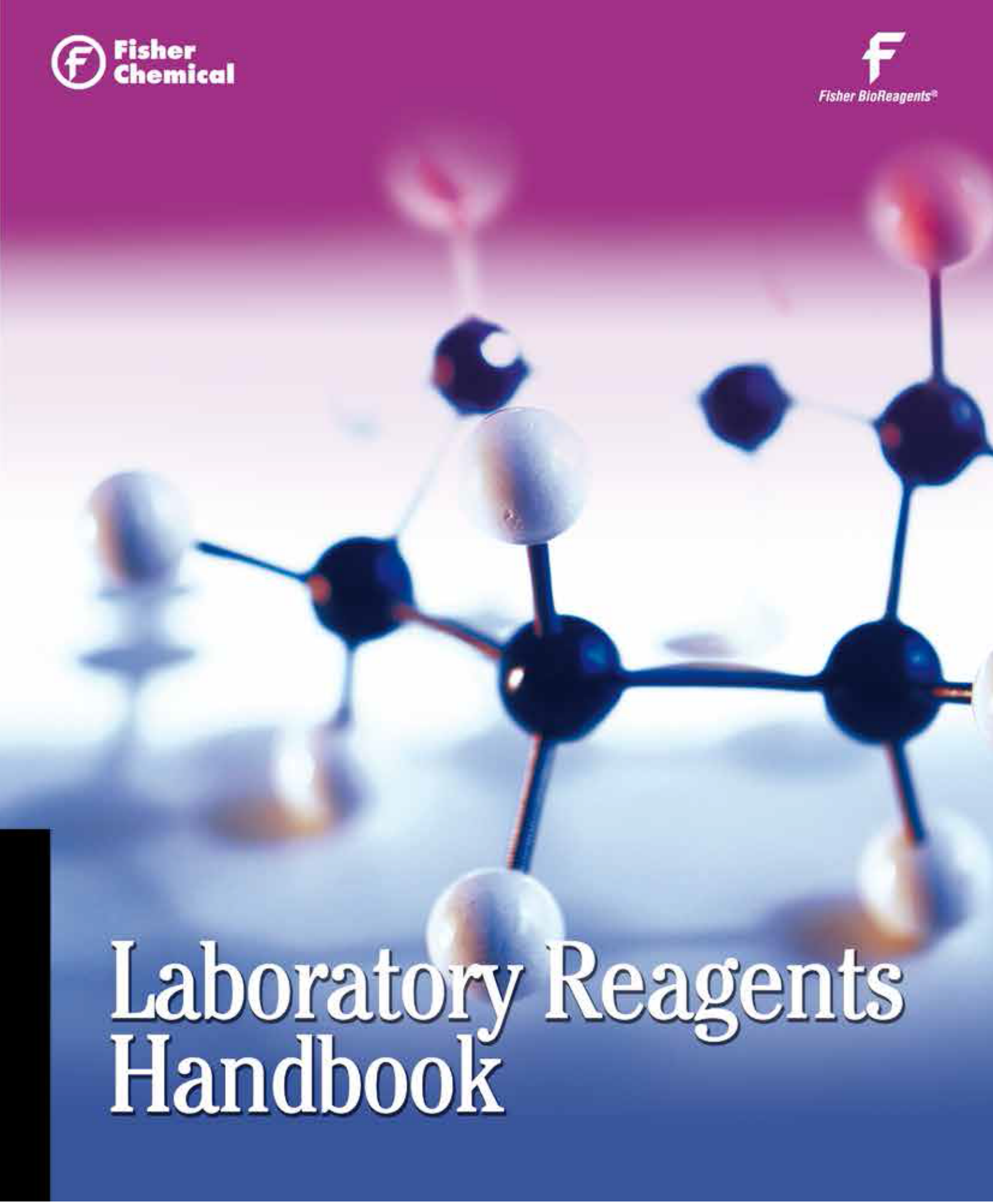
Fisher Chemical

Fisher BioReagents®



Laboratory Reagents Handbook

APEX CHEMICALS

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Trusted solutions
uncompromised analysis

Our online catalog features access to an expanded range of content to help guide you through any application, on any instrument:

- Find products online
- Access to method development support
- Information on application resources
- Links to chromatography videos

www.thermoscientific.com/catalog

2012-2013

Thermo Scientific Chromatography Columns and Consumables Catalog

Expanded interactive online version now available!

www.thermoscientific.com/catalog

Thermo SCIENTIFIC

Part of Thermo Fisher Scientific

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Your partner of choice for chemicals and reagents

Welcome to the new Laboratory Reagents catalogue which reflects the range of choice we offer you :

- Over 4400 Fisher Chemical products dedicated to many analytical applications
- More than 1000 Fisher BioReagents products for molecular biology research, biochemistry and cellular biology
- Including more than 250 new products as Optima® LC/MS Solvents, high purity Acids for Trace Elemental analysis, microbiology media and modifying enzymes

Fisher Chemical

- **Acids & Bases for Trace Elemental analysis** see page 14
- **Buffers Standard Solutions** see page 65
- **Indicators** see page 158
- **Karl Fischer Titration Aqualine™** see page 170
- **Pharmacopeia grade : Reagents & Solvents** see page 234
- **Solvents, Blends and Reagents for Chromatography** see page 308
- **Standard Elemental solution for Trace Metal analysis** see page 314
- **Standard Volumetric solution** see page 323

Fisher BioReagents

- **Molecular Biology** see page 385
- **Protein Chemistry** see page 438
- **Cell Biology** see page 452
- **Core BioReagents & complementary products** see page 479
- **Index by product name** see page 499
- **Index by manufacturer number** see page 501

Fisher Chemical

Fisher BioReagents®

Whatever your field of activity: industry, production, quality control, research, analysis or development, our teams provide you with the best service and support available.

Your chemical specialist
to answer your needs

Smart chemistry solutions

Chemistry experience and expertise
- Large field sales force with highly experienced specialists to advise and support you
- Huge warehouse space ensures high product availability
- An experienced Customer service team dedicated to making your contact with Fisher Scientific easy and efficient

Bottle labelling meets GHS requirements and includes:
- Certificate of analysis
- Grade and application
- Physical, chemical and transportation data

Specification and safety data sheets, online certificates of analysis
- Specification and safety data sheets can be downloaded based on the product reference
- Certificate of analysis can be downloaded based on the product reference and the lot number at www.acros.com

Packaging for quality, safety and convenience
- Solvents are available in plastic-coated glass bottles that confine the liquid in the event of bottle breakage
- Innovative, environmentally friendly packaging: pre-formed cardboard with integrated absorbent that are entirely recyclable and meet UN regulations for transportation.

Our Customer Service Team are on hand to make placing your order a quick and easy experience.

Request a catalogue
fisherchemical@thermofisher.com

Acros Organics Catalogue

Thermo Scientific Catalogue
Chromatography Columns and Consumables

Solvents, reagents, standard solutions and titrants,
A product to suit every application

2 classifications
to simplify your searches

To easily navigate through this catalog, you can access product information by using to 2 modes of reading:

Classification by applications

Acids & bases for trace elemental analysis	see page 14	Pharmacopeia grade: reagents & solvents	see page 234
Buffers standard solutions	see page 65	Solvents, blends and reagents for chromatography	see page 308
Indicators	see page 158	Standard elemental solutions for trace metal analysis	see page 314
Karl Fischer titration Aqualine™	see page 170	Standard volumetric solutions	see page 323

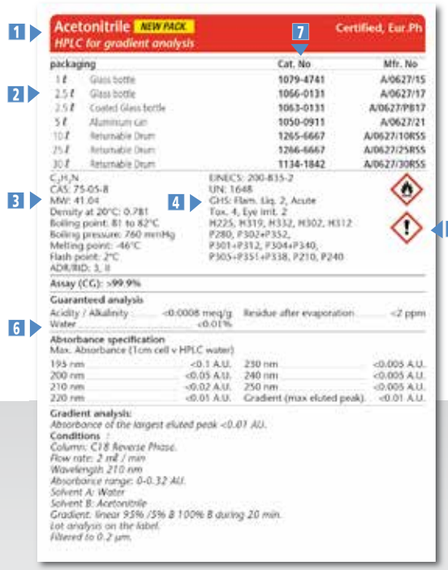
Alphabetical classification and quality in decreasing order

The adopted nomenclature is in compliance with the International Union of Pure and Applied Chemistry rules. We retained some routinely used denominations.

1. colour coded application :
2. pack size & packaging
3. physical and chemical data
4. transportation data
5. hazard symbol
6. specifications
7. Catalogue number and unit pack size code

	Code suffix	Pack size
Liquids	07	= 250mL
	08	= 500mL
	15	= 1L
	17	= 2.5L
	21	= 5L
	24	= 10L
	25	= 25L

	Code suffix	Pack size
Solids	48	= 100g
	50	= 250g
	53	= 500g
	60	= 1Kg
	63	= 3Kg
	65	= 5Kg
	70	= 25Kg


Acetonitrile NEW PACK
HPLC for gradient analysis
Certified, Eur.Ph
packaging | Cat. No | Mfr. No
1 ℓ Glass bottle | 1079-4741 | A/0627/15
2.5 ℓ Glass bottle | 1066-0131 | A/0627/17
2.5 ℓ Coated Glass bottle | 1063-0131 | A/0627/PB17
5 ℓ Aluminium can | 1050-0911 | A/0627/21
10 ℓ Returnable Drum | 1265-6667 | A/0627/10RSS
25 ℓ Returnable Drum | 1266-6667 | A/0627/25RSS
30 ℓ Returnable Drum | 1134-1842 | A/0627/30RSS
C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Boiling pressure: 760 mmHg
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II
EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352, P301+P312, P304+P340, P305+P351+P338, P210, P240
Assay (CG): >99.9%
Guaranteed analysis
Acidity / Alkalinity <0.0008 meq/g
Water <0.01%
Residue after evaporation <2 ppm
Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
195 nm <0.1 A.U.
200 nm <0.05 A.U.
210 nm <0.02 A.U.
220 nm <0.01 A.U.
230 nm <0.005 A.U.
240 nm <0.005 A.U.
250 nm <0.005 A.U.
Gradient (max eluted peak) <0.01 A.U.
Gradient analysis:
Absorbance of the largest eluted peak <0.01 AU.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 2 mℓ / min
Wavelength 210 nm
Absorbance range: 0-0.32 AU.
Solvent A: Water
Solvent B: Acetonitrile
Gradient: linear 95% /5% B 100% B during 20 min.
Lot analysis on the label.
Filtered to 0.2 µm.

For specialist solvents, solutions, specialised packaging for a customised specification,
contact us on: scs.emea@thermofisher.com

4 Fisher Chemical product grades
for a broader offer

Application | **For Analysis** | **Specified** | **Titration**

Optima® LC/MS
Ultra high-purity solvent for use with LC-MS systems. Low background noise in MS detection. Very low metal ion impurities content. Very low detection limit for the development of methods. Reduction in plastic contaminant peaks.

Certified Advanced HPLC Gradient
Advanced HPLC gradient grade. HPLC gradient guarantee with a very low level of gradient baseline drift. Includes lot analysis and absorbance curve on the label.

HPLC Electrochemical
HPLC solvents for Electrochemical and UV detectors. Guaranteed for low electrochemical activity and low UV absorbance/high transmission. Includes lot analysis and absorbance curve on label.

Certified HPLC-MS
HPLC solvents specified for use with LC/MS systems. Guaranteed for low level of trace metals and non-volatile residue. Low level of absorbance, performance under gradient conditions.

CertiFied™ HPLC Gradient
HPLC solvents suitable for gradient analysis. Guaranteed for low absorbance/high UV transmission and low concentration of non-volatile impurities. In some instance may be suitable for fluorescence detection. Includes lot analysis and absorbance curve on the label.

GPC
For gel permeation chromatography. Filtered to 0.2µm. Low water, residue and colour. Unique chemical range – Actual lot analysis on the pack label.

UHPLC Gradient Grade
Solvent certified for UHPLC analysis with high UV transmission. Low background noise at 210nm and 254nm. Filtered at 0.1µm for ultra low particulates.

HPLC Fluorescence
HPLC solvents for Fluorescence and UV detectors. Guaranteed for low fluorescence between 250nm and 750nm emission & excitation wavelenghts.

Distol
For pesticide and petroleum residue analysis. Specified for ECD, NPD and FID detectors. GC range supplied with certificate of analysis.

Optima® Grade
ICP-MS Ultra TraceMetal® analysis. Ultrapure acids, bases & water. Tested for up to 65 parameters at 1-100 ppt level. The highest performance acid range.

For Analysis
Certified reagents for analytical application. Tested for up to 18 guaranteed parameters. Actual lot analysis on the pack label.

Buffers
Standard (colour coded) NIST certified solutions for pH. Ready to use, with an accuracy factor of ±0.02 pH at 20°C. Also available as concentrates, packaged in ampoules.

Trace Metal® Grade
TraceMetal® for ICP trace metal analysis. Acids tested for up to 65 parameters at ppb levels.

For Analysis Conform Eur.Ph.
Certified reagents for analytical application. Many of these products also comply with various pharmaco-poeias, including BP, EP and USP. Tested for up to 18 guaranteed parameters. Actual lot analysis on the pack label.

Karl Fischer - Aqualine®
Karl Fischer reagents for the determination of moisture Volumetric and coulometric reagents and standards. Pyridine free, rapid titration and a stable end-point. Supplied in single packs or in ampoules.

Primar Plus® Grade
Acids for trace elemental analysis. Acids are tested for up to 40 parameters. Levels to ppb.

Volumetric solution
Standard solutions for volumetric analysis. Accuracy factor up to 0.999 - 1.001 NIST traceability. Ready to use.

Dried Distilled
For organic synthesis. Guaranteed low water content.

Specificied Laboratory Reagents (SLR)
Specified Laboratory Reagents for general laboratory applications. Tested for up to 13 parameters.

Solutrate
Concentrated solutions for volumetric analysis. Supplied in singles or pack of six sealed ampoules.

Our analytical reagents and solvents
are produced at a manufacturing site registered ISO 9001:2000 and ISO 14001

Fisher Chemical packaging
for quality, safety and convenience

Plastic bottle HDPE

Volume, mL	Thread	Description	Dimensions, mm	Mass, g
500	DIN45	Natural HDPE	**177 x Ø 78**	**52**
1000	DIN45	Natural HDPE	**212 x 97 x 97**	**112**
1000	DIN45	Black HDPE	**213 x 97 x 97**	**112**
2500	DIN45	Natural HDPE	**300 x Ø 134**	**190**
2500	DIN45	Black HDPE	**301 x Ø 134**	**190**
5000	DIN45	Natural HDPE	**339 x 168 x 168**	**321**
5000	DIN45	Black HDPE	**340 x 168 x 168**	**321**

Glass bottle

Volume, mL	Thread	Description	Dimensions, mm	Mass, g
100	DIN31	Amber Glass	**122 x 50 x 50**	**140**
250	DIN31	Amber Glass	**160 x 63 x 63**	**270**
500	DIN54	Amber Glass	**183 x Ø 83**	**430**
1000	DIN45	Amber Glass	**230 x Ø 102**	**685**
2500	DIN45	Amber Glass	**298 x Ø 134**	**1300**
100	DIN31	Coated Amber Glass	**122 x 51 x 51**	**157**
250	DIN31	Coated Amber Glass	**160 x 64 x 64**	**287**
500	DIN54	Coated Amber Glass	**183 x Ø 84**	**453**
1000	DIN45	Coated Amber Glass	**230 x Ø 103**	**720**
2500	DIN45	Coated Amber Glass	**298 x Ø 135**	**1360**

HDPE Plastic bottle solids (wide opening)

Volume, mL	Thread	Description	Dimensions, mm	Mass, g
50	DIN28	HDPE silver	**88.5 x 36 x 36**	**13,5**
100	DIN32	HDPE silver	**101 x 45 x 45**	**18**
250	DIN45	HDPE silver	**129.5 x 59 x 59**	**30**
350	DIN45	HDPE silver	**164 x 6 x 60**	**36.5**
500	DIN54	HDPE silver	**162 x 75 x 75**	**47**
750	DIN54	HDPE silver	**188 x 83 x83**	**58.5**
1000	DIN54	HDPE silver	**201 x 85 x 85**	**77**
1500	DIN80	HDPE silver	**209 x 108 x 108**	**100**
2500	DIN80	HDPE silver	**260 x 122 x 122**	**130**
4000	DIN80	HDPE silver	**294 x 142 x 142**	**250**

Glass bottle solids

Volume, mL	Thread	Description	Dimensions, mm	Mass, g
30	DIN25	Amber Glass	**66 x Ø 33**	**40**
100	DIN32	Amber Glass	**110 x 45 x 45**	**300**
250	DIN45	Amber Glass	**150 x 60 x 60**	**750**
500	DIN54	Amber Glass	**175 x 70 x 70**	**1500**
1000	DIN54	Amber Glass	**215 x 90 x 90**	**3000**

Various types of packaging
to meet your specifications

Totally recyclable packaging
to respect the environment

Other packaging

Volume	Description	Dimensions, mm	Mass, g
150mL	Plastic Ampoule		**15**
5000mL	Aluminium can DIN45	**300 x Ø 175**	**360**
5000mL	florinated HDPE plastic bottle	**339 x 168 x 168**	**321**
5000mL	Florinated HDPE container (stackable)	**255 x 193 x 146**	**255**
5000mL	Metal can	**200 x Ø 230**	**1200**
10L	Cubitainer	**220 h x 230 w**	**460**
10L	Plastic Jerrican HDPE transparent and black	**325 x 195 x 230**	**450**
25L	Mild steel drum (2" & 3/4")	**473 x Ø 285**	**3840**
25L	Plastic drum	**445 x 286 x 286**	**1350**
15L	Plastic keg	**297 x Ø 338**	**810**
20L	Plastic keg	**377 x Ø 338**	**1080**
25L	Plastic keg	**457 x Ø 338**	**1370**
50L	Fibre keg	**525 x Ø 335**	**1868**
100L	Fibre keg	**775 x Ø 395**	**3834**

Our environmental approach is designed to deal with the main environmental issues

- Chemicals are delivered in totally recyclable pre-formed cardboard with integrated absorbent meeting UN regulations for transportation
- Solvents are available in plastic-coated bottles that confine the liquid in the event of breakage
- All our shipping partners adhere to a sustainable development charter
- Storage, packaging and processing solutions adapted to various types of waste
- Compaction of damaged packaging plastic and films for reprocessing and recovery
- Respect for the environment code and the regulations of Installations Classified for the Protection of the Environment
- Adherence to the EU Regulatory Directives for DEEE, RoHS, REACH

Respect our planet
this is a reality; it is part of our daily lives

Harmonised labelling system

meeting GHS requirements

New labels

Complying with the Globally Harmonized System (GHS) requirements for classification and labelling of chemicals. See key opposite

New hazard pictograms

Symbols are now more visible and easier to understand.
Former symbols printed in black on orange squares are replaced with nine new danger pictograms including black symbols printed in a white lozenge bordered in red. See page 9.

New regulations

Regulation (EC) No. 1272/2008, designated by the GHS or CLP acronyms came into effect on January 20, 2009.
This regulation governs the classification, labelling and packaging of substances and mixtures. The English CLP acronym stands for "Classification, Labelling and Packaging of substances and mixtures". As from 2015, this regulation will replace and supersede European Directive 67/548/CEE defining substances and Directive 1999/45/CE defining preparations.

Header-Key

1. New GHS symbols
2. Fisher Chemical Brand logo
3. • Code for re-ordering
   • Batch(lot) number
   • Packsize
   • Formula & Molecular weight
4. • Chemical name
   • Grade & application
   • Lot analysis showing actual QC data
5. General application information
6. The H+P Statements
7. • Packing date
   • Expiration product information (including date opened)
   • UN & CAS number
   • Storage condition
8. Information about the manufacturing site
9. Physical product data
10. Data Matrix Code (2D Code) for the fastest possible logistic processes

Hazard warning symbols and precautionary phrases

complying with European standards

Physical Hazards

Hazard classes and hazard categories*	Label elements NEW**			Label elements OLD		
Explosives • Unstable explosives • Explosives, divisions 1.1 to 1.3 Self-reactive substances, mixtures, types A, B Organic peroxides, types A, B		H200 H201, H202, H203 H240, H241 H240, H241	Danger		(R2, R3)	Explosive
Explosives, division 1.4		H204	Warning	No classification		
Flammable gases, category 1 Flammable aerosols, category 1 Flammable liquids, category 1		H220 H222 H224	Warning /Danger		(R12) (R12) R12	Extremely flammable
Flammable liquids, category 2 Flammable solids, category 1 Flammable solids, category 2		H225 H228 H228	Warning		R11 (R11) (R11)	Highly flammable
Flammable aerosols, category 2 Flammable liquids, category 3		H223 H226	Warning	No symbol No classification flashpoint 56-60°C	(R10) R10	Flammable
Pyrophoric liquids, category 1 Pyrophoric solids, category 1 Substances, mixtures which in contact with water emit flammable gases, categories 1, 2 and category 3		H250 H250 H260 H261 H261	Danger		R17 R17 (R15) (R15) (R15)	Highly flammable
Self-reactive substances, mixtures, type B Self-reactive substances, mixtures, types C, D and types E, F Self-heating substances, mixtures, category 1 and category 2		H241 H242 H242 H251 H252	Warning /Danger		R12 R12	Highly flammable
Organic peroxides, type B Organic peroxides, types C, D Organic peroxides, types E, F		H241 H242 H242			R7 R7	Oxidising
Oxidising gases, category 1 Oxidising liquids, categories 1, 2 and category 3 Oxidising solids, categories 1, 2 and category 3		H270 H271, H272 H272 H271, H272 H272	Danger/Warning		R8 R8, R9 R8, R9	Oxidising
Gases under pressure • Compressed gases • Liquefied gases • Refrigerated liquefied gases • Dissolved gases		H280 H280 H281 H280	Warning	No classification		
Corrosive to metals, category 1		H290	Warning	No classification		

Detail of the H & P & EUH phrases ▶ see p. 496

Health Hazards

Hazard classes and hazard categories*	Label elements NEW**			Label elements OLD	
Acute toxicity, categories 1, 2 • Oral • Dermal • Inhalation		H300 H310 H330	Danger		R23 R24 R26
Acute toxicity, category 3 • Oral • Dermal • Inhalation		H301 H311 H331	Danger		R25 R24 R26
Germ cell mutagenicity, categories 1A, 1B Carcinogenicity, categories 1A, 1B Reproductive toxicity, categories 1A, 1B STOT***, single exposure, category 1 STOT***, repeated exposure, category 1		H340 H350 H360 H370 H372	Danger		R45 R46 R49 R40 R48
Respiratory sensitisation, category 1 Aspiration hazard, category 1		H334 H304	Danger		R42 R65
Germ cell mutagenicity, category 2 Carcinogenicity, category 2 Reproductive toxicity, category 2 STOT***, single exposure, category 2 STOT***, repeated exposure, category 2		H341 H351 H361 H371 H373	Warning		R68 R40 R62 R63 R48
Acute toxicity, category 4 • Oral • Dermal • Inhalation		H302 H312 H332	Warning		R22 R21 R20
Skin corrosion, categories 1A, 1B, 1C		H314	Danger		R35
Serious eye damage, category 1		H318	Danger		R41
Skin irritation, category 2 Eye irritation, category 2 Skin sensitisation, category 1 STOT***, single exposure, category 3 • Respiratory irritation • Narcotic effects		H315 H319 H317 H335 H336	Warning	No symbol	R38 R36 R43 R37 R67

Environmental Hazards

Hazardous to the aquatic environment, acute, category 1 Hazardous to the aquatic environment, chronic, category 1		H400 H410	Warning		R50 R50/53
Hazardous to the aquatic environment, chronic, category 2		H411			R51/53

Fisher Scientific

New hazard pictograms,
clearer and safer

www.acros.com
to access all GHS information

Your simplified approach
to regulated products

Products subject to legal provisions

Ethanol: ethyl alcohol
For any purchase order bound for UK and UK Overseas Departments, please send us a copy of the "Advance Notification of Occupation" or the warehouse certification (UT No or excise duty No) certified by the Customs Department.
A copy of this document must be sent to our Customer Relations Department.

Chemical weapons precursors, drug precursors and regulated export products
They are subject to preliminary declaration. According to the classification of the products, their quality, quantity and the country of destination, the enforcement authorities issue a delivery authorisation.

Substances which weaken the ozone layer
The use of substances which weaken the ozone layer (ODS: Ozone-Depleting Substances) imposes new delivery requirements:
- Production of your identification number that you must request from the European Commission. This number can be obtained by visiting the website: htpp//ec.europa.eu/clima/policies/ozone/ods found on the Laboratory-ODS Database tab.
- The e-mail response from the European Commission showing the number must be forwarded to our Customer Services Department
- Subsequently fill out and sign the "Notification" document downloadable from the www.fisher.co.uk website. This notification must be renewed along with each order.

REACH

Isolated intermediaries
In accordance with the (EC) N 1907/2006 "REACH" regulation, some substances are listed as isolated intermediates.
These substances are only be delivered to our customers upon presentation of a certificate of use in compliance with the strictly controlled conditions as specified under Article 18 (4) of the present regulation.

Regulation
The implementation of REACH calls for a close collaboration among Thermo Fisher Scientific, its suppliers and its customers, which allows us to guarantee continuity in terms of availability of our chemicals on the basis of the REACH requirements. The chemicals that are affected by the REACH regulation are registered. We follow very closely all the substances which are or will be listed and will require autorisation at a later stage.

For further information

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KOREA	sales.fsk@thermofisher.com
MALAYSIA	enquiry.my@thermofisher.com
NEW ZEALAND	nzinfo@thermofisher.com

Your specialised chemical services partner
We support your chemistry

Specialised Chemical Services

When you need a product that is not readily available in a chemical catalogue, we can help.
We are in a position to offer you solutions adapted to your needs through our knowledge and experience in this area:
- a portfolio of over 100,000 products
- a global network of more than 3,500 suppliers and manufacturers

Our Specialised Chemical Services team is ready directly to discuss your specific chemical needs

- Semi-bulk and bulk chemical service
- Tailored solvents and solvent blends & solutions
- Testing services
- Customised packaging and labelling

For further information

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MALAYSIA	enquiry.my@thermofisher.com
NEW ZEALAND	nzinfo@thermofisher.com

A personalized advice
to optimize the processing of your order

For custom solutions
our team of scientists is at your disposal

Fisher Chemical

- **Acids & bases for trace elemental analysis** see page 14
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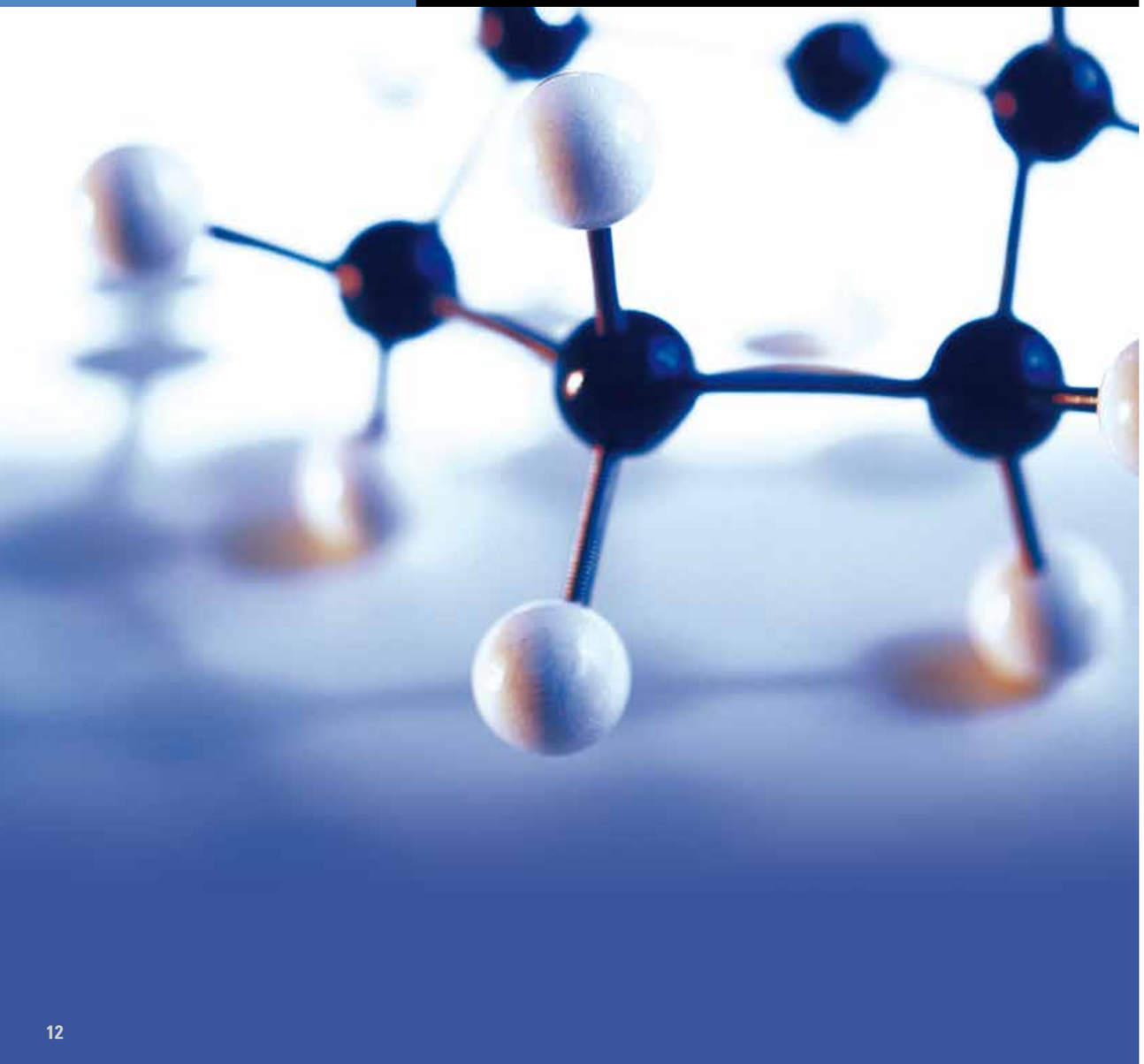


Acetaldehyde — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	A/0080/08
2.5 ℓ	Glass bottle	A/0080/17

C_2H_4O
CAS: 75-07-0
MW: 44.05
Density at 20°C: 0.785
Boiling point: 21°C
Melting point: -123°C
Flash point: -27°C
ADR/RID: 3, I

EINECS: 200-836-8
UN: 1089
GHS: Flam. Liq. 1, Carc. 2, Eye Irrit. 2, STOT SE 3
H224, H319, H351, H335
P261, P280, P305+P351+P338, P210, P243, P403+P235

Assay (CG): >99%

Guaranteed analysis
Acidity ..... <0.05 meq/g

Acetamide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	A/0160/48

C_2H_5NO
CAS: 60-35-5
MW: 59.07
Density at 20°C: 1.16
Boiling point: 221°C

Melting point: 79 to 81°C
EINECS: 200-473-5
GHS: Carc. 2
H351
P301+P310, P281

Assay: >98%

Acetanilide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	A/0200/50
500 g	Plastic jar	A/0200/53

C_8H_9NO
CAS: 103-84-4
MW: 135.17
Boiling point: 304°C
Melting point: 111 to 115°C
Flash point: 173°C

EINECS: 203-150-7
GHS: Acute Tox. 4, Eye Irrit. 2
H302, H319
P301+P312, P280, P305+P351+P338

Guaranteed analysis
Residue after ignition ..... <0.05%

Acetic acid — NEW — Optima
for LC/MS analysis

packaging		Mfr. No
1 mℓ	Ampoule	A113-1AMP
10x1 mℓ	Ampoule	A113-10X1AMP
50 mℓ	HDPE Plastic bottle	A113-50

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338, P302+P352, P304+P340, P210, P309+P311

Assay: 99.7%

Guaranteed analysis

Appearance	Colorless, clear liquid	Magnesium (Mg)	<10 ppb
Colour	10 APHA	Manganese (Mn)	<10 ppb
Water	<0.1%	Nickel (Ni)	<10 ppb
Residue after evaporation	<5 ppm	Potassium (K)	<20 ppb
Also meets ACS specifications	: Pass Test	Propan--1-ol	<10 ppb
Aluminium (Al)	<20 ppb	Sodium (Na)	<50 ppb
Calcium (Ca)	<50 ppb	Sulfate (SO_4)	<0.00004 ppm
Copper (Cu)	<10 ppb	n-Butyl formate	<0.00004 ppm
Iron (Fe)	<10 ppb	Zinc (Zn)	<10 ppb
Lead (Pb)	<10 ppb		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

255 nm	: <1.0 A.U.	LC/MS Gradient Suitability (at 0.1% aqueous)	: Pass Test
280 nm	<0.05 A.U.		
350 nm	<0.02 A.U.		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.

Acetic acid glacial — Certified
for HPLC

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/0406/PB08
1 ℓ	Coated Glass bottle	A/0406/PB15

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338, P302+P352, P304+P340, P210, P309+P311

Assay: >99.7%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

260 nm (sol. aqu. 1 M)	: <0.1 A.U.	280 nm (sol. aqu. 1 M)	: <0.02 A.U.
270 nm (sol. aqu. 1 M)	: <0.02 A.U.		

Acetic acid glacial (d=1.08) is equivalent to a strength of 17.4M (17.4N).
Lot analysis on the label.
Filtered to 0.2 µm.

Acetic acid glacial — Certified
HPLC for electrochemical detection

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/0407/PB08

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338, P302+P352, P304+P340, P210, P309+P311

Assay: >99.7%

Guaranteed analysis

Electrochemical test	Pass	Lead (Pb)	<5 ppm
Iron (Fe)	<5 ppm	n-Butyl formate	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

260 nm (sol. aqu. 1 M)	: <0.1 A.U.	280 nm (sol. aqu. 1 M)	: <0.02 A.U.
270 nm (sol. aqu. 1 M)	: <0.02 A.U.		

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Electrode- Graphite.
Acetic acid glacial (d=1.08) is equivalent to a strength of 17.4M (17.4N).
Lot analysis on the label.
Filtered to 0.2 µm.

Acetic acid glacial min.99% NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
250 mℓ	Pre-cleaned Teflon FEP bottle	A465-250
500 mℓ	Pre-cleaned Teflon FEP bottle	A465-500
1 ℓ	Pre-cleaned Teflon FEP bottle	A465-1

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338,
P302+P352, P304+P340,
P210, P309+P311

Assay: >=99%

Guaranteed analysis

Zirconium (Zr)	<10 ppt	Manganese (Mn)	<10 ppt
Gallium (Ga)	<10 ppt	Molybdenum (Mo)	<10 ppt
Terbium (Tb)	<1 ppt	Neodymium (Nd)	<1 ppt
Indium (In)	<1 ppt	Nickel (Ni)	<50 ppt
Dysprosium (Dy)	<1 ppt	Potassium (K)	<50 ppt
Aluminium (Al)	<50 ppt	Praseodymium (Pr)	<1 ppt
Antimony (Sb)	<50 ppt	Rhenium (Re)	<10 ppt
Arsenic (As)	<50 ppt	Rhodium (Rh)	<50 ppt
Barium (Ba)	<10 ppt	Ruthenium (Ru)	<50 ppt
Beryllium (Be)	<10 ppt	Samarium (Sm)	<1 ppt
Bismuth (Bi)	<10 ppt	Scandium (Sc)	<10 ppt
Cadmium (Cd)	<10 ppt	Propan--1-ol	<50 ppt
Calcium (Ca)	<50 ppt	Sodium (Na)	<100 ppt
Cerium (Ce)	<10 ppt	Strontium (Sr)	<10 ppt
Chromium (Cr)	<10 ppt	Tellurium (Te)	<1 ppt
Cobalt (Co)	<10 ppt	Thallium (Tl)	<10 ppt
Copper (Cu)	<10 ppt	Thorium (Th)	<1 ppt
Erbium (Er)	<1 ppt	Thulium (Tm)	<1 ppt
Europium (Eu)	<1 ppt	Tin (Sn)	<50 ppt
Gadolinium (Gd)	<1 ppt	Titanium (Ti)	<10 ppt
Germanium (Ge)	<10 ppt	Uranium (U)	<1 ppt
Hafnium (Hf)	<10 ppt	Vanadium (V)	<10 ppt
Holmium (Ho)	<1 ppt	Ytterbium (Yb)	<1 ppt
Iron (Fe)	<50 ppt	Yttrium (Y)	<1 ppt
Lanthanum (La)	<1 ppt	Zinc (Zn)	<50 ppt
Lead (Pb)	<10 ppt	Platinum (Pt)	<50 ppt
Lithium (Li)	<10 ppt	Rubidium (Rb)	<10 ppt
Lutetium (Lu)	<10 ppt	Tungsten (W)	<10 ppt
Magnesium (Mg)	<50 ppt		

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Acetic acid glacial min.99% NEW — Trace Metal
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE plastic bottle	A507-P500
1 ℓ	HDPE plastic bottle	A507-P1
2.5 ℓ	HDPE plastic bottle	A507-P212

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338,
P302+P352, P304+P340,
P210, P309+P311

Assay: >=99%

Guaranteed analysis

Colour	<10 APHA	Cesium (Cs)	<0.1 ppb
Aluminium (Al)	<1 ppb	Chromium (Cr)	<1 ppb
Antimony (Sb)	<0.5 ppb	Cobalt (Co)	<0.1 ppb
Arsenic (As)	<0.5 ppb	Copper (Cu)	<0.5 ppb
Barium (Ba)	<0.5 ppb	Dysprosium (Dy)	<0.1 ppb
Beryllium (Be)	<0.1 ppb	Erbium (Er)	<0.1 ppb
Bismuth (Bi)	<0.1 ppb	Europium (Eu)	<0.1 ppb
Cadmium (Cd)	<0.5 ppb	Gadolinium (Gd)	<0.1 ppb
Calcium (Ca)	<1 ppb	Gallium (Ga)	<0.1 ppb
Cerium (Ce)	<0.1 ppb		
Germanium (Ge)	<0.5 ppb	Scandium (Sc)	<0.1 ppb
Hafnium (Hf)	<0.1 ppb	Selenium (Se)	<1 ppb
Holmium (Ho)	<0.1 ppb	Silver (Ag)	<1 ppb
Indium (In)	<0.1 ppb	Sodium (Na)	<1 ppb
Iron (Fe)	<1 ppb	Strontium (Sr)	<0.5 ppb
Lanthanum (La)	<0.1 ppb	Sulfate (SO_4)	<0.5 ppb
Lead (Pb)	<0.1 ppb	Tellurium (Te)	<0.5 ppb
Lithium (Li)	<0.1 ppb	Terbium (Tb)	<0.1 ppb
Lutetium (Lu)	<0.1 ppb	Thallium (Tl)	<0.1 ppb
Magnesium (Mg)	<0.5 ppb	Thorium (Th)	<0.1 ppb
Manganese (Mn)	<0.5 ppb	Thulium (Tm)	<0.1 ppb
Mercury (Hg)	<1 ppb	Tin (Sn)	<0.5 ppb
Molybdenum (Mo)	<0.5 ppb	Titanium (Ti)	<0.5 ppb
Neodymium (Nd)	<0.1 ppb	Total chloride (Cl)	<1 ppb
Nickel (Ni)	<0.5 ppb	Total phosphorus (P)	<1 ppb
Platinum (Pt)	<0.5 ppb	Tungsten (W)	<0.5 ppb
Potassium (K)	<1 ppb	Uranium (U)	<0.1 ppb
Praseodymium (Pr)	<0.1 ppb	Vanadium (V)	<0.5 ppb
Rhenium (Re)	<0.1 ppb	Ytterbium (Yb)	<0.1 ppb
Rhodium (Rh)	<0.5 ppb	Yttrium (Y)	<0.1 ppb
Rubidium (Rb)	<0.1 ppb	Zinc (Zn)	<1 ppb
Ruthenium (Ru)	<0.5 ppb	Zirconium (Zr)	<0.1 ppb
Samarium (Sm)	<0.1 ppb	Dichromate demand	Conform

Bottled in class 10 cleanroom conditions.
Lot analysis on the label.

Acetic acid glacial NEW PACK — Primar Plus
for trace metal analysis

packaging		Mfr. No
250 mℓ	HDPE Plastic bottle	A/0411/PB07
500 mℓ	HDPE Plastic bottle	A/0411/PB08
1 ℓ	HDPE Plastic bottle	A/0411/PB15
2.5 ℓ	HDPE Plastic bottle	A/0411/PB17

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.04
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338,
P302+P352, P304+P340,
P210, P309+P311

Assay: >99.8%

Guaranteed analysis

Aluminium (Al)	<0.005 ppm	Magnesium (Mg)	<0.005 ppm
Antimony (Sb)	<0.005 ppm	Manganese (Mn)	<0.002 ppm
Arsenic (As)	<0.005 ppm	Mercury (Hg)	<0.005 ppm
Barium (Ba)	<0.005 ppm	Molybdenum (Mo)	<0.002 ppm
Beryllium (Be)	<0.005 ppm	Nickel (Ni)	<0.002 ppm
Bismuth (Bi)	<0.005 ppm	Potassium (K)	<0.5 ppm
Boron (B)	<0.005 ppm	Selenium (Se)	<0.005 ppm
Cadmium (Cd)	<0.002 ppm	Strontium (Sr)	<0.002 ppm
Calcium (Ca)	<0.1 ppm	Thallium (Tl)	<0.005 ppm
Chromium (Cr)	<0.05 ppm	Tin (Sn)	<0.005 ppm
Cobalt (Co)	<0.002 ppm	Titanium (Ti)	<0.005 ppm
Copper (Cu)	<0.005 ppm	Total chloride (Cl)	<0.0001%
Gallium (Ga)	<0.005 ppm	Total phosphorus (P)	<0.5 ppm
Germanium (Ge)	<0.005 ppm	Total sulphur (S)	<0.1 ppm
Indium (In)	<0.005 ppm	Vanadium (V)	<0.002 ppm
Iron (Fe)	<0.05 ppm	Zinc (Zn)	<0.01 ppm
Lead (Pb)	<0.002 ppm	Zirconium (Zr)	<0.005 ppm
Lithium (Li)	<0.002 ppm	Residue after ignition	<0.0002%

Acetic acid glacial — Certified AR, Eur.Ph., BP ,USP
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	A/0400/PB08
1 ℓ	HDPE Plastic bottle	A/0400/PB15
1 ℓ	Coated Glass bottle	A/0400/PC15
2.5 ℓ	HDPE Plastic bottle	A/0400/PB17
2.5 ℓ	Coated Glass bottle	A/0400/PC17
25 ℓ	HDPE Plastic container	A/0400/25
45 ℓ	Plastic container	A/0400/26

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338,
P302+P352, P304+P340,
P210, P309+P311

Assay: 99.7 to 100.5%

Guaranteed analysis

Colour	<10 APHA	Magnesium (Mg)	<0.05 ppm
Water	<0.2%	Manganese (Mn)	<0.01 ppm
Residual solvents test	: Pass	Mercury (Hg)	<0.02 ppm
Residue after evaporation	<5 ppm	Molybdenum (Mo)	<0.01 ppm
Substances Reducing $K_2Cr_2O_7$	<0.005%	Nickel (Ni)	<0.02 ppm
Formic acid (H. COOH)	: <0.05%	Potassium (K)	<0.5 ppm
Heavy metals	<5 ppm	Silver (Ag)	<0.01 ppm
Oxygen absorbed test	: Pass	Sodium (Na)	<1 ppm
Conforms to BP, EP & USP	: Pass	Strontium (Sr)	<0.01 ppm
Aluminium (Al)	<0.01 ppm	Tin (Sn)	<0.01 ppm
Arsenic (As)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Total chloride (Cl)	<0.0001%
Cadmium (Cd)	<0.01 ppm	Total nitrogen (N)	<2 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<1 ppm
Chromium (Cr)	<0.2 ppm	Total silicon (Si)	>0 ppm
Cobalt (Co)	<0.01 ppm	Total sulphur (S)	<1 ppm
Copper (Cu)	<0.02 ppm	Vanadium (V)	<0.01 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.05 ppm
Lead (Pb)	<0.01 ppm	Acetic anhydride	<0.2%
Lithium (Li)	<0.01 ppm		

Lot analysis on the label.
Acetic acid glacial (d=1.08) is equivalent to a strength of 17.4M (17.4N).

Acetic acid glacial 99-100% — SLR, Eur.Ph.,BP, USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	A/0360/PB08
1 ℓ	HDPE Plastic bottle	A/0360/PB15
2.5 ℓ	HDPE Plastic bottle	A/0360/PB17
25 ℓ	HDPE Plastic container	A/0360/25
200 ℓ	HDPE Plastic container	A/0360/27

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338,
P302+P352, P304+P340,
P210, P309+P311

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Potassium (K)	<10 ppm
Copper (Cu)	<1 ppm	Sodium (Na)	<20 ppm
Iron (Fe)	<2 ppm	n-Butyl formate	<0.0005%
Lead (Pb)	<2 ppm	Total sulphur (S)	<5 ppm
Magnesium (Mg)	<2 ppm	Zinc (Zn)	<1 ppm

Acetic acid glacial (d=1.08) is equivalent to a strength of 17.4M (17.4N).

Acetic acid glacial
pure, For non aqueous titrations

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	A/0420/PB17

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Melting point: 16 to 16.5°C
Flash point: 40°C
ADR/RID: 8, 3, II

EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338,
P302+P352, P304+P340,
P210, P309+P311

Guaranteed analysis

Water ..... 0.01 to 0.1% Identity test ..... : Pass

Acetic acid glacial
pure, aldehyde free

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	A/0430/PB08

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
Density at 20°C: 1.048
Boiling point: 117 to 118°C
Freezing point: >16.1°C
Melting point: 16 to 16.5°C
Flash point: 40°C

ADR/RID: 8, 3, II
EINECS: 200-580-7
UN: 2789
GHS: Flam. Liq. 3, Skin Corr. 1A
H226, H314
P280, P305+P351+P338,
P302+P352, P304+P340,
P210, P309+P311

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
570 nm ..... <0.02 A.U.

Suitable for use in determination of total cholesterol in blood plasma.
Ref. Macyntre & Ralston, Biochem J.1954.56,XLIII.
Acetic acid glacial (d=1.08) is equivalent to a strength of 17.4M (17.4N).

Acetic acid solution 0.1M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/0551C/05
6	Ampoule	J/0551C/90

EINECS: 200-580-7

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Acetic acid solution 1M (1N approx.6%)
pure, ready to use

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/0550/17

EINECS: 200-580-7
GHS: Skin Corr. 1A
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance ± 0.002

Acetic acid solution 2M (2N approx.12%)
pure, ready to use

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/0549/PB17

CAS: 64-19-7
Density at 20°C: 1.0
Boiling point: 100°C
ADR/RID: 8, III
EINECS: 200-580-7

UN: 2790
GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P305+P351+P338, P280

Manufactured to a tolerance ± 0.002

Acetic anhydride — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	A/0480/PB08
2.5 ℓ	HDPE Plastic bottle	A/0480/PB17

$C_4H_6O_3$
CAS: 108-24-7
MW: 102.09
Density at 20°C: 1.087
Boiling point: 140°C
Melting point: -73.1°C
Flash point: 54°C
ADR/RID: 8, 3, II
EINECS: 203-564-8

UN: 1715
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Corr. 1B
H226, H330, H302, H314, EUH071
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P261, P210

Assay: >98%

Guaranteed analysis

Colour	<10 APHA	Nickel (Ni)	<0.02 ppm
Substances		Potassium (K)	<0.5 ppm
reducing $KMnO_4$	<0.01%	Sodium (Na)	<1 ppm
Calcium (Ca)	<0.5 ppm	Total chloride (Cl)	<0.0002%
Chromium (Cr)	<0.02 ppm	Total nitrogen (N)	<5 ppm
Copper (Cu)	<0.02 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<0.1 ppm	Total sulphur (S)	<2 ppm
Lead (Pb)	<0.02 ppm	Zinc (Zn)	<0.1 ppm
Magnesium (Mg)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.01 ppm
Arsenic (As)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Vanadium (V)	<0.01 ppm
Lithium (Li)	<0.01 ppm		

Lot analysis on the label.

Acetic anhydride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	A/0440/PB08
2.5 ℓ	HDPE Plastic bottle	A/0440/PB17

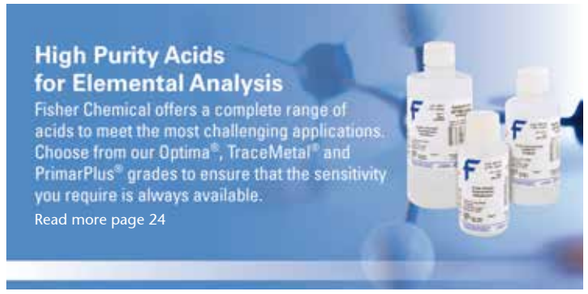
$C_4H_6O_3$
CAS: 108-24-7
MW: 102.09
Density at 20°C: 1.087
Boiling point: 140°C
Melting point: -73.1°C
Flash point: 54°C
ADR/RID: 8, 3, II
EINECS: 203-564-8

UN: 1715
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Corr. 1B
H226, H330, H302, H314, EUH071
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P261, P210

Assay: >97%

Guaranteed analysis

Colour	<20 APHA	Sodium (Na)	<20 ppm
Calcium (Ca)	<10 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<10 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<10 ppm		



Acetone NEW PACK. — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	A/0606/15
2.5 ℓ	Glass bottle	A/0606/17
10 ℓ	Returnable Drum	A/0606/10RSS
25 ℓ	Returnable Drum	A/0606/25RSS
30 ℓ	Returnable Drum	A/0606/30RSS

C_3H_6O
CAS: 67-64-1
MW: 58.08
Density at 20°C: 0.790
Boiling point: 56°C
Melting point: -95°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 200-662-2
UN: 1090
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0003 meq/g	Residue after evaporation	<2 ppm
Water	<0.1%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

330 nm	<1 A.U.	350 nm	<0.005 A.U.
335 nm	<0.3 A.U.	360 nm	<0.005 A.U.
340 nm	<0.09 A.U.	370 nm	<0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Acetone — Primar
for trace metal analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	A/0604/17

C_3H_6O
CAS: 67-64-1
MW: 58.08
Density at 20°C: 0.790
Boiling point: 56°C
Melting point: -95°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 200-662-2
UN: 1090
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Manganese (Mn)	<0.005 ppm
Colour	<5 APHA	Molybdenum (Mo)	<0.005 ppm
Water	<0.2%	Nickel (Ni)	<0.005 ppm
Residue after evaporation	<2 ppm	Potassium (K)	<0.05 ppm
Substances		Propan--1-ol	<0.005 ppm
reducing $KMnO_4$	<0.0005%	Sodium (Na)	<0.2 ppm
Aluminium (Al)	<0.02 ppm	Strontium (Sr)	<0.005 ppm
Barium (Ba)	<0.005 ppm	Titanium (Ti)	<0.005 ppm
Cadmium (Cd)	<0.005 ppm	Total phosphorus (P)	<0.02 ppm
Calcium (Ca)	<0.05 ppm	Total silicon (Si)	<0.02 ppm
Chromium (Cr)	<0.005 ppm	Total sulphur (S)	<0.1 ppm
Cobalt (Co)	<0.005 ppm	Vanadium (V)	<0.005 ppm
Copper (Cu)	<0.01 ppm	Zinc (Zn)	<0.01 ppm
Iron (Fe)	<0.05 ppm	Di-iso-propylether	<0.005%
Lead (Pb)	<0.005 ppm	Methanol	<0.05%
Lithium (Li)	<0.005 ppm	Methylpentadienes	<0.02%
Magnesium (Mg)	<0.02 ppm		

Acetone — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	A/0603/15
2.5 ℓ	Glass bottle	A/0603/17

C_3H_6O
CAS: 67-64-1
MW: 58.08
Density at 20°C: 0.790
Boiling point: 56°C
Melting point: -95°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 200-662-2
UN: 1090
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.0005%	GC (ECD) Analysis	Pass
Water	<0.2%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass

GC Analysis
Pesticides analysis: *No impurity peak that has a retention time greater than Lindane will have a peak height greater than produced by 2500 pg / mℓ Heptachlorepoxide (ECD) and 10 pg / mℓ Parathion (NPD).*
Hydrocarbon analysis: *no impurity chain lenght is greater than Dodecane, is present at a concentration greater than 0.01 ppm (by FID).*
Conditions :
Column: J&W DB 5; 30m x 0.32mm x 0.1µm dF.
Temperature profile:
(1) 50°C, 2 min
(2) 40°C / min up to 320°C
(3) 320°C, 30 min
Injection: 5µℓ cold on-column.

Acetone
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Glass bottle	A/0602/15
2.5 ℓ	Glass bottle	A/0602/17

C_3H_6O
CAS: 67-64-1
MW: 58.08
Density at 20°C: 0.790
Boiling point: 56°C
Melting point: -95°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 200-662-2
UN: 1090
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240

Guaranteed analysis

Water	<0.01%	Residue after evaporation	<2 ppm

Acetone
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	Glass bottle	A/0601/17
5 ℓ	Aluminium can	A/0601/21
25 ℓ	Metal drum	A/0601/25

C_3H_6O
CAS: 67-64-1
MW: 58.08
Density at 20°C: 0.790
Boiling point: 56°C
Melting point: -95°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 200-662-2
UN: 1090
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Magnesium (Mg)	<0.02 ppm
Colour	<5 APHA	Manganese (Mn)	<0.02 ppm
Water	<0.2%	Molybdenum (Mo)	<0.02 ppm
Residue after evaporation	<5 ppm	Nickel (Ni)	<0.02 ppm
Substances		Potassium (K)	<0.1 ppm
reducing $KMnO_4$	<0.0005%	Sodium (Na)	<0.2 ppm
Aluminium (Al)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Total phosphorus (P)	<0.02 ppm
Calcium (Ca)	<0.1 ppm	Total silicon (Si)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Zinc (Zn)	<0.02 ppm
Copper (Cu)	<0.01 ppm	Di-iso-propylether	<0.005%
Iron (Fe)	<0.05 ppm	Methanol	<0.05%
Lead (Pb)	<0.02 ppm	Methylpentadienes	<0.02%
Lithium (Li)	<0.02 ppm		

Acetone NEW PACK. — Certified AR Eur.Ph
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/0600/PB08
1 ℓ	Glass bottle	A/0600/15
2.5 ℓ	Glass bottle	A/0600/17
2.5 ℓ	Coated Glass bottle	A/0600/PB17
2.5 ℓ	HDPE Plastic bottle	A/0600/PC17
5 ℓ	Fluorinated HDPE Plastic bottle	A/0600/21
5 ℓ	HDPE Plastic bottle	A/0600/PC21
25 ℓ	Metal drum	A/0600/25
200 ℓ	Metal drum	A/0600/27

C_3H_6O
CAS: 67-64-1
MW: 58.08
Density at 20°C: 0.790
Boiling point: 56°C
Melting point: -95°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 200-662-2
UN: 1090
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Iron (Fe)	<0.05 ppm
Colour	<5 APHA	Lead (Pb)	<0.02 ppm
Water	<0.2%	Magnesium (Mg)	<0.02 ppm
Residue after evaporation	<5 ppm	Potassium (K)	<0.1 ppm
Substances		Sodium (Na)	<0.2 ppm
reducing $KMnO_4$	<0.0005%	Total phosphorus (P)	<0.02 ppm
Calcium (Ca)	<0.1 ppm	Zinc (Zn)	<0.02 ppm
Copper (Cu)	<0.01 ppm		

Typical analysis

Aluminium (Al)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Total silicon (Si)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Manganese (Mn)	<0.02 ppm		

Lot analysis on the label.

Acetone NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	A/0560/08
1 ℓ	Glass bottle	A/0560/15
2.5 ℓ	Glass bottle	A/0560/17
2.5 ℓ	Coated Glass bottle	A/0560/PB17
2.5 ℓ	HDPE Plastic bottle	A/0560/PC17
5 ℓ	Fluorinated HDPE Plastic bottle	A/0560/21
5 ℓ	Fluorinated HDPE square Drum	A/0560/FP21
5 ℓ	HDPE Plastic bottle	A/0560/PC21
10 ℓ	HDPE Plastic container	A/0560/PC24
25 ℓ	Metal drum	A/0560/25
25 ℓ	HDPE Plastic container	A/0560/PC25
200 ℓ	Metal drum	A/0560/27

C_3H_6O
CAS: 67-64-1
MW: 58.08
Density at 20°C: 0.790
Boiling point: 56°C
Melting point: -95°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 200-662-2
UN: 1090
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Copper (Cu)	<2 ppm
Colour	<10 APHA	Iron (Fe)	<10 ppm
Water	<0.5%	Lead (Pb)	<5 ppm
Residue after evaporation	<50 ppm	Magnesium (Mg)	<1 ppm
Substances		Potassium (K)	<1 ppm
reducing $KMnO_4$	<0.005%	Sodium (Na)	<5 ppm
Calcium (Ca)	<1 ppm	Zinc (Zn)	<1 ppm

Acetone
Technical

packaging		Mfr. No
2.5 ℓ	Glass bottle	A/0520/17
2.5 ℓ	Coated Glass bottle	A/0520/PB17
25 ℓ	Metal drum	A/0520/25

C_3H_6O
CAS: 67-64-1
MW: 58.08
Density at 20°C: 0.790
Boiling point: 56°C
Melting point: -95°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 200-662-2
UN: 1090
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280,
P305+P351+P338, P210, P240

Assay (CG): > 98%

Acetonitrile NEW — Optima
for LC/MS analysis

packaging		Mfr. No
500 mℓ	Glass bottle	A955-500
1 ℓ	Glass bottle	A955-1
2.5 ℓ	Glass bottle	A955-212
4 ℓ	Glass bottle	A955-4

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.785
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): <99.9%

Guaranteed analysis

Acidity	0.008 meq/g	Iron (Fe)	<5 ppb
Alkalinity	<0.0006 meq/g	Lead (Pb)	<5 ppb
Water	<0.01%	Magnesium (Mg)	<10 ppb
Residue after evaporation	<0.8 ppm	Manganese (Mn)	<5 ppb
Aluminium (Al)	<25 ppb	Nickel (Ni)	<5 ppb
Barium (Ba)	<5 ppb	Potassium (K)	<10 ppb
Cadmium (Cd)	<5 ppb	Propan--1-ol	<5 ppb
Calcium (Ca)	<25 ppb	Sodium (Na)	<50 ppb
Chromium (Cr)	<5 ppb	Tin (Sn)	<5 ppb
Cobalt (Co)	<5 ppb	Zinc (Zn)	<10 ppb
Copper (Cu)	<5 ppb		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

190 nm	: <1 A.U.	280 nm	<0.005 A.U.
195 nm	<0.15 A.U.	LC/MS at Negative Mode as Aldicarb	: < 50 ppb
200 nm	<0.05 A.U.		
205 nm	<0.04 A.U.	LC/MS at Positive Mode as Reserpine	: < 50 ppb
210 nm	<0.03 A.U.		
215 nm	: <0.025 A.U.	LC/UV Gradient (single max peak) at 210nm	: <0.002 A.U.
220 nm	<0.015 A.U.		
225 nm	: <0.015 A.U.	LC/UV Gradient (single max peak) at 254nm	: <0.0005 A.U.
230 nm	<0.01 A.U.		
254 nm	<0.005 A.U.		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.
Filtered to 0.2µm.

LC/MS Solvents Starter kit NEW — Optima
for LC/MS analysis

packaging		Mfr. No
Box	Glass bottle	LCMSKIT

Containing acetonitrile, methanol, water and iso-propanol (1ℓ of each) for LC/MS analysis plus pre-treated empty bottle for blend

Acetonitrile — Certified
for HPLC-MS

packaging		Mfr. No
1 ℓ	Glass bottle	A/0638/15
2.5 ℓ	Glass bottle	A/0638/17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity	<0.0002 meq/g	Iron (Fe)	<0.01 ppm
Alkalinity	<0.0001 meq/g	Lead (Pb)	<0.01 ppm
Water	<0.01%	Magnesium (Mg)	<0.01 ppm
Residue after evaporation	<2 ppm	Manganese (Mn)	<0.01 ppm
Aluminium (Al)	<0.05 ppm	Nickel (Ni)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Potassium (K)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Propan--1-ol	<0.01 ppm
Calcium (Ca)	<0.01 ppm	Sodium (Na)	<0.05 ppm
Chromium (Cr)	<0.01 ppm	Tin (Sn)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Zinc (Zn)	<0.01 ppm
Copper (Cu)	<0.01 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.03 A.U.	Gradient (max eluted peak)	<0.2 mA.U.
230 nm	<0.005 A.U.	LC/MS Gradient Suitability	: Pass test
254 nm	<0.005 A.U.		

Gradient analysis:
Absorbance of the largest eluted peak: <0.2 mA.U.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 2 mℓ / min
Wavelength 254 nm
Solvent A: Water
Solvent B: Acetonitrile
Gradient: linear 95% /5% B 100% B during 20 min.
Lot analysis on the label.
This product has been tested on an LC-MS instrument to ensure suitability.
Filtered to 0.2 µm.

Acetonitrile NEW — Certified UHPLC
for UHPLC gradient grade analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/0650/PB15
2.5 ℓ	Coated Glass bottle	A/0650/PB17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	0.0002 meq/g	Residue after evaporation	<1 ppm
Water	<0.01%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

195 nm	<0.1 A.U.	230 nm	<0.005 A.U.
200 nm	<0.05 A.U.	240 nm	<0.005 A.U.
210 nm	<0.02 A.U.	250 nm	<0.005 A.U.
220 nm	<0.01 A.U.		

Gradient analysis:
Absorbance of the largest eluted peak at 210nm: <2mA.U.
Absorbance of the largest eluted peak at 220nm: <0.1mA.U.
Baseline Drift at 220nm: <8mA.U.
Conditions:
Column: C18 Reverse phase
Wavelenght:210nm
Wavelenght:220nm
Solvent A: Water
Solvent B: Acetonitrile
Gradient: Linear Gradient from 95% A/5%B to 100% B
Suitable for UHPLC instrument .
Lot analysis on the label.
Filtered to 0.1µm

UHPLC Solvents starter kit NEW — Certified UHPLC
for UHPLC gradient grade analysis

packaging		Mfr. No
Box	Coated Glass bottle	UHPLCKIT

Containing acetonitrile, methanol, water (1ℓ of each) for UHPLC gradient analysis also includes UHPLC solvents brochure
Lot analysis on the label

Acetonitrile — Certified Advanced HPLC
HPLC for gradient analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/0632/PB15
2.5 ℓ	Coated Glass bottle	A/0632/PB17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0008 meq/g	Residue after evaporation	<2 ppm
Water	<0.01%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

195 nm	<0.1 A.U.	230 nm	<0.005 A.U.
200 nm	<0.05 A.U.	240 nm	<0.005 A.U.
210 nm	<0.02 A.U.	250 nm	<0.005 A.U.
220 nm	<0.01 A.U.	Drift in gradient baseline	<8 mA.U.

Gradient analysis (30% to 95% of the solvent):
Absorbance of the largest eluted peak: <0.1 mA.U.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 3 mℓ / min
Wavelength 220 nm
Solvent A: Water
Solvent B: Acetonitrile
Gradient: 10 min at 30% solvent B followed by a linear gradient to 95% solvent B over 15 min.
Lot analysis on the label.Filtered to 0.2µ.

Acetonitrile NEW PACK. — Certified, Eur.Ph
HPLC for gradient analysis

packaging		Mfr. No
1 ℓ	Glass bottle	A/0627/15
2.5 ℓ	Glass bottle	A/0627/17
2.5 ℓ	Coated Glass bottle	A/0627/PB17
5 ℓ	Aluminium can	A/0627/21
10 ℓ	Returnable Drum	A/0627/10RSS
25 ℓ	Returnable Drum	A/0627/25RSS
30 ℓ	Returnable Drum	A/0627/30RSS

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0008 meq/g	Residue after evaporation	<2 ppm
Water	<0.01%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

195 nm	<0.1 A.U.	230 nm	<0.005 A.U.
200 nm	<0.05 A.U.	240 nm	<0.005 A.U.
210 nm	<0.02 A.U.	250 nm	<0.005 A.U.
220 nm	<0.01 A.U.	Gradient (max eluted peak).	<0.01 A.U.

Gradient analysis:
Absorbance of the largest eluted peak <0.01 AU.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 2 mℓ / min
Wavelength 210 nm
Absorbance range: 0-0.32 AU.
Solvent A: Water
Solvent B: Acetonitrile
Gradient: linear 95% /5% B 100% B during 20 min.
Lot analysis on the label.
Filtered to 0.2 µm.

Acetonitrile — Certified
for HPLC-RMN with low propionitrile level

packaging		Mfr. No
1 ℓ	Glass bottle	A/0636/15
2.5 ℓ	Glass bottle	A/0636/17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0008 meq/g	Residue after evaporation	<2 ppm
Water	<0.01%	Proprionitrile	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

195 nm	<0.1 A.U.	230 nm	<0.005 A.U.
200 nm	<0.05 A.U.	240 nm	<0.005 A.U.
210 nm	<0.02 A.U.	250 nm	<0.005 A.U.
220 nm	<0.01 A.U.		

Gradient analysis:
Absorbance of the largest eluted peak: <0.01A.U.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 2 mℓ / min
Wavelength 210 nm
Solvent A: Water
Solvent B: Acetonitrile
Gradient: linear 95% /5% B 100% B during 20 min.
Lot analysis on the label.
Filtered to 0.2 µm.

Acetonitrile NEW PACK. — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	A/0626/15
2.5 ℓ	Glass bottle	A/0626/17
2.5 ℓ	Coated Glass bottle	A/0626/PB17
5 ℓ	Aluminium can	A/0626/21
10 ℓ	Returnable Drum	A/0626/10RSS
25 ℓ	Returnable Drum	A/0626/25RSS
30 ℓ	Returnable Drum	A/0626/30RSS

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis
Acidity / Alkalinity <0.0008 meq/g
Residue after evaporation <2 ppm
Water <0.05%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
230 nm <0.05 A.U.
240 nm <0.015 A.U.
250 nm <0.01 A.U.
260 nm <0.005 A.U.
270 nm <0.005 A.U.
280 nm <0.005 A.U.
290 nm <0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Acetonitrile — Certified
HPLC for fluorescence detection

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/0630/PB15
2.5 ℓ	Coated Glass bottle	A/0630/PB17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis
Water <0.02%
Residue after evaporation <2 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
200 nm <0.1 A.U.
205 nm <0.05 A.U.
210 nm <0.035 A.U.
220 nm <0.025 A.U.
230 nm <0.01 A.U.
240 nm <0.005 A.U.
250 nm <0.005 A.U.
Fluorescence Pass

Excitation in the range 250-750nm produces no fluorescence emission greater than the solvent natural Raman signal at 350nm excitation.This is equivalent to the emission maximum of approximately 1ppb quinine sulfate.
Lot analysis on the label.
Filtered to 0.2 µm (excluding fluorescence scan).

Acetonitrile — Certified
HPLC for electrochemical detection

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/0635/PB15
2.5 ℓ	Coated Glass bottle	A/0635/PB17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.6%

Guaranteed analysis
Acidity / Alkalinity <0.0008 meq/g
Residue after evaporation <2 ppm
Water <0.05%
Electrochemical test Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
230 nm <0.1 A.U.
240 nm <0.015 A.U.
250 nm <0.01 A.U.
260 nm <0.008 A.U.
270 nm <0.006 A.U.
280 nm <0.005 A.U.

Purified then tested by HPLC-EC to show low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

Acetonitrile — Primar
for trace metal analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	A/0624/17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis
Acidity / Alkalinity <0.0005 meq/g
Colour <5 APHA
Water <0.05%
Residue after evaporation <2 ppm
Aluminium (Al) <0.02 ppm
Barium (Ba) <0.005 ppm
Cadmium (Cd) <0.005 ppm
Calcium (Ca) <0.05 ppm
Chromium (Cr) <0.005 ppm
Cobalt (Co) <0.005 ppm
Copper (Cu) <0.01 ppm
Iron (Fe) <0.05 ppm
Lead (Pb) <0.005 ppm
Lithium (Li) <0.005 ppm
Magnesium (Mg) <0.02 ppm
Manganese (Mn) <0.005 ppm
Molybdenum (Mo) <0.005 ppm
Nickel (Ni) <0.005 ppm
Potassium (K) <0.05 ppm
Propan--1-ol <0.005 ppm
Sodium (Na) <0.2 ppm
Strontium (Sr) <0.005 ppm
Titanium (Ti) <0.005 ppm
Total phosphorus (P) <0.02 ppm
Total silicon (Si) <0.02 ppm
Total sulphur (S) <0.1 ppm
Vanadium (V) <0.005 ppm
Zinc (Zn) <0.01 ppm
Allyl alcohol <0.005%
Methanol <0.005%
Proprionitrile <0.05%

Acetonitrile — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	A/0623/15
2.5 ℓ	Glass bottle	A/0623/17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Guaranteed analysis
Water <0.1%
Residue after evaporation <2 ppm
GC (ECD) Analysis Pass
GC (FID) Analysis Pass
GC (NPD) analysis Pass

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ heptachlo-reoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile:
(1) 50°C for 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Acetonitrile
for DNA synthesis and protein sequencing

packaging		Mfr. No
1 ℓ	Glass bottle	A/0628/15
2.5 ℓ	Glass bottle	A/0628/17
2.5 ℓ	Coated Glass bottle	A/0628/PB17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.9%

Guaranteed analysis
Alkalinity <0.00006 meq/g
Acidity <0.00015 meq/g
Water <0.003%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
190 nm : <1 A.U.
200 nm <0.05 A.U.
230 nm <0.01 A.U.
250 nm <0.005 A.U.

Acetonitrile
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Glass bottle	A/0622/PB15
2.5 ℓ	Glass bottle	A/0622/PB17

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Guaranteed analysis
Water <0.01%
Residue after evaporation <2 ppm

Acetonitrile NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/0621/PB15
2.5 ℓ	Coated Glass bottle	A/0621/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	A/0621/21
25 ℓ	Metal drum	A/0621/25
200 ℓ	Metal drum	A/0621/27

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis
Acidity / Alkalinity <0.0008 meq/g
Colour <10 APHA
Water <0.1%
Residue after evaporation <10 ppm
Calcium (Ca) <0.05 ppm
Copper (Cu) <0.05 ppm
Iron (Fe) <0.2 ppm
Lead (Pb) <0.05 ppm
Magnesium (Mg) <0.05 ppm
Potassium (K) <0.05 ppm
Sodium (Na) <1 ppm
Zinc (Zn) <0.5 ppm

Typical analysis
Aluminium (Al) <0.02 ppm
Barium (Ba) <0.02 ppm
Cadmium (Cd) <0.02 ppm
Chromium (Cr) <0.02 ppm
Cobalt (Co) <0.02 ppm
Lithium (Li) <0.02 ppm
Manganese (Mn) <0.02 ppm
Molybdenum (Mo) <0.02 ppm
Nickel (Ni) <0.02 ppm
Total silicon (Si) <0.02 ppm
Strontium (Sr) <0.02 ppm
Titanium (Ti) <0.02 ppm
Vanadium (V) <0.02 ppm

Lot analysis on the label.

Acetonitrile NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/0620/PB08
2.5 ℓ	Coated Glass bottle	A/0620/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	A/0620/21
25 ℓ	Metal drum	A/0620/25
200 ℓ	Metal drum	A/0620/27

C_2H_3N
CAS: 75-05-8
MW: 41.04
Density at 20°C: 0.781
Boiling point: 81 to 82°C
Melting point: -46°C
Flash point: 2°C
ADR/RID: 3, II

EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H319, H332, H302, H312
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Assay (CG): >99%

Guaranteed analysis
Acidity / Alkalinity <0.001 meq/g
Colour <20 APHA
Water <0.3%
Residue after evaporation <50 ppm
Calcium (Ca) <1 ppm
Copper (Cu) <2 ppm
Iron (Fe) <2 ppm
Lead (Pb) <2 ppm
Magnesium (Mg) <0.5 ppm
Potassium (K) <1 ppm
Sodium (Na) <5 ppm
Zinc (Zn) <2 ppm

Acetonitrile with 0.1% formic acid (v/v) NEW — Optima
for LC/MS analysis

packaging		Mfr. No
500 mℓ	Glass bottle	LS120-500
1 ℓ	Glass bottle	LS120-1
2.5 ℓ	Glass bottle	LS120-212
4 ℓ	Glass bottle	LS120-4

Density at 20°C: 0.781
Flash point: 6°C
ADR/RID: 3, II
EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute

Tox. 4, Eye Irrit. 2
H225, H302, H312, H332, H319
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Guaranteed analysis
Assay (v/v) : 0.095 to 0.105%
Colour <10 APHA
Water <0.01%
Residue after evaporation <1 ppm
Aluminium (Al) <25 ppb
Calcium (Ca) <50 ppb
Copper (Cu) <10 ppb
Iron (Fe) <10 ppb
Lead (Pb) <10 ppb
Magnesium (Mg) <10 ppb
Manganese (Mn) <10 ppb
Nickel (Ni) <10 ppb
Potassium (K) <20 ppb
Propan--1-ol <10 ppb
Sodium (Na) <50 ppb
Zinc (Zn) <20 ppb

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
210 nm <1.3 A.U.
220 nm <1.25 A.U.
230 nm <0.75 A.U.
254 nm <0.03 A.U.
LC/MS Gradient Suitability : Pass test

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.
Filtered to 0.2µm.

Acetonitrile with 0.1% formic acid (v/v) NEW — Certified
HPLC for gradient analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	FE/1100/17

Density at 20°C: 0.781
Flash point: 6°C
ADR/RID: 3, II
EINECS: 200-835-2
UN: 1648
GHS: Flam. Liq. 2, Acute

Tox. 4, Eye Irrit. 2
H225, H302, H312, H332, H319
P280, P302+P352,
P301+P312, P304+P340,
P305+P351+P338, P210, P240

Guaranteed analysis

Residue after evaporation ..... <=1 ppm
Formic acid (% v/v) .... : 0.095 to 0.105%
Gradient analysis at 254 nm . : <0.01 A.U.

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<1.3 A.U.	250 nm	<0.06 A.U.
230 nm	<0.8 A.U.	254 nm	<0.03 A.U.
240 nm	<0.3 A.U.	260 nm	<0.01 A.U.

Lot analysis on the label.
Filtered to 0.2µm.

Acetonitrile with 0.1% trifluoroacetic acid (v/v) NEW — Optima
for LC/MS analysis

packaging		Mfr. No
500 mℓ	Glass bottle	LS121-500
1 ℓ	Glass bottle	LS121-1
2.5 ℓ	Glass bottle	LS121-212
4 ℓ	Glass bottle	LS121-4

CAS: 76-05-1
Density at 20°C: 0.781
Boiling point: 82°C
Melting point: -50°C
Flash point: 6°C
ADR/RID: 3, II
EINECS: 200-929-3

UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H302, H312, H319, H332
P280, P301+P312,
P304+P341, P302+P352,
P305+P351+P338, P210, P240

Guaranteed analysis

Assay (v/v)	: 0.095 to0.105%	Lead (Pb)	<10 ppb
Colour	<10 APHA	Magnesium (Mg)	<10 ppb
Water	<0.01%	Manganese (Mn)	<10 ppb
Residue after evaporation	<1 ppm	Nickel (Ni)	<10 ppb
Aluminium (Al)	<25 ppb	Potassium (K)	<20 ppb
Calcium (Ca)	<50 ppb	Propan--1-ol	<10 ppb
Copper (Cu)	<10 ppb	Sodium (Na)	<50 ppb
Iron (Fe)	<10 ppb	Zinc (Zn)	<20 ppb

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<0.6 A.U.	254 nm	<0.03 A.U.
220 nm	<0.55 A.U.	LC/MS Gradient Suitability	: Pass test
230 nm	<0.4 A.U.		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.
Filtered to 0.2µm.

Acetonitrile with 0.1% trifluoroacetic acid (v/v) NEW — Certified
HPLC for gradient analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	FE/0200/17

CAS: 76-05-1
Density at 20°C: 0.781
Boiling point: 82°C
Melting point: -50°C
Flash point: 6°C
ADR/RID: 3, II
EINECS: 200-929-3

UN: 1648
GHS: Flam. Liq. 2, Acute
Tox. 4, Eye Irrit. 2
H225, H302, H312, H319, H332
P280, P301+P312,
P304+P341, P302+P352,
P305+P351+P338, P210, P240

Guaranteed analysis

Residue after evaporation ..... <=1 ppm
Gradient analysis at 254 nm . : <0.01 A.U.
Trifluoroacetic acid (% v/v) ..... : 0.095 to 0.105%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

190 nm	: <1 A.U.	240 nm	<0.15 A.U.
200 nm	<0.5 A.U.	250 nm	<0.05 A.U.
210 nm	<0.36 A.U.	254 nm	<0.03 A.U.
230 nm	<0.3 A.U.	260 nm	<0.01 A.U.

Lot analysis on the label.
Filtered to 0.2µm.

Acetophenone — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500	Coated Glass bottle	A/0640/PB08

$C_6H_5COCH_3$
CAS: 98-86-2
MW: 120.15
Density at 20°C: 1.03
Boiling point: 202°C
Melting point: 19 to 20°C

Flash point: 76°C
EINECS: 202-708-7
GHS: Acute Tox. 4, Eye Irrit. 2
H302, H319
P280, P302+P352,
P301+P312, P305+P351+P338

Assay (CG): >99%

2-Acetoxybenzoic acid
See Acetylsalicylic acid, page 23

Acetylacetone — Certified AR
for analysis

packaging		Mfr. No
100 mℓ	Coated Glass bottle	A/0802/PB05

$C_5H_8O_2$
CAS: 123-54-6
MW: 100.12
Density at 20°C: 0.975
Boiling point: 133 to 135°C
Melting point: -23°C
Flash point: 35.5°C

ADR/RID: 3, 6.1, III
EINECS: 204-634-0
UN: 2310
GHS: Flam. Liq. 3, Acute Tox. 4
H226, H302
P280, P301+P312, P210

Assay (CG): >99%

Guaranteed analysis

Colour	<20 APHA	Lead (Pb)	<1 ppm
Water	<0.1%	Magnesium (Mg)	<0.1 ppm
Residue after evaporation	<500 ppm	Potassium (K)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Sodium (Na)	<2 ppm
Copper (Cu)	<1 ppm	Zinc (Zn)	<1 ppm
Iron (Fe)	<1 ppm		

Typical analysis

Aluminium (Al)	<0.05 ppm	Molybdenum (Mo)	<0.05 ppm
Barium (Ba)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Cadmium (Cd)	<0.05 ppm	Strontium (Sr)	<0.05 ppm
Chromium (Cr)	<0.05 ppm	Titanium (Ti)	<0.05 ppm
Cobalt (Co)	<0.05 ppm	Total silicon (Si)	<0.05 ppm
Lithium (Li)	<0.05 ppm	Vanadium (V)	<0.05 ppm
Manganese (Mn)	<0.05 ppm		

Lot analysis on the label

Acetylacetone — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/0800/PB08

$C_5H_8O_2$
CAS: 123-54-6
MW: 100.12
Density at 20°C: 0.975
Boiling point: 133 to 135°C
Melting point: -23°C
Flash point: 35.5°C

ADR/RID: 3, 6.1, III
EINECS: 204-634-0
UN: 2310
GHS: Flam. Liq. 3, Acute Tox. 4
H226, H302
P280, P301+P312, P210

Assay (CG): >98%

Guaranteed analysis

Colour	<30 APHA	Lead (Pb)	<5 ppm
Water	<0.5%	Magnesium (Mg)	<0.5 ppm
Residue after evaporation	<100 ppm	Potassium (K)	<0.5 ppm
Calcium (Ca)	<2 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<5 ppm	Zinc (Zn)	<0.5 ppm
Iron (Fe)	<5 ppm		

Acetyl chloride — Certified AR
for analysis

packaging		Mfr. No
100 mℓ	Coated Glass bottle	A/0920/PB05
500 mℓ	Coated Glass bottle	A/0920/PB08

C_2H_3ClO
CAS: 75-36-5
MW: 78.50
Density at 20°C: 1.1
Boiling point: 51°C
Melting point: -112°C
Flash point: 4°C
ADR/RID: 3, 8, II
EINECS: 200-865-6

UN: 1717
GHS: Flam. Liq. 2, Skin Corr. 1B, Eye Dam. 1
H225, H314, EUH014
P301+P330+P331, P280,
P305+P351+P338, P310,
P402+P404, P301+P312,
P210, P240

Assay: >99%

Guaranteed analysis

Colour	<20 APHA	Magnesium (Mg)	<2 ppm
Residue after evaporation	<0.01%	Potassium (K)	<2 ppm
Calcium (Ca)	<2 ppm	Sodium (Na)	<2 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<2 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm

Lot analysis on the label.

Acetyl chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/0880/PB08

C_2H_3ClO
CAS: 75-36-5
MW: 78.50
Density at 20°C: 1.1
Boiling point: 51°C
Melting point: -112°C
Flash point: 4°C
ADR/RID: 3, 8, II
EINECS: 200-865-6

UN: 1717
GHS: Flam. Liq. 2, Skin Corr. 1B, Eye Dam. 1
H225, H314, EUH014
P301+P330+P331, P280,
P305+P351+P338, P310,
P402+P404, P301+P312,
P210, P240

Assay: >98%

Guaranteed analysis

Residue after evaporation	<0.05%	Potassium (K)	<10 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<10 ppm		

Acetyl chloride
technical

packaging		Mfr. No
5	Ampoule	A/0881/99

C_2H_3ClO
CAS: 75-36-5
MW: 78.50
Density at 20°C: 1.1
Boiling point: 51°C
Melting point: -112°C
Flash point: 4°C
ADR/RID: 3, 8, II
EINECS: 200-865-6

UN: 1717
GHS: Flam. Liq. 2, Skin Corr. 1B, Eye Dam. 1
H225, H314, EUH014
P301+P330+P331, P280,
P305+P351+P338, P310,
P402+P404, P301+P312,
P210, P240

Acetylsalicylic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/0960/53

$C_9H_8O_4$
CAS: 50-78-2
MW: 180.16
Density at 20°C: 1.35
Melting point: 136 to 140°C
Flash point: 250°C
ADR/RID: 6.1, III
EINECS: 200-064-1

UN: 2811
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H301, H335, H315, H319
P301+P310, P261,
P302+P352, P280,
P305+P351+P338

Assay: >99.5%

Guaranteed analysis

Residue after ignition	<0.1%	Lead (Pb)	<10 ppm
Arsenic (As)	<2 ppm	Salicylic acid	<0.05%

OPTIMA® grade for Ultra Trace Elemental analysis

as low as 1-100 ppt level detection, tested up to 65 parameters
For ICP-MS & ICP equipment
Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions.
Certificate of analysis delivered with each bottle.

designation	packsize	package type		Mfr. No	page
Acetic acid glacial	250 mℓ	Pre-cleaned Teflon FEP bottle		A465-250	14
	500 mℓ	Pre-cleaned Teflon FEP bottle		A465-500	14
	1 L	Pre-cleaned Teflon FEP bottle		A465-1	14
Ammonia solution 20%	250 mℓ	Pre-cleaned HDPE bottle		A470-250	33
	500 mℓ	Pre-cleaned HDPE bottle		A470-500	33
	1 L	Pre-cleaned HDPE bottle		A470-1	33
Hydrobromic acid 44-49%	500 mℓ	Pre-cleaned Teflon FEP bottle		A471-500	146
Hydrochloric acid 32-35%	250 mℓ	Teflon PFA bottle		A466-250	147
	500 mℓ	Pre-cleaned Teflon PFA bottle		A466-500	147
	1 L	Pre-cleaned Teflon PFA bottle		A466-1	147
Hydrofluoric acid 47-51%	250 mℓ	Pre-cleaned Teflon PFA bottle		A463-250	152
	500 mℓ	Pre-cleaned Teflon PFA bottle		A463-500	152
	1 L	Pre-cleaned Teflon PFA bottle		A463-1	152
Hydrogen peroxyde 30-32%	500 mℓ	Pre-cleaned Teflon FEP bottle		P170-500	154
Nitric acid 67-69%	250 mℓ	Pre-cleaned Teflon FEP bottle		A467-250	215
	500 mℓ	Pre-cleaned Teflon FEP bottle		A467-500	215
	1 L	Pre-cleaned Teflon FEP bottle		A467-1	215
Perchloric acid 65-71%	250 mℓ	Pre-cleaned Teflon FEP bottle		A469-250	228
	500 mℓ	Pre-cleaned Teflon FEP bottle		A469-500	228
	1	Pre-cleaned Teflon FEP bottle		A469-1	228
Sulfuric acid 93-98%	250 mℓ	Pre-cleaned Teflon FEP bottle		A468-250	336
	500 mℓ	Pre-cleaned Teflon FEP bottle		A468-500	336
	1 L	Pre-cleaned Teflon FEP bottle		A468-1	336
Water	500 mℓ	LDPE bottle		W9-500	368
	1 L	LDPE bottle		W9-1	368
	2 L	LDPE bottle		W9-2	368

TRACE METAL ®grade for Trace Metal analysis NEW

at 1 ppb level detection, tested up to 65 parameters
For ICP-MS & ICP equipment
Bottled in class 10 cleanroom conditions.
Lot analysis on the label.

designation	packsize	package type		Mfr. No	page
Acetic acid glacial	500 mℓ	HDPE plastic bottle		A507-P500	14
	1 L	HDPE plastic bottle		A507-P1	14
	2.5 L	HDPE plastic bottle		A507-P212	14
Ammonia solution 20%	500 mℓ	HDPE plastic bottle		A512-P500	33
Hydrochloric acid 34-37%	500 mℓ	HDPE plastic bottle		A508-P500	147
	1 L	HDPE plastic bottle		A508-P1	147
	2.5 L	HDPE plastic bottle		A508-P212	147
Hydrofluoric acid 47-51%	500 mℓ	HDPE plastic bottle		A513-P500	152
Nitric acid 67-69%	500 mℓ	HDPE plastic bottle		A509-P500	216
	1 L	HDPE plastic bottle		A509-P1	216
	2.5 L	HDPE plastic bottle		A509-P212	216
Perchloric acid 65-71%	500 mℓ	HDPE plastic bottle		A511-P500	228
		Coated Glass bottle		P/1292/PB08	228
	1 L	HDPE plastic bottle		A511-P1	228
		Coated Glass bottle		P/1292/PB15	228
	2.5 L	HDPE plastic bottle		A511-P212	228
Sulfuric acid 93-98%	500 mℓ	HDPE plastic bottle		A510-P500	336
	1 L	HDPE plastic bottle		A510-P1	336
	2.5 L	HDPE plastic bottle		A510-P212	336

PRIMAR PLUS ®grade for Trace Metal analysis NEW PACK.

at 1-10 ppb level detection, tested up to 40 parameters
For AAS equipment
Lot analysis on the label.

designation	packsize	package type		Mfr. No	page
Acetic acid glacial	250 mℓ	HDPE Plastic bottle		A/0411/PB07	14
	500 mℓ	HDPE Plastic bottle		A/0411/PB08	14
	1 L	HDPE Plastic bottle		A/0411/PB15	14
	2.5 L	HDPE Plastic bottle		A/0411/PB17	14
Hydrochloric acid 37% d=1.18	250 mℓ	HDPE Plastic bottle		H/1196/PB07	148
	500 mℓ	HDPE Plastic bottle		H/1196/PB08	148
	1 L	HDPE Plastic bottle		H/1196/PB15	148
	2.5 L	HDPE Plastic bottle		H/1196/PB17	148
Nitric acid 68% d =1.42	500 mℓ	HDPE Plastic bottle		N/2272/PB08	216
	1 L	HDPE Plastic bottle		N/2272/PB15	216
	2.5 L	HDPE Plastic bottle		N/2272/PB17	216
Sulfuric acid 94-98% d=1.83	250 mℓ	HDPE Plastic bottle		S/9231/PB07	337
	500 mℓ	HDPE Plastic bottle		S/9231/PB08	337
	1 L	HDPE Plastic bottle		S/9231/PB15	337
	2.5 L	HDPE Plastic bottle		S/9231/PB17	337

Acrylamide
for electrophoresis, unstabilized

packaging		Mfr. No
250 g	Plastic jar	A/0977/50
1 kg	Plastic jar	A/0977/60
25 kg	Plastic keg	A/0977/70

C_3H_5NO
CAS: 79-06-1
MW: 71.08
Density at 30°C: 1.122
Boiling point: 125°C
Melting point: 82 to 86°C
Flash point: 138°C
ADR/RID: 6.1, III
EINECS: 201-173-7
UN: 2074
GHS: Carc. 1B, Muta. 1B,
Repr. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 1
H315, H319, H301, H317, H332, H350, H340, H372, H361f, H312
P301+P310, P280, P302+P350, P201, P308+P313, P260, P304+P340, P305+P351+P338

Acrylamide SLR
extra pure, unstabilized

packaging		Mfr. No
250 g	Plastic jar	A/0976/50

C_3H_5NO
CAS: 79-06-1
MW: 71.08
Density at 30°C: 1.122
Boiling point: 125°C
Melting point: 82 to 86°C
Flash point: 138°C
ADR/RID: 6.1, III
EINECS: 201-173-7
UN: 2074
GHS: Carc. 1B, Muta. 1B,
Repr. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 1
H315, H319, H301, H317, H332, H350, H340, H372, H361f, H312
P301+P310, P280, P302+P350, P201, P308+P313, P260, P304+P340, P305+P351+P338

Assay (CG): >98.5%

Adipic acid
pure

packaging		Mfr. No
500 g	Plastic jar	A/1000/53

$C_6H_{10}O_4$
CAS: 124-04-9
MW: 146.15
Boiling point: 265°C
Melting point: 151 to 153°C
Flash point: 196°C
EINECS: 204-673-3
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99%

Adipoyl chloride
pure

packaging		Mfr. No
5 mℓ	Glass bottle	A/1020/99

$C_6H_8Cl_2O_2$
CAS: 111-50-2
MW: 183.04
Density at 20°C: 1.25
Boiling point: 105 to 107°C
Flash point: 72°C
ADR/RID: 8, 6.1, II
EINECS: 203-876-4
UN: 2922
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H314, H312, H332, H302, EUH029, EUH014
P280, P301+P330+P331, P305+P351+P338, P310, P302+P352, P402+P404, P301+P312, P304+P340

Agar
technical, granular powder

packaging		Mfr. No
100 g	Plastic jar	A/1080/48
500 g	Plastic jar	A/1080/53
10 kg	Plastic keg	A/1080/68

CAS: 9002-18-0
EINECS: 232-658-1

Guaranteed analysis
Identity test ..... : Pass

L-Alanine
pure

packaging		Mfr. No
100 g	Plastic jar	A/1162/48

$C_3H_7NO_2$
CAS: 56-41-7
MW: 89.09
Density at 20°C: 1.401
Melting point: 314 to 316°C
EINECS: 200-273-8

Assay: >99%

Guaranteed analysis
Loss on drying ..... <0.1%
Specific rotation ..... 14° to 16°
Residue after ignition ..... <0.1%
Iron (Fe) ..... <10 ppm
Lead (Pb) ..... <10 ppm

DL-Alanine
pure

packaging		Mfr. No
100 g	Plastic jar	A/1160/48

$C_3H_7NO_2$
CAS: 302-72-7
MW: 89.09
Melting point: 272 to 275°C
EINECS: 206-126-4

Guaranteed analysis
Complies with standard IR spectrum: Pass

Albumin, egg SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	A/1280/48
250 g	Plastic jar	A/1280/50

CAS: 9006-50-2
Density at 20°C: 1.0
Melting point: 61°C

Guaranteed analysis
Identity test ..... : Pass

Albumin, bovine (fraction V) SLR
extra pure, powder

packaging		Mfr. No
25 g	Plastic jar	A/1278/46

CAS: 9048-46-8
EINECS: 232-936-2

Guaranteed analysis
Loss on drying ..... <6%
Protein content ..... : >96%
pH (aqueous solution 1%) ..... 6 to 8

Alizarin C.I. 58000
pure, indicator grade

packaging		Mfr. No
10 g	Glass jar	A/1460/45

$C_{14}H_8O_4$
CAS: 72-48-0
MW: 240.22
Boiling point: 430°C
Melting point: 287 to 289°C
EINECS: 200-782-5
GHS: Acute Tox. 4
H302
P301+P312

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

pH 11.0-13.0 pink to violet.

Alizarin fluorine blue
See 3-Aminomethylalizarin-NN-diacetic acid, page 32

Alizarin red S, C.I.58005
pure

packaging		Mfr. No
25 g	Glass jar	A/1520/46

$C_{14}H_7NaO_7S$
CAS: 130-22-3
MW: 342.26
EINECS: 204-981-8

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

Alkyd resin
pure, solution 70 % wt

packaging		Mfr. No
1 ℓ	Glass bottle	A/1552/15

Density at 20°C: 0.96
Flash point: 41°C
ADR/RID: 3, III
UN: 1866
GHS: Flam. Liq. 3, Asp. Tox. 1, Aquatic Chronic 2
H226, H304, H411
P301+P310, P331, P280, P210, P240, P273

Guaranteed analysis
Complies with standard IR spectrum: Pass

Allylthiourea
pure, Determination of biological oxygen demand in water

packaging		Mfr. No
50 g	Plastic jar	A/1566/47

$C_4H_8N_2S$
CAS: 109-57-9
MW: 116.19
Melting point: >70°C
ADR/RID: 6.1, III
EINECS: 203-683-5
UN: 2811
GHS: Acute Tox. 3
H301
P264, P270, P301+P310, P280

Guaranteed analysis
Melting Point tested ..... >70°C

Almond oil SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	A/1565/05

Guaranteed analysis
Identity test ..... : Pass

alpha-Amylase bacterial
technical, 50-100 units/mg

packaging		Mfr. No
5 g	Glass jar	A/7190/44

CAS: 9000-85-5
EINECS: 232-560-9
GHS: Resp. Sens. 1
H334
P261, P304+P341, P342+P311

Guaranteed analysis
Complies with standard IR spectrum: Pass

Alumina
See "Aluminium oxide, page 30

Aluminium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8000/05
500 mℓ	HDPE Plastic bottle	J/8000/08

ADR/RID: 8, II
EINECS: 236-751-8
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Aluminium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8206/08

ADR/RID: 8, II
EINECS: 236-751-8
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Aluminium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8205/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Aluminium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLAL22Y
250 mℓ	Plastic bottle	SPPLAL22T
500 mℓ	Plastic bottle	SPPLAL22X

ADR/RID: 8, II
EINECS: 236-751-8
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H315, H319
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Aluminium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLAL12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Aluminium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLAL23Y
500 mℓ	Plastic bottle	SPPLAL23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Aluminium standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLAL13X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Aluminium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLAL22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Aluminium foil — SLR
extra pure, approx. 0.1 mm thick

packaging		Mfr. No
250 g	Plastic jar	A/1570/50
500 g	Plastic jar	A/1570/53

Al
CAS: 7429-90-5
MW: 26.97
Density at 20°C: 2.7
Boiling point: 2327°C
Melting point: 660°C
ADR/RID: 4.3/II
EINECS: 231-072-3

Guaranteed analysis
Identity test ..... : Pass

Aluminium thin sheet — SLR
extra pure, approx. 0.5 mm thick

packaging		Mfr. No
250 g	Plastic jar	A/1690/50

Al
CAS: 7429-90-5
MW: 26.97
Density at 20°C: 2.7
Boiling point: 2327°C
Melting point: 660°C
ADR/RID: 4.3/II
EINECS: 231-072-3

Guaranteed analysis
Identity test ..... : Pass

Aluminium powder — SLR
extra-pure, powder fine

packaging		Mfr. No
250 g	Glass jar	A/1605/50
500 g	Glass jar	A/1605/53

Al
CAS: 7429-90-5
MW: 26.97
Density at 20°C: 27.02
Boiling point: 2327°C
Melting point: 660°C
ADR/RID: 4.3, II
EINECS: 231-072-3
UN: 1396
GHS: Flam. Sol. 1, Water-react. 2
H228, H261
P402+P404, P280, P231+P232, P210, P240

Guaranteed analysis
Identity test ..... : Pass

Aluminium powder — SLR
extra-pure, coarse (grease free)

packaging		Mfr. No
250 g	Glass jar	A/1610/50
500 g	Glass jar	A/1610/53

Al
CAS: 7429-90-5
MW: 26.97
Density at 20°C: 27.02
Boiling point: 2327°C
Melting point: 660°C
ADR/RID: 4.3, II
EINECS: 231-072-3
UN: 1396
GHS: Pyr. Sol. 1, Water-react. 2
H261, H250
P210, P370+P378, P402

Guaranteed analysis
Identity test ..... : Pass

Aluminium metal flake
technical

packaging		Mfr. No
250 g	Plastic jar	A/1600/50

Al
CAS: 7429-90-6
MW: 26.97
Boiling point: 2327°C

Guaranteed analysis
Identity test ..... : Pass

Aluminium metal wire — Certified AR
for analysis, 1.0 mm diameter - 25 mtr

packaging		Mfr. No
COIL	Plastic jar	A/1810/99

Al
CAS: 7429-90-5
MW: 26.97
Density at 20°C: 2.7
Boiling point: 2327°C
Melting point: 660°C
EINECS: 231-072-3

Assay: >99.9%

Guaranteed analysis

Copper (Cu)	<50 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<40 ppm	Total silicon (Si)	<50 ppm
Manganese (Mn)	<20 ppm	Insoluble Acids	<0.005%

Lot analysis on the label

Aluminium ammonium sulfate dodecahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/1880/53

$NH_4Al(SO_4)_2.12H_2O$
CAS: 7784-26-1
MW: 453.33
Density at 20°C: 1.64
Boiling point: 200°C
Melting point: 93.5°C
EINECS: 232-055-3
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P280, P305+P351+P338

Assay: 99 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	>3	Nitrate (NO_3)	<0.001%
Calcium (Ca)	<20 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<5 ppm	Sodium (Na)	<50 ppm
Iron (Fe)	<5 ppm	n-Butyl formate	<0.002%
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Aluminium ammonium sulfate dodecahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	A/1840/60

$NH_4Al(SO_4)_2.12H_2O$
CAS: 7784-26-1
MW: 453.33
Density at 20°C: 1.64
Boiling point: 200°C
Melting point: 93.5°C
EINECS: 232-055-3
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Potassium (K)	<2000 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<100 ppm
Iron (Fe)	<20 ppm	n-Butyl formate	<0.005%
Lead (Pb)	<20 ppm	Zinc (Zn)	<50 ppm
Magnesium (Mg)	<50 ppm		

Aluminium chloride anhydrous
pure

packaging		Mfr. No
500 g	Glass bottle	A/2000/53

$AlCl_3$
CAS: 7446-70-0
MW: 133.35
Density at 20°C: 2.44
Melting point: 194°C
ADR/RID: 8, II
EINECS: 231-208-1
UN: 1726
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Iron (Fe)	<500 ppm	Sulfate (SO_4)	<0.01%

Aluminium chloride hexahydrate — SLR, Eur.Ph., BP, USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/1960/53

$AlCl_3.6H_2O$
CAS: 7784-13-6
MW: 241.44
Density at 20°C: 2.39
ADR/RID: 8/II
EINECS: 231-208-1
UN: 1726
GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Magnesium (Mg)	<100 ppm
Copper (Cu)	<50 ppm	Potassium (K)	<100 ppm
Iron (Fe)	<50 ppm	Sodium (Na)	<100 ppm
Lead (Pb)	<50 ppm	Zinc (Zn)	<100 ppm

Aluminium hydroxide dried — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	A/2080/60

$Al(OH)_3$
CAS: 21645-51-2
MW: 78.00
Density at 20°C: 2.42
Melting point: 300°C
EINECS: 244-492-7
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis

Iron (Fe)	<100 ppm	n-Butyl formate	<0.01%
Sodium (Na)	<3000 ppm		

Aluminium nitrate nonahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/2202/53
1 kg	Plastic jar	A/2202/60

$Al(NO_3)_3.9H_2O$
CAS: 7784-27-2
MW: 375.13
Melting point: 73°C
ADR/RID: 5.1, III
EINECS: 236-751-8
UN: 1438
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2
H272, H315, H319
P302+P352, P280, P305+P351+P338, P210

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	>2	Potassium (K)	<10 ppm
Ammonia (NH_3)	<0.02%	Sodium (Na)	<50 ppm
Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<5 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Silver (Ag)	<2 ppm	Lithium (Li)	<2 ppm
Arsenic (As)	<1 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Aluminium nitrate nonahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	A/2200/50
500 g	Plastic jar	A/2200/53
1 kg	Plastic jar	A/2200/60
5 kg	Plastic jar	A/2200/65

$Al(NO_3)_3.9H_2O$
CAS: 7784-27-2
MW: 375.13
Melting point: 73°C
ADR/RID: 5.1, III
EINECS: 236-751-8

UN: 1438
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2
H272, H315, H319
P302+P352, P280, P305+P351+P338, P210

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm

Aluminium oxide, acid Brockmann type I
For chromatography, "Camag" 100-250 mesh

packaging		Mfr. No
500 g	Plastic jar	A/2370/53

Al_2O_3
CAS: 1344-28-1
MW: 101.96

Boiling point: 2980°C
Melting point: 2000°C
EINECS: 215-691-6

Guaranteed analysis

pH (10% aq. suspension) ..... : 4 to 5

Acid, pH (4.0- 5.0)

Aluminium oxide, basic Brockmann type I
For chromatography, "Camag" 100-250 mesh

packaging		Mfr. No
500 g	Plastic jar	A/2372/53

Al_2O_3
CAS: 1344-28-1
MW: 101.96

Boiling point: 2980°C
Melting point: 2000°C
EINECS: 215-691-6

Guaranteed analysis

pH (10% aq. suspension) ..... : 9 to 10

Alkaline, pH (9.0- 10.0)

Aluminium oxide, neutral Brockmann type I
For chromatography, "Camag" 100-250 mesh

packaging		Mfr. No
500 g	Plastic jar	A/2374/53

Al_2O_3
CAS: 1344-28-1
MW: 101.96

Boiling point: 2980°C
Melting point: 2000°C
EINECS: 215-691-6

Guaranteed analysis

pH (10% aq. suspension) ..... : 6.5 to 7.5

Neutral, pH (6.5-7.5)

Aluminium oxide, basic Brockmann type II
For chromatography, "Camag" 100-250 mesh

packaging		Mfr. No
500 g	Plastic jar	A/2380/53

Al_2O_3
CAS: 1344-28-1
MW: 101.96

Boiling point: 2980°C
Melting point: 2000°C
EINECS: 215-691-6

Guaranteed analysis

pH (10% aq. suspension) ..... : 9 to 10

Alkaline, pH (9-10)

Aluminium oxide — Certified AR
for analysis, calcined

packaging		Mfr. No
1 kg	Plastic jar	A/2360/60

Al_2O_3
CAS: 1344-28-1
MW: 101.96

Boiling point: 2980°C
Melting point: 2000°C
EINECS: 215-691-6

Guaranteed analysis

Loss on ignition	<0.5%	Sulfate (SO_4)	<0.005%
Iron (Fe)	<50 ppm	n-Butyl formate	<0.005%

Lot analysis on the label.

Aluminium oxide
pure, Desiccating agent

packaging		Mfr. No
500 g	Plastic jar	A/2320/53

Al_2O_3
CAS: 1344-28-1
MW: 101.96

Boiling point: 2980°C
Melting point: 2000°C
EINECS: 215-691-6

Guaranteed analysis

Identity test ..... : Pass

Particle size 3-6 mm.

Aluminium oxide calcined — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/2280/53
1 kg	Plastic jar	A/2280/60

Al_2O_3
CAS: 1344-28-1
MW: 101.96

Boiling point: 2980°C
Melting point: 2000°C
EINECS: 215-691-6

Guaranteed analysis

Identity test ..... : Pass

Aluminium potassium sulfate dodecahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/2400/53
1 kg	Plastic jar	A/2400/60
3 kg	Plastic jar	A/2400/63

$AlK(SO_4)_2.12H_2O$
CAS: 7784-24-9
MW: 474.39
Density at 20°C: 1.757
Melting point: 92°C

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H315, H319, H302
P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Heavy metals	<20 ppm	Sodium (Na)	<100 ppm
Ammonium (NH_4)	<0.2%	n-Butyl formate	<0.002%
Calcium (Ca)	<100 ppm	Total nitrogen (N)	<1000 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<50 ppm
Magnesium (Mg)	<100 ppm		

Aluminium silicate (hydrated)
See Kaolin - light, page 169

Aluminium sulfate hexadecahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/2600/53

$Al_2(SO_4)_3.16H_2O$
CAS: 16828-11-8
MW: 630.39
EINECS: 233-135-0
GHS: Skin Irrit. 2, Eye Dam.

1, STOT SE 3, Aquatic Chronic 3
H412, H335, H318, H315
P280, P273,
P305+P351+P338,
P302+P352, P261

Assay: 98 to 102%

Guaranteed analysis

pH (aqueous solution 5%)	>2.2	Sodium (Na)	<500 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<2 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<10 ppm	Total nitrogen (N)	<200 ppm
Potassium (K)	<20 ppm		

Typical analysis

Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<5 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Aluminium sulfate hexadecahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/2560/53
1 kg	Plastic jar	A/2560/60
5 kg	Plastic keg	A/2560/65

$Al_2(SO_4)_3.16H_2O$
CAS: 16828-11-8
MW: 630.39
EINECS: 233-135-0
GHS: Skin Irrit. 2, Eye Dam.

1, STOT SE 3, Aquatic Chronic 3
H412, H335, H318, H315
P280, P273,
P305+P351+P338,
P302+P352, P261

Assay: >94%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<100 ppm	Total nitrogen (N)	<1000 ppm
Lead (Pb)	<100 ppm	Total phosphorus (P)	<500 ppm
Magnesium (Mg)	<100 ppm	Total silicon (Si)	<200 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<100 ppm

Aluminium sulfate hexadecahydrate
Technical

packaging		Mfr. No
2 kg	Plastic jar	A/2520/61

$Al_2(SO_4)_3.16H_2O$
CAS: 16828-11-8
MW: 630.39
EINECS: 233-135-0
GHS: Skin Irrit. 2, Eye Dam.

1, STOT SE 3, Aquatic Chronic 3
H412, H335, H318, H315
P280, P273,
P305+P351+P338,
P302+P352, P261

Amberjet® 1000H cation — NEW
for Ion chromatography, Gel-strongly acidic, Hydrogen form (size 0.62-0.80mm),

packaging		Mfr. No
500 g	Plastic jar	IE/1012/53

CAS: 69011-20-7
Boiling point: 100°C
GHS: Eye Dam. 1

H318
P280, P305+P351+P338, P310

Guaranteed analysis

Identity test ..... : Pass

Amberlite® IR-120, Cation exchange resin
for Ion chromatography, Gel type (Hydrogen form , strongly acidic)

packaging		Mfr. No
100 g	Plastic jar	IE/1015/48
500 g	Plastic jar	IE/1015/53

Guaranteed analysis

Identity test ..... : Pass

Styrene-DVB Matrix structure.
Premium quality conventional strongly acidic cation exchange resin with 8% DVB by weight, amber in colour and contains a high perfect bead content. The quality of this resin is such that it can be used in standard operations as well as where there is a need for a premium grade gel cation exchange resin.

Amberlite® IR-120, Cation exchange resin
for Ion chromatography, Gel type (Sodium form , strongly acidic)

packaging		Mfr. No
500 g	Plastic jar	IE/1020/53

Guaranteed analysis

Identity test ..... : Pass

Styrene-DVB Matrix structure.
Premium quality conventional strongly acidic cation exchange resin with 8% DVB by weight, amber in colour and contains a high perfect bead content. The quality of this resin is such that it can be used in standard operations as well as where there is a need for a premium grade gel cation exchange resin.

Amberlite® 200, Cation exchange resin
for Ion chromatography, Macroreticular type (Sodium form, strongly acidic)

packaging		Mfr. No
500 g	Plastic jar	IE/1040/53

Guaranteed analysis

Identity test ..... : Pass

Styrene-DVB matrix structure.
Excellent physical stability and resistance to oxidation. Contains approximately 20%DVD by weight, and can be expected to provide at least three times greater resistance to oxidation than conventional gel type cation exchange resin.

Amberlite® IRA-67 chloride
for Ion chromatography, Gel type, free base: weakly basic

packaging		Mfr. No
500 g	Plastic jar	IE/1080/53

Guaranteed analysis

Identity test ..... : Pass

Amberlite® IRA-402, Anion exchange resin
for Ion chromatography, Gel type (Chloride form, strongly basic)

packaging		Mfr. No
500 g	Plastic jar	IE/1050/53

Guaranteed analysis

Identity test ..... : Pass

Styrene-DVB Matrix structure.
Combined with a strong acid cation exchanger it reduces both strong and weak acid concentrations to extremely low levels.Its main use is water demineralisation.

Amberlite® MB-1 (Mixed resin)
for Ion chromatography

packaging		Mfr. No
500 g	Plastic jar	IE/1505/53

Guaranteed analysis

Identity test ..... : Pass

Can be used to remove trace ionic impurities from acrylamide before polymerisation.

Amberlite® MB-6113 (Mixed resin)
for Ion chromatography

packaging		Mfr. No
500 g	Plastic jar	IE/1502/53

GHS: Eye Dam. 1
H318
P280, P305+P351+P338, P310

Guaranteed analysis
Identity test ..... : Pass

Amberlite® FPC3500 cation
for Ion chromatography, Carboxylic functionality, Hydrogen form (size 0.45-0.65mm),

packaging		Mfr. No
100 g	Plastic jar	IE/1046/48

CAS: 950182-46-4

Guaranteed analysis
Identity test ..... : Pass

Amberlyst® 15, Amberlyst exchange resin
for Ion chromatography, Macroreticular type (cation, strongly acidic), dry

packaging		Mfr. No
500 g	Plastic jar	IE/2500/53

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P280, P301+P312, P302+P352, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Amberlyst 15 Matrix structure

Amidosulfonic acid
See Sulfamic acid, page 334

4-Aminophenazone — Certified AR
for analysis

packaging		Mfr. No
25 g	Plastic jar	A/3042/46

$C_{11}H_{13}N_3O$
CAS: 83-07-8
MW: 203.25
Density at 20°C: 0.800
Melting point: 105.5 to 110°C
EINECS: 201-452-3

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H302, H315, H335, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis
Loss on drying ..... <0.5%
Residue after ignition ..... <0.1%
Solution ..... : Pass
Complies with standard IR spectrum: Pass

Lot analysis on the label.

4-Aminophenazone — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	A/3040/46

$C_{11}H_{13}N_3O$
CAS: 83-07-8
MW: 203.25
Density at 20°C: 0.800
Melting point: 105.5 to 110°C
EINECS: 201-452-3

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H302, H315, H335, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Aminobenzene
See Aniline, page 48

4-Aminobenzenesulfonamide
See Sulfanilamide, page 335

4-Aminobenzenesulfonic acid
See Sulfanilic acid 99+ % , page 335

4-Aminobenzoic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	A/2840/48

$C_7H_7NO_2$
CAS: 150-13-0
MW: 137.14
Melting point: 186 to 189°C
EINECS: 205-753-0

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338, P264

Assay: >99%

3-Amino-7-dimethylamino-2-methylphenazine hydrochloride
See Neutral red C.I 50040, page 212

4-Amino-2.3-dimethyl-1-phenyl-3-pyrazolin-5-one
See 4-Aminophenazone, page 32

2-Aminoethanesulfonic acid
See Taurine 99+ % (2-aminoethane-sulfonic acid), page 342

2-Aminoethanol
See Ethanolamine, page 123

3-Aminoethylbenzene
See 2-Phenylethylamine 98.5+ % , page 239

2-Amino-2-(hydroxymethyl)-1.3-propanediol
See Tris(hydroxymethyl) methylamine, page 362

L-2-Amino-3-(4-imidazolyl)propionic acid
See L-Histidine, page 144

3-Aminomethylalizarin-N,N-diacetic acid
pure, indicator grade

packaging		Mfr. No
1 g	Glass jar	A/2930/43

$C_{19}H_{15}NO_8.2H_2O$
CAS: 3952-78-1
MW: 421.35
Melting point: 190°C
EINECS: 223-544-2

Guaranteed analysis
Complies with standard IR spectrum: Pass

Conforming to the IR spectrum of reference.

(2S,3S)-2-Amino-3-methylpentanoic acid
See L-iso-Leucine 99 %, page 182

2-Amino-2-methyl-propan-1-ol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	A/2960/08

$C_4H_{11}NO$
CAS: 124-68-5
MW: 89.14
Density at 20°C: 0.930
Boiling point: 165°C
Melting point: 31 to 32°C
Flash point: 67°C
ADR/RID: 8, III

EINECS: 204-709-8
UN: 3259
GHS: Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 3
H412, H315, H319
P273, P302+P352, P280, P305+P351+P338

Assay (CG): >93%

Guaranteed analysis
Residue after ignition ..... <0.005%

3-Aminophthalhydrazide (Luminol) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 g	Vial	A/3150/43
5 g	Glass jar	A/3150/44

$C_8H_7N_3O_2$
CAS: 521-31-3
MW: 177.16
Melting point: 319 to 320°C
EINECS: 208-309-4
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H302, H315, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

L-2-Aminosuccinamic acid
See L-Asparagine, page 465

L-Aminosuccinic acid
See L-Aspartic acid, page 51

Ammonia solution 20-22% NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
250 mℓ	Pre-cleaned HDPE bottle	A470-250
500 mℓ	Pre-cleaned HDPE bottle	A470-500
1 ℓ	Pre-cleaned HDPE bottle	A470-1

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.920
ADR/RID: 8, III
EINECS: 215-647-6

UN: 2672
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P301+P330+P331, P305+P351+P338, P280, P261

Assay: 20-22%

Guaranteed analysis

Zirconium (Zr)	<10 ppt	Cadmium (Cd)	<10 ppt
Gallium (Ga)	<10 ppt	Calcium (Ca)	<10 ppt
Terbium (Tb)	<10 ppt	Cerium (Ce)	<10 ppt
Indium (In)	<10 ppt	Chromium (Cr)	<10 ppt
Dysprosium (Dy)	<10 ppt	Cobalt (Co)	<10 ppt
Aluminium (Al)	<20 ppt	Copper (Cu)	<10 ppt
Antimony (Sb)	<10 ppt	Erbium (Er)	<10 ppt
Arsenic (As)	<10 ppt	Europium (Eu)	<10 ppt
Barium (Ba)	<10 ppt	Gadolinium (Gd)	<10 ppt
Beryllium (Be)	<10 ppt	Germanium (Ge)	<10 ppt
Bismuth (Bi)	<10 ppt		
Gold (Au)	<10 ppt	Samarium (Sm)	<10 ppt
Holmium (Ho)	<10 ppt	Scandium (Sc)	<10 ppt
Iron (Fe)	<10 ppt	Propan--1-ol	<10 ppt
Lanthanum (La)	<10 ppt	Sodium (Na)	<20 ppt
Lead (Pb)	<10 ppt	Strontium (Sr)	<10 ppt
Lithium (Li)	<10 ppt	Tellurium (Te)	<10 ppt
Lutetium (Lu)	<10 ppt	Thallium (Tl)	<10 ppt
Magnesium (Mg)	<10 ppt	Thorium (Th)	<10 ppt
Manganese (Mn)	<10 ppt	Thulium (Tm)	<10 ppt
Mercury (Hg)	<200 ppt	Tin (Sn)	<10 ppt
Molybdenum (Mo)	<10 ppt	Titanium (Ti)	<10 ppt
Neodymium (Nd)	<10 ppt	Uranium (U)	<10 ppt
Nickel (Ni)	<10 ppt	Vanadium (V)	<10 ppt
Niobium (Nb)	<10 ppt	Ytterbium (Yb)	<10 ppt
Potassium (K)	<10 ppt	Yttrium (Y)	<10 ppt
Praseodymium (Pr)	<10 ppt	Zinc (Zn)	<10 ppt
Rhodium (Rh)	<10 ppt	Rubidium (Rb)	<10 ppt

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Ammonia solution 20-22% NEW — Trace Metal
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE plastic bottle	A512-P500

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.921
ADR/RID: 8, III
EINECS: 215-647-6

UN: 2672
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P301+P330+P331, P305+P351+P338, P280, P261

Assay: 20-22%

Guaranteed analysis

Colour	<10 APHA	Nickel (Ni)	<0.5 ppb
Aluminium (Al)	<1 ppb	Niobium (Nb)	<0.1 ppb
Antimony (Sb)	<0.5 ppb	Palladium (Pd)	<1 ppb
Arsenic (As)	<1 ppb	Platinum (Pt)	<1 ppb
Barium (Ba)	<0.1 ppb	Potassium (K)	<1 ppb
Beryllium (Be)	<0.1 ppb	Praseodymium (Pr)	<0.1 ppb
Bismuth (Bi)	<0.1 ppb	Rhenium (Re)	<1 ppb
Cadmium (Cd)	<0.5 ppb	Rhodium (Rh)	<0.5 ppb
Calcium (Ca)	<1 ppb	Rubidium (Rb)	<0.1 ppb
Cerium (Ce)	<0.1 ppb	Ruthenium (Ru)	<1 ppb
Cesium (Cs)	<0.1 ppb	Samarium (Sm)	<0.1 ppb
Chromium (Cr)	<0.5 ppb	Scandium (Sc)	<0.1 ppb
Cobalt (Co)	<0.5 ppb	Selenium (Se)	<1 ppb
Copper (Cu)	<0.5 ppb	Silver (Ag)	<0.5 ppb
Dysprosium (Dy)	<0.1 ppb	Sodium (Na)	<1 ppb
Erbium (Er)	<0.1 ppb	Strontium (Sr)	<0.1 ppb
Europium (Eu)	<0.1 ppb	Sulfate (SO_4)	<1 ppm
Gadolinium (Gd)	<0.1 ppb	Tellurium (Te)	<0.1 ppb
Gallium (Ga)	<0.1 ppb	Terbium (Tb)	<0.1 ppb
Germanium (Ge)	<0.1 ppb	Thallium (Tl)	<0.1 ppb
Gold (Au)	<0.5 ppb	Thorium (Th)	<0.1 ppb
Hafnium (Hf)	<1 ppb	Thulium (Tm)	<0.1 ppb
Holmium (Ho)	<0.1 ppb	Tin (Sn)	<0.5 ppb
Indium (In)	<0.1 ppb	Titanium (Ti)	<0.5 ppb
Iron (Fe)	<1 ppb	Total chloride (Cl)	<0.5 ppm
Lanthanum (La)	<0.1 ppb	Total phosphorus (P)	<0.5 ppm
Lead (Pb)	<0.1 ppb	Tungsten (W)	<0.1 ppb
Lithium (Li)	<0.1 ppb	Uranium (U)	<0.1 ppb
Lutetium (Lu)	<0.1 ppb	Vanadium (V)	<0.5 ppb
Magnesium (Mg)	<1 ppb	Ytterbium (Yb)	<0.1 ppb
Manganese (Mn)	<0.5 ppb	Yttrium (Y)	<0.1 ppb
Mercury (Hg)	<0.2 ppb	Zinc (Zn)	<0.5 ppb
Molybdenum (Mo)	<0.5 ppb	Zirconium (Zr)	<0.1 ppb
Neodymium (Nd)	<0.1 ppb		

Bottled in class 10 cleanroom conditions.
Lot analysis on the label.

Ammonia solution 20% d=0.92 — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	A/3367/15
2.5 ℓ	Glass bottle	A/3367/17

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.920
ADR/RID: 8, III
EINECS: 215-647-6

UN: 2672
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P301+P330+P331,
P305+P351+P338, P280, P261

Assay: 20 to 22%

Guaranteed analysis

Colour	<10 APHA	Magnesium (Mg)	<0.1 ppm
Density at 20°C	: 0.917 to 0.923	Potassium (K)	<1 ppm
Substances		Sodium (Na)	<2 ppm
reducing $KMnO_4$	<0.001%	Total chloride (Cl)	<0.00005%
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<0.5 ppm
Carbonate (Na_2CO_3)	<0.002%	Total silicon (Si)	<1 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.05 ppm	Pyridine & homologues	<2 ppm

Lot analysis on the label.

Ammonia Solution 20% d=0.92 — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	A/3366/15
5 ℓ	HDPE Plastic bottle	A/3366/21

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.920
ADR/RID: 8, III
EINECS: 215-647-6

UN: 2672
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P301+P330+P331,
P305+P351+P338, P280, P261

Assay: 20 to 22%

Guaranteed analysis

Density at 20°C	: 0.91 to 0.93	Potassium (K)	<10 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<20 ppm
Carbonate (Na_2CO_3)	<0.01%	n-Butyl formate	<0.001%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<1 ppm		

Ammonia solution 25% d=0.91 — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/3360/PB15
2.5 ℓ	Coated Glass bottle	A/3360/PB17

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.910
Boiling point: 38°C
Melting point: -57°C
ADR/RID: 8, III
EINECS: 215-647-6

UN: 2672
GHS: Skin Corr. 1B, Eye
Dam. 1, STOT SE 3, Aquatic
Acute 1
H335, H410, H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P261, P273

Assay: 20 to 30%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<1 ppm
Substances		Sodium (Na)	<5 ppm
reducing $KMnO_4$	<0.001%	Total chloride (Cl)	<0.00005%
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<0.5 ppm
Carbonate (Na_2CO_3)	<0.002%	Total silicon (Si)	<1 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.05 ppm	Pyridine & homologues	<2 ppm
Magnesium (Mg)	<0.1 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.
Ammonia is equivalent to a strength of 13.4M (13.4N).

Ammonia solution 25% d=0.91 — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/3320/PB15
2.5 ℓ	Coated Glass bottle	A/3320/PB17
5 ℓ	HDPE Plastic bottle	A/3320/PB21

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.910
Boiling point: 38°C
Melting point: -57°C
ADR/RID: 8, III
EINECS: 215-647-6

UN: 2672
GHS: Skin Corr. 1B, Eye
Dam. 1, STOT SE 3, Aquatic
Acute 1
H335, H410, H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P261, P273

Assay: 20 to 30%

Guaranteed analysis

Colour	<20 APHA	Potassium (K)	<10 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<20 ppm
Carbonate (Na_2CO_3)	<0.01%	n-Butyl formate	<0.001%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<2 ppm		

Ammonia is equivalent to a strength of 13.4M (13.4N).

Ammonia solution 35% d=0.88 — Certified
for HPLC

packaging		Mfr. No
100 mℓ	Coated Glass bottle	A/3295/PB05

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.88
ADR/RID: 8, III
EINECS: 215-647-6
UN: 2672

GHS: Skin Corr. 1B, Eye
Dam. 1, STOT SE 3, Aquatic
Acute 1
H335, H314, H400
P301+P330+P331, P280,
P305+P351+P338, P310,
P261, P273

Assay: 32 to 36%

Guaranteed analysis

Iron (Fe)	<0.2 ppm	Lead (Pb)	<0.05 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm ..... <0.01 A.U.

Ammonia is equivalent to a strength of 18.1M (18.1N).
Lot analysis on the label.
Filtered to 0.2 µm.

Ammonia solution 35% d=0.88 — Primar
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	A/3290/PB08
1 ℓ	HDPE Plastic bottle	A/3290/PB15

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.88
ADR/RID: 8, III
EINECS: 215-647-6
UN: 2672

GHS: Skin Corr. 1B, Eye
Dam. 1, STOT SE 3, Aquatic
Acute 1
H335, H314, H400
P301+P330+P331, P280,
P305+P351+P338, P310,
P261, P273

Assay: 32 to 36%

Guaranteed analysis

Other organic impurities	: <1 ppm	Manganese (Mn)	<0.005 ppm
Oxygen absorbed	: <0.0002%	Mercury (Hg)	<0.01 ppm
Aluminium (Al)	<0.05 ppm	Molybdenum (Mo)	<0.005 ppm
Arsenic (As)	<0.005 ppm	Nickel (Ni)	<0.005 ppm
Barium (Ba)	<0.01 ppm	Potassium (K)	<0.05 ppm
Cadmium (Cd)	<0.001 ppm	Propan--1-ol	<0.05 ppm
Calcium (Ca)	<0.2 ppm	Strontium (Sr)	<0.005 ppm
Carbonate (Na_2CO_3)	<0.001%	Tin (Sn)	<0.005 ppm
Chromium (Cr)	<0.005 ppm	Titanium (Ti)	<0.005 ppm
Cobalt (Co)	<0.005 ppm	n-Butyl formate	<0.00001%
Copper (Cu)	<0.005 ppm	Total phosphorus (P)	<0.05 ppm
Iron (Fe)	<0.05 ppm	Total sulphur (S)	<0.1 ppm
Lead (Pb)	<0.002 ppm	Vanadium (V)	<0.005 ppm
Lithium (Li)	<0.005 ppm	Zinc (Zn)	<0.01 ppm
Magnesium (Mg)	<0.05 ppm		

Ammonia is equivalent to a strength of 18.1M (18.1N).

Ammonia solution 35% d=0.88
for AAS

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	A/3285/PB17

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.88
ADR/RID: 8, III
EINECS: 215-647-6
UN: 2672

GHS: Skin Corr. 1B, Eye
Dam. 1, STOT SE 3, Aquatic
Acute 1
H335, H314, H400
P301+P330+P331, P280,
P305+P351+P338, P310,
P261, P273

Assay: 32 to 36%

Guaranteed analysis

Cadmium (Cd)	<0.02 ppm	Magnesium (Mg)	<0.02 ppm
Calcium (Ca)	<0.5 ppm	Manganese (Mn)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Nickel (Ni)	<0.01 ppm
Copper (Cu)	<0.05 ppm	Potassium (K)	<0.2 ppm
Iron (Fe)	<0.2 ppm	Sodium (Na)	<0.5 ppm
Lead (Pb)	<0.05 ppm	Zinc (Zn)	<0.1 ppm

Ammonia solution 35% d=0.88
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	A/3222/PB17
5 ℓ	HDPE Plastic bottle	A/3222/21

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.88
ADR/RID: 8, III
EINECS: 215-647-6
UN: 2672

GHS: Skin Corr. 1B, Eye
Dam. 1, STOT SE 3, Aquatic
Acute 1
H335, H314, H400
P301+P330+P331, P280,
P305+P351+P338, P310,
P261, P273

Assay: 32 to 36%

Guaranteed analysis

Colour	<10 APHA	Magnesium (Mg)	<0.1 ppm
Density at 20°C	: 0.88 to 0.89	Manganese (Mn)	<0.01 ppm
Substances		Molybdenum (Mo)	<0.01 ppm
reducing $KMnO_4$	<0.001%	Nickel (Ni)	<0.02 ppm
Aluminium (Al)	<0.1 ppm	Potassium (K)	<1 ppm
Barium (Ba)	<0.01 ppm	Sodium (Na)	<5 ppm
Cadmium (Cd)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Calcium (Ca)	<1 ppm	Titanium (Ti)	<0.01 ppm
Carbonate (Na_2CO_3)	<0.002%	n-Butyl formate	<0.00005%
Chromium (Cr)	<0.02 ppm	Total phosphorus (P)	<0.5 ppm
Cobalt (Co)	<0.01 ppm	Total sulphur (S)	<1 ppm
Copper (Cu)	<0.05 ppm	Vanadium (V)	<0.01 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.05 ppm	Pyridine & homologues	<2 ppm
Lithium (Li)	<0.01 ppm		

Ammonia solution 0.25M — Certified
for HPLC

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/0100/PB08

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.98
Melting point: -2.9°C
ADR/RID: 8, III
EINECS: 215-647-6
UN: 2672

GHS: Skin Corr. 1B, Eye
Dam. 1, STOT SE 3, Aquatic
Acute 1, Aquatic Chronic 1
H314, H335, H410
P301+P330+P331, P280,
P305+P351+P338, P310,
P261, P273

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Drift in gradient baseline ..... <40 mA.U.

Absorbance of the largest eluted peak: <1.5 mA.U.

Ammonia solution 35% d=0.88 — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/3280/PB15
2.5 ℓ	Coated Glass bottle	A/3280/PB17
5 ℓ	HDPE Plastic bottle	A/3280/21
25 ℓ	HDPE Plastic container	A/3280/25

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.88
ADR/RID: 8, III
EINECS: 215-647-6
UN: 2672

GHS: Skin Corr. 1B, Eye
Dam. 1, STOT SE 3, Aquatic
Acute 1
H335, H314, H400
P301+P330+P331, P280,
P305+P351+P338, P310,
P261, P273

Assay: 32 to 36%

Guaranteed analysis

Colour	<10 APHA	Magnesium (Mg)	<0.1 ppm
Density at 20°C	: 0.88 to 0.89	Potassium (K)	<1 ppm
Substances		Sodium (Na)	<5 ppm
reducing $KMnO_4$	<0.001%	Total chloride (Cl)	<0.00005%
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<0.5 ppm
Carbonate (Na_2CO_3)	<0.002%	Total silicon (Si)	<1 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.05 ppm	Pyridine & homologues	<2 ppm

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.
Ammonia is equivalent to a strength of 18.1M (18.1N).

Ammonia solution 35% d=0.88 — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Coated Glass bottle	A/3240/PB15
2.5 ℓ	Coated Glass bottle	A/3240/PB17

$NH_3.H_2O$
CAS: 1336-21-6
MW: 35.05
Density at 20°C: 0.88
ADR/RID: 8, III
EINECS: 215-647-6
UN: 2672

GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3, Aquatic Acute 1
H335, H314, H400
P301+P330+P331, P280, P305+P351+P338, P310, P261, P273

Assay: 32 to 36%

Guaranteed analysis

Colour	<20 APHA	Magnesium (Mg)	<2 ppm
Density at 20°C	: 0.88 to 0.89	Potassium (K)	<10 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<20 ppm
Carbonate (Na_2CO_3)	<0.01%	n-Butyl formate	<0.001%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<2 ppm

Ammonia is equivalent to a strength of 18.1M (18.1N).

Ammonia solution
0.88 SG, 1:2 dilution

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/9015/08

ADR/RID: 8, III
UN: 2672
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3, Aquatic Acute 1

H335, H410, H314
P301+P330+P331, P280, P305+P351+P338, P310, P261, P273

Ammonia-Nitrogen standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASNH3N92Y

CAS: 12125-02-9

Manufactured to a tolerance of ±0.3%.
Check with your local distributor for availability of Spex product

Ammonium standard
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4542/05

Manufactured to a tolerance of ± 1%.

Ammonium acetate — NEW — Optima
for LC/MS analysis

packaging		Mfr. No
50 g	Glass bottle	A114-50

$C_2H_7NO_2$
CAS: 631-61-8
MW: 77.08

Melting point: 110 to 112°C
Flash point: 136°C
EINECS: 211-162-9

Assay: >99%

Guaranteed analysis

Appearance	White fine crystals w/ lumps	Nickel (Ni)	<10 ppb
Water	<1%	Nitrate (NO_3)	<0.001%
Aluminium (Al)	<20 ppb	Potassium (K)	<20 ppb
Calcium (Ca)	<50 ppb	Propan--1-ol	<10 ppb
Copper (Cu)	<10 ppb	Sodium (Na)	<50 ppb
Iron (Fe)	<10 ppb	n-Butyl formate	<0.0005%
Lead (Pb)	<10 ppb	Zinc (Zn)	<20 ppb
Magnesium (Mg)	<10 ppb	Residue after ignition	<0.01%
Manganese (Mn)	<10 ppb		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
LC/MS Gradient Suitability : Pass test

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.

Ammonium acetate — Certified
for HPLC

packaging		Mfr. No
250 g	Plastic jar	A/3446/50

$C_2H_7NO_2$
CAS: 631-61-8
MW: 77.08

Melting point: 110 to 112°C
Flash point: 136°C
EINECS: 211-162-9

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	6.5 to 7.5	Lead (Pb)	<1 ppm
Iron (Fe)	<1 ppm	n-Butyl formate	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.02 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Ammonium acetate — Certified
HPLC for electrochemical detection

packaging		Mfr. No
250 g	Plastic jar	A/3450/50

$C_2H_7NO_2$
CAS: 631-61-8
MW: 77.08

Melting point: 110 to 112°C
Flash point: 136°C
EINECS: 211-162-9

Assay: >97%

Guaranteed analysis

pH (aqueous solution 5%)	6.5 to 7.5	Lead (Pb)	<1 ppm
Electrochemical test	Pass	n-Butyl formate	<0.0005%
Iron (Fe)	<1 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.02 A.U.

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

Ammonium acetate
For soil analysis

packaging		Mfr. No
500 g	Plastic jar	A/3445/53
1 kg	Plastic jar	A/3445/60

$C_2H_7NO_2$
CAS: 631-61-8
MW: 77.08

Melting point: 110 to 112°C
Flash point: 136°C
EINECS: 211-162-9

Assay: >97%

Guaranteed analysis

pH (aqueous solution 5%)	6.5 to 7.5	Magnesium (Mg)	<5 ppm
Residue after ignition	<0.01%	Nitrate (NO_3)	<0.001%
Aluminium (Al)	<5 ppm	Phosphate (PO_4)	<1 ppm
Calcium (Ca)	<10 ppm	Potassium (K)	<2 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.0005%
Iron (Fe)	<1 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<1 ppm		

Ammonium acetate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	A/3440/50
500 g	Plastic jar	A/3440/53
1 kg	Plastic jar	A/3440/60
5 kg	Plastic keg	A/3440/65

$C_2H_7NO_2$
CAS: 631-61-8
MW: 77.08

Melting point: 110 to 112°C
Flash point: 136°C
EINECS: 211-162-9

Assay: >99%

Guaranteed analysis

pH(aq. Solution 5%) at 25°C.	: 6.7 to 7.3	Sodium (Na)	<5 ppm
Insoluble matter	<0.005%	Total chloride (Cl)	<0.0005%
Calcium (Ca)	<2 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<5 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<10 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<1 ppm
Magnesium (Mg)	<1 ppm	Sulfate (SO_4)	<0.001%
Nitrate (NO_3)	<0.001%	Residue after ignition	<0.01%
Potassium (K)	<10 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Ammonium acetate — SLR
extra pure, crystals

packaging		Mfr. No
500 g	Plastic jar	A/3400/53
1 kg	Plastic jar	A/3400/60
5 kg	Plastic keg	A/3400/65

$C_2H_7NO_2$
CAS: 631-61-8
MW: 77.08

Melting point: 110 to 112°C
Flash point: 136°C
EINECS: 211-162-9

Assay: >97%

Guaranteed analysis

pH (aqueous solution 5%)	6.5 to 7.5	Sodium (Na)	<20 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<50 ppm		

Ammonium acetate solution 0.25M — Certified
HPLC for gradient analysis

packaging		Mfr. No
500 mℓ	HDPE plastic bottle	J/0200/PB08

$C_2H_7NO_3$
CAS: 631-61-8
MW: 77.08

EINECS: 211-162-9
P262

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Drift in gradient baseline <40 mA.U.

Absorbance of the largest eluted peak: <1.5 mA.U.
Manufactured to a tolerance of ±0.02M
Conditions:
Column: C18 Reverse Phase
Flow Rate: 3ml/min
Wavelenght: 254nm
Solvent A: Water + 10%Buffer
Solvent B: Acetonitrile + 10% Buffer
Gradient: 10 min. At 5% solvent B followed by a linear gradient to 95% solvent B over 15min.

Ammonium bromide — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/3560/53

NH_4Br
CAS: 12124-97-9
MW: 97.95
Density at 20°C: 2.42
Boiling point: 235°C

Melting point: 452°C
EINECS: 235-183-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	4.8 to 6	Magnesium (Mg)	<5 ppm
Loss on drying	<0.1%	Potassium (K)	<50 ppm
Bromate (BrO_3)	<0.001%	Sodium (Na)	<20 ppm
Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.2%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<10 ppm
Iodide (I)	<0.005%	Total silicon (Si)	<10 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<2 ppm
Silver (Ag)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm

Ammonium bromide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/3520/53

NH_4Br
CAS: 12124-97-9
MW: 97.95
Density at 20°C: 2.42
Boiling point: 235°C

Melting point: 452°C
EINECS: 235-183-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.5%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<500 ppm	Zinc (Zn)	<50 ppm

Ammonium carbonate — Certified
for HPLC

packaging		Mfr. No
250 g	Plastic jar	A/3686/50

$NH_4HCO_3+NH_2.COO.NH_4$
CAS: 506-87-6
MW: 96.09
Melting point: 58°C

EINECS: 208-058-0
GHS: Acute Tox. 4
H302
P301+P312

Assay: >31%

Guaranteed analysis

Iron (Fe)	<1 ppm	n-Butyl formate	<0.0001%
Lead (Pb)	<1 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.02 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Ammonium carbonate — Certified AR
for analysis, powder

packaging		Mfr. No
500 g	Plastic jar	A/3680/53
1 kg	Plastic jar	A/3680/60

$NH_4HCO_3+NH_2.COO.NH_4$
CAS: 506-87-6
MW: 96.09
Melting point: 58°C

EINECS: 208-058-0
GHS: Acute Tox. 4
H302
P301+P312

Assay: >31%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Sodium (Na)	<5 ppm
Copper (Cu)	<0.5 ppm	Total chloride (Cl)	<0.00005%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<5 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<10 ppm
Potassium (K)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Ammonium carbonate — SLR
extra pure, powder

packaging		Mfr. No
500 g	Plastic jar	A/3640/53
1 kg	Plastic jar	A/3640/60
5 kg	Plastic keg	A/3640/65

$NH_4HCO_3+NH_2.COO.NH_4$
CAS: 506-87-6
MW: 96.09
Melting point: 58°C

EINECS: 208-058-0
GHS: Acute Tox. 4
H302
P301+P312

Assay: >30%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<20 ppm	Zinc (Zn)	<50 ppm

Ammonium cerium(IV) nitrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	A/3730/48
250 g	Plastic jar	A/3730/50

$(NH_4)_2Ce(NO_3)_6$
CAS: 16774-21-3
MW: 548.23
Melting point: 107 to 108°C
ADR/RID: 5.1, II
EINECS: 240-827-6
UN: 1477

GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H272, H335, H318, H302, H315
P280, P305+P351+P338, P310, P210, P261, P301+P312

Assay: >99%

Guaranteed analysis

Loss on drying	<3%	n-Butyl formate	<0.001%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<50 ppm	Insoluble Acids	<0.005%
Sodium (Na)	<50 ppm		

Lot analysis on the label.

Ammonium cerium(IV) nitrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	A/3720/48
250 g	Plastic jar	A/3720/50

$(NH_4)_2Ce(NO_3)_6$
CAS: 16774-21-3
MW: 548.23
Melting point: 107 to 108°C
ADR/RID: 5.1, II
EINECS: 240-827-6
UN: 1477

GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H272, H335, H318, H302, H315
P280, P305+P351+P338, P310, P210, P261, P301+P312

Assay: >98%

Guaranteed analysis

Loss on drying	<5%	Sodium (Na)	<500 ppm
Copper (Cu)	<100 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<100 ppm	Total phosphorus (P)	<500 ppm
Lead (Pb)	<100 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<200 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<500 ppm	Zinc (Zn)	<200 ppm

Ammonium cerium(IV) sulfate — Certified AR
for analysis, low in rare earths

packaging		Mfr. No
100 g	Plastic jar	A/3771/48

$(NH_4)_4Ce(SO_4)_4.2H_2O$
CAS: 10378-47-9
MW: 632.56

Melting point: 130°C
EINECS: 231-567-4

Assay: >99%

Guaranteed analysis

Copper (Cu)	<10 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<50 ppm	Other rare earths	<2%
Sodium (Na)	<50 ppm		

Lot analysis on the label.

Ammonium cerium(IV) sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	A/3760/48

$(NH_4)_4Ce(SO_4)_4.2H_2O$
CAS: 10378-47-9
MW: 632.56

Melting point: 130°C
EINECS: 231-567-4

Assay: 90 to 105%

Guaranteed analysis

Copper (Cu)	<500 ppm	Sodium (Na)	<500 ppm
Iron (Fe)	<500 ppm	n-Butyl formate	<0.05%
Lead (Pb)	<500 ppm	Total phosphorus (P)	<500 ppm
Magnesium (Mg)	<500 ppm	Total silicon (Si)	<500 ppm
Potassium (K)	<500 ppm	Zinc (Zn)	<500 ppm

Ammonium chloride — Certified AR, Ph.Eur., BP
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/3920/53
1 kg	Plastic jar	A/3920/60
2 kg	Plastic jar	A/3920/61
5 kg	Plastic keg	A/3920/65
25 kg	Fibre Keg	A/3920/70

NH_4Cl
CAS: 12125-02-9
MW: 53.49
Melting point: 340°C
EINECS: 235-186-4

GHS: Acute Tox. 4, Eye Irrit. 2
H319, H302
P270, P264, P280,
P305+P351+P338, P301+P312

Assay: 99.5 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	4.5 to 5.5	Nitrate (NO_3)	<0.0005%
Heavy metals	<10 ppm	Potassium (K)	<50 ppm
Sulfated ash	<0.1%	Sodium (Na)	<50 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<5 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<2 ppm
Iodide (I)	<0.001%	Total sulphur (S)	<10 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm	Pyridine & homologues	<10 ppm
Magnesium (Mg)	<1 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<1 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Ammonium chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/3880/53
1 kg	Plastic jar	A/3880/60
2 kg	Plastic jar	A/3880/61
5 kg	Plastic keg	A/3880/65
25 kg	Plastic keg	A/3880/70

NH_4Cl
CAS: 12125-02-9
MW: 53.49
Melting point: 340°C
EINECS: 235-186-4

GHS: Acute Tox. 4, Eye Irrit. 2
H319, H302
P270, P264, P280,
P305+P351+P338, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<200 ppm		

Ammonium chloride
Technical, powder

packaging		Mfr. No
2 kg	Plastic jar	A/3800/61

NH_4Cl
CAS: 12125-02-9
MW: 53.49
Melting point: 340°C
EINECS: 235-186-4

GHS: Acute Tox. 4, Eye Irrit. 2
H319, H302
P270, P264, P280,
P305+P351+P338, P301+P312

Guaranteed analysis

Identity test : Pass

tri-Ammonium citrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	A/4082/50
500 g	Plastic jar	A/4082/53
25 kg	Fibre Keg	A/4082/70

$(NH_4)_3C_6H_5O_7$
CAS: 3458-72-8
MW: 243.22
Melting point: 185°C
EINECS: 222-394-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P305+P351+P338

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	6 to 7	Sodium (Na)	<50 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<2 ppm
Oxalate (C_2O_4)	<0.01%	Readily carbonisable substances test	Pass
Potassium (K)	<20 ppm	Reducing substance	Pass

tri-Ammonium citrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/4080/53
1 kg	Plastic jar	A/4080/60
25 kg	Fibre Keg	A/4080/70

$(NH_4)_3C_6H_5O_7$
CAS: 3458-72-8
MW: 243.22
Melting point: 185°C
EINECS: 222-394-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

pH (aqueous solution 5%)	6 to 7	Sodium (Na)	<500 ppm
Calcium (Ca)	<50 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<100 ppm		

Ammonium copper(II) chloride dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/4240/53

$(NH_4)_2CuCl_4.2H_2O$
CAS: 15610-76-1
MW: 277.47
EINECS: 239-690-5

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Potassium (K)	<500 ppm
Iron (Fe)	<100 ppm	Sodium (Na)	<500 ppm
Lead (Pb)	<500 ppm	Zinc (Zn)	<500 ppm
Magnesium (Mg)	<500 ppm		

Ammonium dichromate NEW — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	A/4420/50
500 g	Plastic jar	A/4420/53
1 kg	Plastic jar	A/4420/60

$(NH_4)CrO_7$
CAS: 7789-09-5
MW: 252.70
Density at 20°C: 2.15
Melting point: 170°C
Flash point: 218°C
ADR/RID: 5.1, II
EINECS: 232-143-1
UN: 1439
GHS: Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 2, Skin Corr. 1B, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H350, H340, H360FD, H330, H301, H372, H312, H314, H334, H317, H410
P280, P301+P330+P331, P302+P352, P305+P351+P338, P304+P340, P342+P311

Assay: > 99.5%

Guaranteed analysis

Appearance	orange red crystals	Chloride (Cl)	<0.005%
Loss on drying (105°C /2h)	: <3.0%	Iron (Fe)	<0.002%
Insoluble matter	<0.005%	Sodium (Na)	<0.005%
Calcium (Ca)	<0.002%	Sulfate (SO_4)	<0.01%

Ammonium dihydrogen orthophosphate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/4560/53
1 kg	Plastic jar	A/4560/60

$(NH_4)H_2PO_4$
CAS: 7722-76-1
MW: 115.03
Melting point: 190°C
EINECS: 231-764-5

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	4 to 4.5	Potassium (K)	<20 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.0005%
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm
Nitrate (NO_3)	<0.001%		

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<2 ppm
Silver (Ag)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<5 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Ammonium dihydrogen orthophosphate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/4520/53

$(NH_4)H_2PO_4$
CAS: 7722-76-1
MW: 115.03
Melting point: 190°C
EINECS: 231-764-5

Guaranteed analysis

Identity test : Pass

Ammonium fluoride — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/4960/53

NH_4F
CAS: 12125-01-8
MW: 37.04
ADR/RID: 6.1, III
EINECS: 235-185-9
UN: 2505
GHS: Acute Tox. 3
H311, H331, H301
P260, P280, P302+P350, P304+P340, P301+P310

Assay: >96%

Guaranteed analysis

Reaction (0.5% solution)	: 6 to 7	Sodium (Na)	<10 ppm
Calcium (Ca)	<5 ppm	n-Butyl formate	<0.0005%
Copper (Cu)	<2 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<1000 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<2 ppm	Zinc (Zn)	<2 ppm
Potassium (K)	<20 ppm		

Lot analysis on the label.

Ammonium fluoride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/4920/53

NH_4F
CAS: 12125-01-8
MW: 37.04
ADR/RID: 6.1, III
EINECS: 235-185-9
UN: 2505
GHS: Acute Tox. 3
H311, H331, H301
P260, P280, P302+P350, P304+P340, P301+P310

Assay: >95%

Guaranteed analysis

Reaction (0.5% solution)	: 6 to 7	Sodium (Na)	<100 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.002%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<2000 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<100 ppm		

Ammonium formate NEW — Optima
for LC/MS analysis

packaging		Mfr. No
50 g	Glass bottle	A115-50

$HCOONH_4$
CAS: 540-69-2
MW: 63.06
Melting point: 115 to 120°C
EINECS: 208-753-9
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: 99%

Guaranteed analysis

Appearance	White fine crystals w/ lumps	Nickel (Ni)	<10 ppb
Water	<2%	Potassium (K)	<20 ppb
Aluminium (Al)	<20 ppb	Propan--1-ol	<10 ppb
Calcium (Ca)	<50 ppb	Sodium (Na)	<50 ppb
Copper (Cu)	<10 ppb	Sulfate (SO_4)	<0.005%
Iron (Fe)	<10 ppb	n-Butyl formate	<0.001%
Lead (Pb)	<10 ppb	Zinc (Zn)	<20 ppb
Magnesium (Mg)	<10 ppb	Residue after ignition	<0.005%
Manganese (Mn)	<10 ppb		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

LC/MS Gradient Suitability : Pass test Protease (0.1% aqueous) : Not Detected

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.

Ammonium formate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/5080/53

$HCOONH_4$
CAS: 540-69-2
MW: 63.06
Melting point: 115 to 120°C
EINECS: 208-753-9
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	6 to 7	Sodium (Na)	<5 ppm
Calcium (Ca)	<5 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<2 ppm	Zinc (Zn)	<2 ppm
Potassium (K)	<10 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Ammonium formate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/5040/53

$HCOONH_4$
CAS: 540-69-2
MW: 63.06
Melting point: 115 to 120°C
EINECS: 208-753-9
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

pH (aqueous solution 5%)	6 to 7	Sodium (Na)	<50 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<50 ppm		

Ammonium hydrogen carbonate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	A/5160/50
1 kg	Plastic jar	A/5160/60
25 kg	Fibre Keg	A/5160/70

NH_4HCO_3
CAS: 1066-33-7
MW: 79.06
Melting point: 105°C
EINECS: 213-911-5
GHS: Acute Tox. 4
H302
P264, P270, P301+P312, P330

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<5 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<2 ppm	Total chloride (Cl)	<0.0005%
Iron (Fe)	<1 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<10 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<1 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Ammonium hydrogen carbonate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	A/5120/60

NH_4HCO_3
CAS: 1066-33-7
MW: 79.06
Melting point: 105°C
EINECS: 213-911-5
GHS: Acute Tox. 4
H302
P264, P270, P301+P312, P330

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm

di-Ammonium hydrogen citrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/5200/53

$C_6H_{14}N_2O_7$
CAS: 3012-65-5
MW: 226.19
Density at 20°C: 1.5
EINECS: 221-146-3
GHS: Eye Irrit. 2, STOT SE 3
H319, H335
P261, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Lead (Pb)	<50 ppm	n-Butyl formate	<0.005%
Sulfate (SO_4)	<0.005%		

Ammonium hydrogen difluoride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/5280/53
2.5 kg	Plastic jar	A/5280/62
25 kg	Fibre Keg	A/5280/70

NH_4HF_2
CAS: 1341-49-7
MW: 57.05
Density at 20°C: 1.50
Boiling point: 230°C
Melting point: 125°C
ADR/RID: 8, II
EINECS: 215-676-4
UN: 1727
GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H314, H301
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >97%

Guaranteed analysis

Residue after ignition	<0.02%	Lead (Pb)	<100 ppm
Solution	: Pass	n-Butyl formate	<0.002%
Iron (Fe)	<100 ppm		

Ammonium hydrogen difluoride
Technical

packaging		Mfr. No
3 kg	Plastic jar	A/5240/63

NH_4HF_2
CAS: 1341-49-7
MW: 57.05
Density at 20°C: 1.50
Boiling point: 230°C
Melting point: 125°C
ADR/RID: 8, II
EINECS: 215-676-4
UN: 1727
GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H314, H301
P301+P330+P331, P280, P305+P351+P338, P310

Guaranteed analysis

Identity test : Pass

di-Ammonium hydrogen orthophosphate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/5360/53
1 kg	Plastic jar	A/5360/60

$(NH_4)_2HPO_4$
CAS: 7783-28-0
MW: 132.06
Density at 20°C: 1.619
EINECS: 231-987-8

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

pH (aqueous solution 5%)	7.8 to 8.2	Potassium (K)	<10 ppm
Calcium (Ca)	<5 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.0005%
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm
Nitrate (NO_3)	<0.001%		

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

di-Ammonium hydrogen orthophosphate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/5320/53
1 kg	Plastic jar	A/5320/60

$(NH_4)_2HPO_4$
CAS: 7783-28-0
MW: 132.06
Density at 20°C: 1.619
EINECS: 231-987-8

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<50 ppm		

Ammonium hydrogen sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/5400/53

NH_4SO_4
CAS: 7803-63-6
MW: 115.11
Boiling point: 350°C
Melting point: 147°C
ADR/RID: 8, II

EINECS: 232-265-5
UN: 2506
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Magnesium (Mg)	<100 ppm
Copper (Cu)	<50 ppm	Potassium (K)	<300 ppm
Iron (Fe)	<50 ppm	Sodium (Na)	<100 ppm
Lead (Pb)	<50 ppm	Zinc (Zn)	<50 ppm

Ammonium iron (III) citrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/4640/53

$C_6H_{11}FeNO_7$
CAS: 1185-57-5
MW: 265.00
EINECS: 214-686-6

Assay: 20.5 to 22.5%

Guaranteed analysis

Lead (Pb)	<50 ppm	Zinc (Zn)	<1000 ppm

Ammonium Iron(II) sulfate hexahydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	A/4880/50
500 g	Plastic jar	A/4880/53
1 kg	Plastic jar	A/4880/60
3 kg	Plastic jar	A/4880/63

$(NH_4)_2Fe(SO_4)_2.6H_2O$
CAS: 7783-85-9
MW: 392.14
Melting point: 100°C
EINECS: 233-151-8

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	3 to 5	Potassium (K)	<50 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<10 ppm	Total chloride (Cl)	<0.001%
Iron (III)	<0.03%	Total phosphorus (P)	<30 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<0.02 %
Silver (Ag)	<2 ppm	Molybdenum (Mo)	<2 ppm
Arsenic (As)	<5 ppm	Nickel (Ni)	<0.001 %
Barium (Ba)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<0.001 %	Vanadium (V)	<2 ppm
Lithium (Li)	<2 ppm		

Lot analysis on the label.

Ammonium iron(II) sulfate hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/4840/53
1 kg	Plastic jar	A/4840/60
3 kg	Plastic jar	A/4840/63
25 kg	Plastic keg	A/4840/70

$(NH_4)_2Fe(SO_4)_2.6H_2O$
CAS: 7783-85-9
MW: 392.14
Melting point: 100°C
EINECS: 233-151-8

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.005%
Iron (III)	<0.05%	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<200 ppm
Potassium (K)	<200 ppm		

Ammonium iron(III) sulfate dodecahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/4760/53
1 kg	Plastic jar	A/4760/60

$NH_4Fe(SO_4)_2.12H_2O$
CAS: 7783-83-7
MW: 482.19
Density at 20°C: 1.71

Boiling point: 230°C
Melting point: 39 to 41°C
EINECS: 233-382-4

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	<3	Potassium (K)	<20 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.0005%
Iron (II)	<0.001%	Total phosphorus (P)	<20 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<0.001 %
Silver (Ag)	<2 ppm	Molybdenum (Mo)	<2 ppm
Arsenic (As)	<5 ppm	Nickel (Ni)	<2 ppm
Barium (Ba)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm
Lithium (Li)	<2 ppm		

Lot analysis on the label.

Ammonium iron(III) sulfate dodecahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/4720/53
1 kg	Plastic jar	A/4720/60

$NH_4Fe(SO_4)_2.12H_2O$
CAS: 7783-83-7
MW: 482.19
Density at 20°C: 1.71

Boiling point: 230°C
Melting point: 39 to 41°C
EINECS: 233-382-4

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.002%
Iron (II)	<0.005%	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<100 ppm		

Ammonium iron (II) sulfate solution 0.1M (0.1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/1101/15
2.5 ℓ	HDPE Plastic bottle	J/1101/PB17

CAS: 7783-85-9
Density at 20°C: 1.04

Manufactured to a tolerance of ± 0.5%.
See the full range of Standard Volumetric solution page 323.

Ammonium iron(II) sulfate solution 0.025M
Standard solution ready to use for volumetric analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/1100/17

CAS: 7783-85-9
Density at 20°C: 1.04

Manufactured to a tolerance of ± 0.5%.
See the full range of Standard Volumetric solution page 323.

Ammonium metavanadate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	A/5680/48
250 g	Plastic jar	A/5680/50
25 kg	Fibre Keg	A/5680/70

NH_4VO_3
CAS: 7803-55-6
MW: 116.98
Melting point: 200°C
ADR/RID: 6.1, II
EINECS: 232-261-3

UN: 2859
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319, H301, H332
P301+P310, P302+P352, P280, P305+P351+P338, P260

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<10 ppm

Ammonium molybdate tetrahydrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	A/5760/48
250 g	Plastic jar	A/5760/50
500 g	Plastic jar	A/5760/53
1 kg	Plastic jar	A/5760/60
25 kg	Fibre Keg	A/5760/70

$(NH_4)_6Mo_7O_{24}.4H_20$
CAS: 12054-85-2
MW: 123.86
Density at 20°C: 2.49
Melting point: 190°C
EINECS: 234-722-4

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H302, H335, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: 99 to 101%

Guaranteed analysis

Calcium (Ca)	<5 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.0005%
Iron (Fe)	<5 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<5 ppm	Arsenate, phosphate and silicate	<0.001%
Potassium (K)	<20 ppm		

Lot analysis on the label.

Ammonium molybdate tetrahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	A/5720/48
250 g	Plastic jar	A/5720/50
500 g	Plastic jar	A/5720/53

$(NH_4)_6Mo_7O_{24}.4H_20$
CAS: 12054-85-2
MW: 123.86
Density at 20°C: 2.49
Melting point: 190°C
EINECS: 234-722-4

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H302, H335, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<5000 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<100 ppm		

Ammonium nickel(II) sulfate hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	A/5800/50
500 g	Plastic jar	A/5800/53

$(NH_4)_2Ni(SO_4)_2.6H_2O$
CAS: 15699-18-0
MW: 394.97
Density at 20°C: 1.9
ADR/RID: 9, III
EINECS: 239-793-5
UN: 3077
GHS: Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H302, H317, H332, H334, H341, H350i, H372, H410, H360D
P273, P304+P340, P301+P312, P307+P311, P201, P302+P352, P280

Guaranteed analysis
Identity test ..... : Pass

Ammonium nitrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/5920/53
1 kg	Plastic jar	A/5920/60
2.5 kg	Plastic jar	A/5920/62

NH_4NO_3
CAS: 6484-52-2
MW: 80.04
Density at 20°C: 1.72
Boiling point: 210°C
Melting point: 169°C
ADR/RID: 5.1, III
EINECS: 229-347-8
UN: 1942
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H319, H335
P261, P302+P352, P280, P305+P351+P338, P210

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	4.5 to 6	Potassium (K)	<10 ppm
Calcium (Ca)	<5 ppm	Sodium (Na)	<5 ppm
Copper (Cu)	<1 ppm	Total chloride (Cl)	<0.0005%
Iron (Fe)	<1 ppm	Total phosphorus (P)	<5 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<5 ppm
Magnesium (Mg)	<1 ppm	Total sulphur (S)	<10 ppm
Nitrite (NO_2)	<0.0005%	Zinc (Zn)	<1 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Ammonium nitrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/5880/53
1 kg	Plastic jar	A/5880/60
5 kg	Plastic keg	A/5880/65

NH_4NO_3
CAS: 6484-52-2
MW: 80.04
Density at 20°C: 1.72
Boiling point: 210°C
Melting point: 169°C
ADR/RID: 5.1, III
EINECS: 229-347-8
UN: 1942
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H319, H335
P261, P302+P352, P280, P305+P351+P338, P210

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<20 ppm

Ammonium oxalate monohydrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	A/6040/48
500 g	Plastic jar	A/6040/53
1 kg	Plastic jar	A/6040/60

$(NH_4)_2C_2O_4.H_2O$
CAS: 6009-70-7
MW: 142.11
Density at 20°C: 1.5
Melting point: 70°C
ADR/RID: 6.1, III
UN: 2811
GHS: Acute Tox. 4
H312, H302
P280, P302+P352, P301+P312

Assay: 99 to 101%

Guaranteed analysis

Reaction (2.5% solution)	: 6.3 to 6.7	Sodium (Na)	<10 ppm
Calcium (Ca)	<5 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<10 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<2 ppm
Silver (Ag)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Ammonium oxalate monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/6000/53

$(NH_4)_2C_2O_4.H_2O$
CAS: 6009-70-7
MW: 142.11
Density at 20°C: 1.5
Melting point: 70°C
ADR/RID: 6.1, III
UN: 2811
GHS: Acute Tox. 4
H312, H302
P280, P302+P352, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm

Ammonium persulfate
for electrophoresis

packaging		Mfr. No
25 g	Plastic jar	A/P470/46

$H_8N_2O_8S_2$
CAS: 7727-54-0
MW: 228.19
Density at 20°C: 1.98
Melting point: 120°C
ADR/RID: 5.1, III
EINECS: 231-786-5
UN: 1444
GHS: Ox. Sol. 3, Acute Tox.
4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H272, H334, H335, H315, H317, H319, H302
P342+P311, P280, P301+P312, P302+P352, P305+P351+P338, P210

Assay: >99%

Guaranteed analysis

Insoluble matter	<0.003%	Lead (Pb)	<20 ppm
Copper (Cu)	<20 ppm	Manganese (Mn)	<1 ppm
Iron (Fe)	<10 ppm	n-Butyl formate	<0.0005%

Ammonium persulfate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/6160/53
1 kg	Plastic jar	A/6160/60

$(NH_4)_2S_2O_8$
CAS: 7727-54-0
MW: 228.19
Density at 20°C: 1.98
Melting point: 120°C
ADR/RID: 5.1, III
EINECS: 231-786-5
UN: 1444
GHS: Ox. Sol. 3, Acute Tox.
4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H272, H334, H335, H315, H317, H319, H302
P342+P311, P280, P301+P312, P302+P352, P305+P351+P338, P210

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<5 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.0005%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<5 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<20 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<5 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Ammonium persulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	A/6120/60
3 kg	Plastic jar	A/6120/63

$(NH_4)_2S_2O_8$
CAS: 7727-54-0
MW: 228.19
Density at 20°C: 1.98
Melting point: 120°C
ADR/RID: 5.1, III
EINECS: 231-786-5
UN: 1444
GHS: Ox. Sol. 3, Acute Tox.
4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H272, H334, H335, H315, H317, H319, H302
P342+P311, P280, P301+P312, P302+P352, P305+P351+P338, P210

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<500 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<200 ppm		

Ammonium polysulfide 8% solution — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/6560/PB08
2.5 ℓ	Coated Glass bottle	A/6560/PB17

$(NH_4)_2Sx$
CAS: 12259-92-6
Density at 20°C: 1.07
ADR/RID: 8, 6.1, II
EINECS: 235-512-5
UN: 2818
GHS: Skin Corr. 1B, Eye Dam. 1
H314, H400, EUH031
P280, P305+P351+P338, P273

Assay: >6%

Guaranteed analysis

Residue after ignition	<0.01%	Carbonate (Na_2CO_3)	<0.005%

Lot analysis on the label.

Ammonium purpurate
pure, Metal indicator

packaging		Mfr. No
5 g	Glass jar	A/6200/44
25 g	Glass jar	A/6200/46

$C_8H_8N_6O_6$
CAS: 3051-09-0
MW: 284.19
Melting point: 300°C
EINECS: 221-266-6

Guaranteed analysis
Complies with standard IR spectrum: Pass

Ammonium pyrrolidine dithiocarbamate
for AAS

packaging		Mfr. No
25 g	Plastic jar	A/6220/46

$(C_4H_8N)CSSNH_4$
CAS: 5108-96-3
MW: 164.29
Melting point: 150 to 155°C
ADR/RID: 6.1, III
EINECS: 225-834-4
UN: 2811
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H302, H335
P261, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Residue after ignition	<0.05%	Lead (Pb)	<0.5 ppm
Cobalt (Co)	<0.2 ppm	Nickel (Ni)	<0.2 ppm
Copper (Cu)	<0.2 ppm	Zinc (Zn)	<0.5 ppm
Iron (Fe)	<0.5 ppm		

For the analysis by atomic absorption (AAS).
Contains ammonium carbonate to delay decomposition.

Ammonium sodium hydrogen orthophosphate tetrahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/6280/53

$Na(NH_4)HPO_4.4H_2O$
CAS: 13011-54-6
MW: 209.07
Density at 20°C: 1.54
Melting point: 79°C
EINECS: 235-860-8

Assay: >95%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Magnesium (Mg)	<100 ppm
Copper (Cu)	<50 ppm	Potassium (K)	<100 ppm
Iron (Fe)	<50 ppm	Zinc (Zn)	<50 ppm
Lead (Pb)	<50 ppm		

Ammonium sulfamate
pure

packaging		Mfr. No
250 g	Plastic jar	A/6400/50

$NH_4OSO_2NH_2$
CAS: 7773-06-0
MW: 114.12
Melting point: 132 to 135°C
EINECS: 231-871-7
GHS: Acute Tox. 4
H302
P280, P264, P270, P301+P312

Assay: >99%

Ammonium sulfate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	A/6480/53
1 kg	Plastic jar	A/6480/60
2.5 kg	Plastic jar	A/6480/62
5 kg	Plastic keg	A/6480/65
25 kg	Fibre Keg	A/6480/70

$(NH_4)_2SO_4$ — Melting point: 280°C
CAS: 7783-20-2 — EINECS: 231-984-1
MW: 132.13

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 6	Nitrate (NO_3)	<0.001%
pH(aq. Solution 5%) at 25°C	: 5 to 6	Potassium (K)	<20 ppm
Loss on drying	<0.1%	Sodium (Na)	<20 ppm
Heavy metals	<5 ppm	Total chloride (Cl)	<0.0003%
Insoluble matter	<0.005%	Total phosphorus (P)	<5 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<20 ppm
Copper (Cu)	<1 ppm	Zinc (Zn)	<10 ppm
Iron (Fe)	<1 ppm	Phosphate (PO_4)	<5 ppm
Lead (Pb)	<2 ppm	Residue after ignition	<0.005%
Magnesium (Mg)	<2 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<2 ppm
Silver (Ag)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Ammonium sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/6440/53
1 kg	Plastic jar	A/6440/60
2.5 kg	Plastic jar	A/6440/62
5 kg	Plastic keg	A/6440/65

$(NH_4)_2SO_4$ — Melting point: 280°C
CAS: 7783-20-2 — EINECS: 231-984-1
MW: 132.13

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 6	Potassium (K)	<200 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<100 ppm
Nitrate (NO_3)	<0.01%		

Ammonium thiocyanate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	A/6680/50
500 g	Plastic jar	A/6680/53
1 kg	Plastic jar	A/6680/60

NH_4SCN — GHS: Acute Tox. 4, Aquatic Chronic 3
CAS: 1762-95-4 — H302, H312, H412, H332, EUH032
MW: 76.12 — P280, P302+P352, P273, P233, P301+P312, P304+P340
Density at 20°C: 1.3
Melting point: 149°C
Flash point: 190°C
EINECS: 217-175-6

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	4.8 to 5.8	Potassium (K)	<10 ppm
Iodine consuming substances	: <0.02%	Sodium (Na)	<10 ppm
Calcium (Ca)	<20 ppm	Sulfate (SO_4)	<0.03%
Copper (Cu)	<2 ppm	Total chloride (Cl)	<0.005%
Iron (Fe)	<1 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Sulfide (S)	<0.001%	Lithium (Li)	<1 ppm
Aluminium (Al)	<1 ppm	Manganese (Mn)	<1 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<1 ppm
Barium (Ba)	<1 ppm	Strontium (Sr)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Chromium (Cr)	<1 ppm	Vanadium (V)	<1 ppm
Cobalt (Co)	<1 ppm		

Lot analysis on the label.

Ammonium thiocyanate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	A/6640/50
500 g	Plastic jar	A/6640/53
1 kg	Plastic jar	A/6640/60

NH_4SCN — GHS: Acute Tox. 4, Aquatic Chronic 3
CAS: 1762-95-4 — H302, H312, H412, H332, EUH032
MW: 76.12 — P280, P302+P352, P273, P233, P301+P312, P304+P340
Density at 20°C: 1.3
Melting point: 149°C
Flash point: 190°C
EINECS: 217-175-6

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<50 ppm		

Ammonium thiocyanate solution 0.1M (0.1N) — Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/1500/PB15
2.5 ℓ	HDPE Plastic bottle	J/1500/PB17

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Ammonium thiocyanate solution 0.1M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/1500C/05
6	Ampoule	J/1500C/90

CAS: 1762-95-4
EINECS: 217-175-6
EUH032
P233

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Ammonium thiosulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/6720/53
25 kg	Fibre Keg	A/6720/70

$(NH_4)_2S_2O_3$ — Melting point: 150°C
CAS: 7783-18-8 — EINECS: 231-982-0
MW: 148.20

Guaranteed analysis

Identity test : Pass

n-Amyl acetate — SLR
extra pure, mix of 3 and 2-Methylbutyl acetate

packaging		Mfr. No
500 mℓ	Glass bottle	A/6800/08

$CH_3COO(CH_2)_4CH_3$ — ADR/RID: 3, III
CAS: 628-63-7 — EINECS: 211-047-3
MW: 130.19 — UN: 1104
Density at 20°C: 0.870 — GHS: Flam. Liq. 3
Boiling point: 149°C — H226, EUH066
Melting point: -70.8°C — P210
Flash point: 24°C

Assay (CG): >99%

iso-Amyl acetate — Certified AR
for analysis, Mix of 2- &3- Methylbutyl acetate

packaging		Mfr. No
500 mℓ	Glass bottle	A/6920/08
2.5 ℓ	Glass bottle	A/6920/17

$CH_3COOCH_2CH_2CH(CH_3)_2$ — ADR/RID: 3, III
CAS: 123-92-2 — EINECS: 204-662-3
MW: 130.19 — UN: 1104
Density at 20°C: 0.874 — GHS: Flam. Liq. 3
Boiling point: 142°C — H226, EUH066
Melting point: -78°C — P210
Flash point: 25°C

Assay (CG): >99%

Guaranteed analysis

Acidity	<0.002 meq/g	Lead (Pb)	<0.05 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.5 ppm
Water	<0.1%	Potassium (K)	<1 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<0.5 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<0.5 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<1 ppm

Lot analysis on the label.

iso-Amyl acetate — SLR
extra pure, Mix of 2- &3- Methylbutyl acetate

packaging		Mfr. No
500 mℓ	Glass bottle	A/6880/08
2.5 ℓ	Glass bottle	A/6880/17

$CH_3COOCH_2CH_2CH(CH_3)_3$ — ADR/RID: 3, III
CAS: 123-92-2 — EINECS: 204-662-3
MW: 130.19 — UN: 1104
Density at 20°C: 0.874 — GHS: Flam. Liq. 3
Boiling point: 142°C — H226, EUH066
Melting point: -78°C — P210
Flash point: 25°C

Assay (CG): >98%

Guaranteed analysis

Acidity	<0.01 meq/g	Lead (Pb)	<1 ppm
Colour	<20 APHA	Magnesium (Mg)	<2 ppm
Water	<0.5%	Potassium (K)	<0.5 ppm
Residue after evaporation	<200 ppm	Sodium (Na)	<2 ppm
Calcium (Ca)	<5 ppm	Total sulphur (S)	<2 ppm
Copper (Cu)	<1 ppm	Zinc (Zn)	<0.5 ppm
Iron (Fe)	<2 ppm		

n-Amyl alcohol
See Pentan-1-ol, page 226

iso-Amyl alcohol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	A/6960/08
2.5 ℓ	Coated Glass bottle	A/6960/PB17

$(CH_3)_2CHCH_2CH_2OH$ — ADR/RID: 3, III
CAS: 123-51-3 — EINECS: 204-633-5
MW: 88.15 — UN: 1105
Density at 20°C: 0.800 — GHS: Flam. Liq. 3, Acute
Boiling point: 130°C — Tox. 4, STOT SE 3
Melting point: -117°C — H226, H335, H332, EUH066
Flash point: 43°C — P261, P304+P340, P210

Assay (CG): >98%

Guaranteed analysis

Acidity / Alkalinity	<0.01 meq/g	Lead (Pb)	<1 ppm
Colour	<20 APHA	Magnesium (Mg)	<0.2 ppm
Water	<0.5%	Potassium (K)	<0.5 ppm
Residue after evaporation	<100 ppm	Sodium (Na)	<10 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<5 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<0.5 ppm

iso-Amyl alcohol — SLR
extra pure, for determination of fat in milk

packaging		Mfr. No
500 mℓ	Glass bottle	A/7000/08
2.5 ℓ	Coated Glass bottle	A/7000/PB17

$(CH_3)_2CHCH_2CH_2OH$ — ADR/RID: 3, III
CAS: 123-51-3 — EINECS: 204-633-5
MW: 88.15 — UN: 1105
Density at 20°C: 0.800 — GHS: Flam. Liq. 3, Acute
Boiling point: 130°C — Tox. 4, STOT SE 3
Melting point: -117°C — H226, H335, H332, EUH066
Flash point: 43°C — P261, P304+P340, P210

Assay (CG): >98%

Guaranteed analysis

Acidity / Alkalinity	<0.01 meq/g	Lead (Pb)	<1 ppm
Colour	<20 APHA	Magnesium (Mg)	<0.2 ppm
Water	<0.5%	Potassium (K)	<0.5 ppm
Residue after evaporation	<100 ppm	Sodium (Na)	<10 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<5 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<0.5 ppm

Aniline
for analysis — Certified AR

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/7280/PB08
2.5 ℓ	Coated Glass bottle	A/7280/PB17

C_6H_7N
CAS: 62-53-3
MW: 93.13
Density at 20°C: 1.021
Boiling point: 181 to 185°C
Melting point: -6.2°C
Flash point: 76°C
ADR/RID: 6.1, II
EINECS: 200-539-3
UN: 1547

GHS: Carc. 2, Muta. 2, Acute Tox. 3, Eye Dam. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1
H351, H372, H341, H311, H301, H318, H331, H317, H400
P301+P310, P280, P302+P350, P305+P351+P338, P304+P340, P260, P273

Assay (CG): >99.8%

Guaranteed analysis

Water	<0.1%	Potassium (K)	<0.5 ppm
Residue after evaporation	<100 ppm	Sodium (Na)	<5 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<1 ppm
Copper (Cu)	<0.5 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<0.5 ppm	Zinc (Zn)	<1 ppm
Lead (Pb)	<0.1 ppm	Nitrobenzene ($C_6H_5NO_2$)	<0.001%
Magnesium (Mg)	<0.5 ppm		

Aniline
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/7240/PB08
2.5 ℓ	Coated Glass bottle	A/7240/PB17

C_6H_7N
CAS: 62-53-3
MW: 93.13
Density at 20°C: 1.021
Boiling point: 181 to 185°C
Melting point: -6.2°C
Flash point: 76°C
ADR/RID: 6.1, II
EINECS: 200-539-3
UN: 1547

GHS: Carc. 2, Muta. 2, Acute Tox. 3, Eye Dam. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1
H351, H372, H341, H311, H301, H318, H331, H317, H400
P301+P310, P280, P302+P350, P305+P351+P338, P304+P340, P260, P273

Assay (CG): >99%

Guaranteed analysis

Water	<0.5%	Magnesium (Mg)	<2 ppm
Residue after evaporation	<500 ppm	Potassium (K)	<2 ppm
Calcium (Ca)	<5 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<5 ppm

Aniline blue C.I. 42755
pure, water soluble

packaging		Mfr. No
25 g	Glass jar	A/7300/46

$C_{32}H_{25}N_3Na_2O_9S_3$
CAS: 28631-66-5
MW: 737.71
EINECS: 249-113-9
GHS: Skin Irrit. 2, Eye Irrit. 2,

STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Aniline hydrochloride
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Glass jar	A/7360/48
500 g	Glass jar	A/7360/53

$C_6H_7N.HCl$
CAS: 142-04-1
MW: 129.59
Boiling point: 245°C
Melting point: 196 to 199°C
Flash point: 193°C
ADR/RID: 6.1, III
EINECS: 205-519-8
UN: 1548

GHS: Carc. 2, Muta. 2, Acute Tox. 3, Eye Dam. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1
H351, H341, H331, H311, H301, H318, H317, H400
P280, P301+P310, P305+P351+P338, P302+P350, P304+P340, P310

Assay: >99%

Guaranteed analysis
Residue after ignition ..... <0.05%

8-Anilinonaphthalene-1-sulfonic acid ammonium salt
pure

packaging		Mfr. No
250 g	Plastic jar	A/7486/50

$C_6H_5NHC_{10}H_6SO_3NH_4$
CAS: 28836-03-5
MW: 316.38
EINECS: 249-265-6

GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P280, P302+P352, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Anion Eluent Concentrate
for Ion pair chromatography

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4534/05

0.0028M sodium bicarbonate / 0.0022M sodium carbonate solution.
100mℓ makes 5 ℓ of above solution.

Anion standard mixed concentrate
for Ion pair chromatography (for column check)

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4552/05

Guaranteed analysis

Fluoride (F)	29.7 to 30.3 ppm	Sulfate (SO_4)	297 to 303 ppm
Nitrate (NO_3)	297 to 303 ppm		

Manufactured to a tolerance of ± 1%.
100mℓ, to make 1000mℓ consisting of: 3ppm F^-, 6ppm Cl^-, 25ppm Br^-, 30ppm NO_3^-, 60ppm PO_4^{3-}, 30ppm SO_4^{2-}

p-Anisaldehyde
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 mℓ	Coated Glass bottle	A/7490/PB05

$C_8H_8O_2$
CAS: 123-11-5
MW: 136.15
Density at 20°C: 1.121
Boiling point: 248 to 249°C
Melting point: -1°C

Flash point: 116°C
EINECS: 204-602-6
GHS: Acute Tox. 4
H302
P301+P330+P331

Assay (CG): >98%

Guaranteed analysis
Acidity ..... <0.03 meq/g

Anisole
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	A/7600/PB08

C_7H_8O
CAS: 100-66-3
MW: 108.14
Density at 20°C: 0.990
Boiling point: 154°C
Melting point: -37°C
Flash point: 43°C

ADR/RID: 3, III
EINECS: 202-876-1
UN: 2222
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2
H226, H332, H315
P304+P340, P302+P352, P210

Assay (CG): >99%

Guaranteed analysis
Complies with standard IR spectrum: Pass

Anthranilic acid
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Glass jar	A/7680/48

$C_7H_7NO_2$
CAS: 118-92-3
MW: 137.14
Density at 20°C: 1.41
Melting point: 148°C
Flash point: 150°C

EINECS: 204-287-5
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Anthrone
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
25 g	Plastic jar	A/7760/46

$C_{14}H_{10}O$
CAS: 90-44-8
MW: 194.23
Boiling point: 721°C
Melting point: 152 to 158°C

EINECS: 201-994-0
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P305+P351+P338, P261

Guaranteed analysis
Residue after ignition ..... <0.2% Sensitivity to sucrose ..... Pass

Anti-bumping granules
extra pure, fused alumina — SLR

packaging		Mfr. No
250 g	Plastic jar	A/7770/50
500 g	Plastic jar	A/7770/53
1 kg	Plastic jar	A/7770/60

Al_2O_3
CAS: 1344-28-1
MW: 101.96

Boiling point: 2980°C
Melting point: 2000°C
EINECS: 215-691-6

Guaranteed analysis
Identity test ..... : Pass

Antimony standard metal solution 1000 ppm
for AAS, solution HCl 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8002/05
500 mℓ	HDPE Plastic bottle	J/8002/08

ADR/RID: 8, III
UN: 1789
GHS: Met. Corr. 1

H290
P234, P390

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Antimony standard metal solution 1000 ppm
for ICP, solution HCl 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8215/08

ADR/RID: 8, III
UN: 1789
GHS: Met. Corr. 1

H290
P234, P390

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
All ICP standards are manufactured from acids, metal & metal salts Ultra pure quality and contain less than <10 ppm total metal impurities.
See also the full range of "Standard solution" in the Standard solution section.

Antimony standard metal solution 10 000 ppm
for ICP, solution HCl 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8210/05

ADR/RID: 8, III
UN: 1789
GHS: Met. Corr. 1

H290
P234, P390

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Antimony standard metal solution 1000 ppm
for ICP-MS solution in H_2O/0.6% Tartaric Acid/HNO_3 trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLSB72Y

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Antimony standard metal solution 1000 ppm
for ICP solution in H_2O/0.6% Tartaric Acid/HNO_3 trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSB72Y
250 mℓ	Plastic bottle	SPPLSB72T
500 mℓ	Plastic bottle	SPPLSB72X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Antimony standard metal solution 10 000 ppm
for ICP solution in H_2O/0.6% Tartaric Acid/HNO_3 trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSB73Y
500 mℓ	Plastic bottle	SPPLSB73X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Antimony standard metal solution 10 000 ppm
for ICP solution in HCL 20%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	PLSB53X

H315, H319, H335, H351

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Antimony metal min.99+ %
pure

packaging		Mfr. No
500 g	Plastic jar	A/7840/53

Sb
CAS: 7440-36-0
MW: 121.75
Boiling point: 1635°C
Melting point: 630°C
ADR/RID: 6.1, III

EINECS: 231-146-5
UN: 2871
GHS: Acute Tox. 4, Aquatic Chronic 2
H302, H332, H411
P273, P301+P312, P304+P340

Assay: >99%

Antimony trichloride — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	A/8202/50

$SbCl_4$
CAS: 10025-91-9
MW: 228.11
Boiling point: 223°C
Melting point: 73°C
ADR/RID: 8, II
EINECS: 233-047-2

UN: 1733
GHS: Skin Corr. 1B, Aquatic Chronic 2
H314, H411
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P273

Assay: >99%

Guaranteed analysis

Insoluble in chloroform	: <0.05%	Potassium (K)	<50 ppm
Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<50 ppm

Lot analysis on the label.

Antimony trichloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	A/8200/50

$SbCl_3$
CAS: 10025-91-9
MW: 228.11
Boiling point: 223°C
Melting point: 73°C
ADR/RID: 8, II
EINECS: 233-047-2

UN: 1733
GHS: Skin Corr. 1B, Aquatic Chronic 2
H314, H411
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<50 ppm	Sodium (Na)	<500 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<200 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<200 ppm

Antimony trioxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/8240/53

Sb_2O_3
CAS: 1309-64-4
MW: 291.42
Boiling point: 1550°C
Melting point: 656°C

EINECS: 215-175-0
GHS: Carc. 2
H351
P281, P273, P260

Assay: >99%

L(+)Arabinose — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	A/8280/46

$C_5H_{10}O_5$
CAS: 5328-37-0
MW: 150.13

Melting point: 155°C
EINECS: 226-214-6

Guaranteed analysis
Complies with standard IR spectrum: Pass

L-Arginine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	A/8300/46

$C_6H_{14}N_4O_2$
CAS: 74-79-3
MW: 174.20
Density at 20°C: 1.3
Melting point: 223 to 224°C

EINECS: 200-811-1
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Loss on drying	<0.3%	Ammonium (NH_4)	<0.02%
Specific rotation	26.5° to 27.5°	Iron (Fe)	<50 ppm
Residue after ignition	<0.1%	Lead (Pb)	<20 ppm

Arsenic standard metal solution 1000 ppm
for AAS, solution HCl 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8003/05
500 mℓ	HDPE Plastic bottle	J/8003/08

ADR/RID: 8, III
EINECS: 215-481-4
UN: 1789

H350
P281, P308+P313, P302+P352

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Arsenic standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLAS22Y
250 mℓ	Plastic bottle	SPPLAS22T
500 mℓ	Plastic bottle	SPPLAS22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Arsenic standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLAS12X

H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Arsenic standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLAS23Y
500 mℓ	Plastic bottle	SPPLAS23X

H314, H412

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Arsenic standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLAS22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Arsenic trioxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/8440/53

As_2O_3
CAS: 1327-53-3
MW: 197.84
Melting point: 312.3°C
ADR/RID: 6.1, II
EINECS: 215-481-4
UN: 1561

GHS: Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H314, H410, H350, H300
P280, P301+P330+P331, P305+P351+P338, P201, P308+P313, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<100 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<500 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<200 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<500 ppm	Zinc (Zn)	<200 ppm

L-Ascorbic acid — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	A/8882/48
500 g	Plastic jar	A/8882/53

$C_6H_8O_6$
CAS: 50-81-7
MW: 176.12

Melting point: 190 to 192°C
EINECS: 200-066-2

Assay: >99.7%

Guaranteed analysis

Specific rotation	20.5° to 21.5°	Sodium (Na)	<5 ppm
Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.005%
Copper (Cu)	<2 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<2 ppm	Zinc (Zn)	<2 ppm
Potassium (K)	<5 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

L-Ascorbic acid — SLR
extra pure, 99+%

packaging		Mfr. No
100 g	Plastic jar	A/8880/48
500 g	Plastic jar	A/8880/53
1 kg	Plastic jar	A/8880/60

$C_6H_8O_6$
CAS: 50-81-7
MW: 176.13

Density at 20°C: 1.7
Melting point: 190 to 192°C
EINECS: 200-066-2

Assay: >99%

Guaranteed analysis

Specific rotation	20° to 22°	Magnesium (Mg)	<20 ppm
Calcium (Ca)	<20 ppm	Potassium (K)	<50 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<50 ppm
Iron (Fe)	<20 ppm	n-Butyl formate	<0.02%
Lead (Pb)	<20 ppm	Zinc (Zn)	<20 ppm

Vitamin C

L-Aspartic acid
pure

packaging		Mfr. No
500 g	Plastic jar	A/8961/53

$C_4H_7NO_4$
CAS: 56-84-8
MW: 133.11

Melting point: >230°C
EINECS: 200-291-6

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Iron (Fe)	<10 ppm
Specific rotation	24° to 26°	Lead (Pb)	<10 ppm
Residue after ignition	<0.1%		

Azomethine H
pure, For colorimetric determination of boron

packaging		Mfr. No
10 g	Plastic jar	A/9080/45

$C_{17}H_{12}NO_8S_2Na$
CAS: 5941-07-1
MW: 445.39
EINECS: 227-698-1

Guaranteed analysis
Complies with standard IR spectrum: Pass

Barbitone — SLR
extra pure, 99.5+ %

packaging		Mfr. No
250 g	Plastic jar	B/0052/50

$C_8H_{12}N_2O_3$
CAS: 57-44-3
MW: 184.20
Density at 20°C: 1.2
Melting point: 190°C

EINECS: 200-331-2
GHS: Acute Tox. 4
H302, H332
P261, P280, P301+P312,
P305+P351+P338, P302+P352

Assay: >99.5%

Guaranteed analysis

Copper (Cu)	<2 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<5 ppm	Residue after ignition	<0.05%
Lead (Pb)	<5 ppm		

Product restriction only supplied to UK customers

Barbitone sodium — Certified AR, BP
for analysis

packaging		Mfr. No
100 g	Plastic jar	B/0102/48

$C_8H_{11}N_2O_3Na$
CAS: 144-02-5
MW: 206.18
EINECS: 205-613-9

GHS: Acute Tox. 4
H302, H332
P261, P280,
P304+P340, P301+P312

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Potassium (K)	<100 ppm
Free barbitone	: <0.1%	n-Butyl formate	<0.005%
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<5 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Arsenic (As)	<2 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Chromium (Cr)	<1 ppm	Vanadium (V)	<1 ppm
Cobalt (Co)	<1 ppm		

Product restriction only supplied to UK customers. Lot analysis on the label.

Barbitone sodium — SLR
extra pure, 98.5+ %

packaging		Mfr. No
100 g	Plastic jar	B/0100/48
500 g	Plastic jar	B/0100/53

$C_8H_{11}N_2O_3Na$
CAS: 144-02-5
MW: 206.18
EINECS: 205-613-9

GHS: Acute Tox. 4
H302, H332
P261, P280,
P304+P340, P301+P312

Assay: >98.5%

Guaranteed analysis

Loss on drying	<1%	Potassium (K)	<500 ppm
Calcium (Ca)	<200 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm

Product restriction only supplied to UK customers

Barbituric acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	B/0120/48

$C_4H_4N_2O_3$
CAS: 67-52-7
MW: 128.09

Melting point: 248 to 255°C
EINECS: 200-658-0

Assay: >99%

Barium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8004/05
500 mℓ	HDPE Plastic bottle	J/8004/08

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B

H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Barium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8221/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B
H314

P301+P330+P331, P280,
P305+P351+P338, P310,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
All ICP standards are manufactured from acids, metal & metal salts Ultra pure quality and contain less than <10 ppm total metal impurities.
See also the full range of "Standard solution" in the Standard solution section.

Barium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8220/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314

P301+P330+P331, P280,
P305+P351+P338, P310,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Barium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLBA22Y
250 mℓ	Plastic bottle	SPPLBA22T
500 mℓ	Plastic bottle	SPPLBA22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Barium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	PLBA12X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Barium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLBA23Y
500 mℓ	Plastic bottle	SPPLBA23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Barium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLBA22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Barium
pure, metal in liquid paraffin

packaging		Mfr. No
25 g	Aluminium jar	B/0150/46

Ba
CAS: 7440-39-3
MW: 137.34
Density at 20°C: 3.51
Boiling point: 1640°C
Melting point: 725°C
ADR/RID: 4.3, II
EINECS: 231-149-1
UN: 1400

GHS: Flam. Sol. 2, Water-react. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H261, H228, H335, H315, H319, EUH014
P210, P280, P302+P352, P305+P351+P338, P304+P340, P261

Standard Volumetric solution
For your convenience we offer a range of NIST traceable solutions. A full list of our products can be found on page 323. Can't see what you need? Please email your contact details and a brief description of your requirements to begel.sha.quotes@thermofisher.com

Barium carbonate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	B/0400/48
500 g	Plastic jar	B/0400/53

$BaCO_3$
CAS: 513-77-9
MW: 197.35
Density at 20°C: 4.43
Boiling point: 1450°C
Melting point: 811°C

ADR/RID: 6.1, III
EINECS: 208-167-3
UN: 1564
GHS: Acute Tox. 4
H302
P280, P301+P310

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<10 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<50 ppm		

Lot analysis on the label.

Barium carbonate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	B/0350/53

$BaCO_3$
CAS: 513-77-9
MW: 197.35
Density at 20°C: 4.43
Boiling point: 1450°C
Melting point: 811°C

ADR/RID: 6.1, III
EINECS: 208-167-3
UN: 1564
GHS: Acute Tox. 4
H302
P280, P301+P310

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<200 ppm		

Barium chloride dihydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	B/0550/53
1 kg	Plastic jar	B/0550/60
3 kg	Plastic jar	B/0550/63
5 kg	Plastic jar	B/0550/65
25 kg	Plastic keg	B/0550/70

$BaCl_2.2H_2O$
CAS: 10326-27-9
MW: 244.28
Boiling point: 1560°C
Melting point: 962°C
ADR/RID: 6.1, III

EINECS: 233-788-1
UN: 1564
GHS: Acute Tox. 3
H301, H332
P301+P310, P304+P340

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 8	Sodium (Na)	<50 ppm
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<1 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<20 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.01 %
Chromium (Cr)	<2 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Barium chloride dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	B/0500/53
1 kg	Plastic jar	B/0500/60
5 kg	Plastic jar	B/0500/65
25 kg	Plastic keg	B/0500/70

$BaCl_2.2H_2O$
CAS: 10326-27-9
MW: 244.28
Boiling point: 1560°C
Melting point: 962°C
ADR/RID: 6.1, III

EINECS: 233-788-1
UN: 1564
GHS: Acute Tox. 3
H301, H332
P301+P310, P304+P340

Assay: 99 to 101%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<100 ppm		

Barium chloride solution 1M (2N)
pure, ready to use

packaging		Mfr. No
1 ℓ	Coated Glass bottle	J/1700/PB15

ADR/RID: 6.1,
III UN: 3287

Manufactured to a tolerance of ± 0.5%.

Barium diphenylamine-4-sulfonate
pure, Redox indicator

packaging		Mfr. No
5 g	Plastic jar	B/0620/44

$C_{24}H_{20}BaN_2O_6S_2$
CAS: 6211-24-1
MW: 633.89
Melting point: 300°C
ADR/RID: 6.1, II

EINECS: 228-278-0
UN: 1564
GHS: Acute Tox. 4
H302, H332
P301+P312, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Barium hydroxide octahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	B/0700/53
1 kg	Plastic jar	B/0700/60

$Ba(OH)_2.8H_2O$
CAS: 12230-71-6
MW: 315.48
Density at 20°C: 2.18
Melting point: 78°C
ADR/RID: 8, III
EINECS: 241-234-5

UN: 3262
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H332, H302, H314
P280, P305+P351+P338, P308+P313

Assay: 98 to 102%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Carbonate (Na_2CO_3)	<2%	Total chloride (Cl)	<0.001%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<500 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<10 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<50 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.5 %
Chromium (Cr)	<2 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Barium hydroxide octahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	B/0650/53
1 kg	Plastic jar	B/0650/60

$Ba(OH)_2.8H_2O$
CAS: 12230-71-6
MW: 315.48
Density at 20°C: 2.18
Melting point: 78°C
ADR/RID: 8, III
EINECS: 241-234-5

UN: 3262
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H332, H302, H314
P280, P305+P351+P338, P308+P313

Assay: 97 to 103%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<500 ppm
Carbonate (Na_2CO_3)	<2%	Sodium (Na)	<1000 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Barium nitrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	B/0850/50
500 g	Plastic jar	B/0850/53
1 kg	Plastic jar	B/0850/60
25 kg	Fibre Keg	B/0850/70

$Ba(NO_3)_2$
CAS: 10022-31-8
MW: 261.35
Density at 20°C: 3.23
Melting point: 592°C
ADR/RID: 5.1, 6.1, II

EINECS: 233-020-5
UN: 1446
GHS: Ox. Sol. 2, Acute Tox. 4
H272, H302, H332
P210, P301+P312, P304+P340

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 8	Potassium (K)	<50 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<1 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.05 %
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Barium nitrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	B/0800/53
25 kg	Plastic keg	B/0800/70

$Ba(NO_3)_2$
CAS: 10022-31-8
MW: 261.35
Density at 20°C: 3.23
Melting point: 592°C
ADR/RID: 5.1, 6.1, II

EINECS: 233-020-5
UN: 1446
GHS: Ox. Sol. 2, Acute Tox. 4
H272, H302, H332
P210, P301+P312, P304+P340

Assay: >95%

Barium peroxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	B/1080/53

BaO_2
CAS: 1304-29-6
MW: 169.36
Density at 20°C: 4.96
Melting point: 450°C
ADR/RID: 5.1, 6.1, II

EINECS: 215-128-4
UN: 1449
GHS: Ox. Sol. 2, Acute Tox. 4
H272, H332, H302
P210, P304+P340, P301+P312

Assay: >85%

Guaranteed analysis

Calcium (Ca)	<10000 ppm	n-Butyl formate	<0.04%
Iron (Fe)	<200 ppm	Insoluble Acids	<3%

Barium sulfate precipitated — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	B/1120/53
2 kg	Plastic jar	B/1120/61

$BaSO_4$
CAS: 7727-43-7
MW: 233.40

Density at 20°C: 4.5
Melting point: 1580°C
EINECS: 231-784-4

Guaranteed analysis
Identity test ..... : Pass

Benedict's reagent quantitative
pure

packaging		Mfr. No
1 ℓ	Glass bottle	J/2150/15

GHS: Aquatic Chronic 3
H412, EUH032

50 mℓ of solution is equivalent to 0.1 g glucose.
Blue to white colour change.

Benedict's reagent qualitative
pure

packaging		Mfr. No
1 ℓ	Glass bottle	J/2100/15
2.5 ℓ	Glass bottle	J/2100/17

Density at 20°C: 1.21
GHS: Eye Irrit. 2, Aquatic Chronic 3
H412, H319
P273, P280, P305+P351+P338

Bentonite — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	B/1300/60

CAS: 1302-78-9
EINECS: 215-108-5

Guaranteed analysis
Identity test ..... : Pass

Benzaldehyde — Certified AR
for analysis

packaging		Mfr. No
250 mℓ	Coated Glass bottle	B/1450/PB07

C_7H_6O
CAS: 100-52-7
MW: 106.13
Density at 20°C: 1.043
Boiling point: 179°C
Melting point: -26°C
Flash point: 64°C

ADR/RID: 9, III
EINECS: 202-860-4
UN: 1990
GHS: Acute Tox. 4
H302
P280, P301+P310

Assay (CG): >99%

Guaranteed analysis

Colour	<40 APHA	Lead (Pb)	<1 ppm
Sulfated ash	<0.005%	Magnesium (Mg)	<1 ppm
Acidity	<0.02 meq/g	Potassium (K)	<20 ppm
Calcium (Ca)	<5 ppm	Sodium (Na)	<20 ppm
Ionized chloride	<0.005%	Total phosphorus (P)	<1 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<1 ppm	Zinc (Zn)	<1 ppm

Lot analysis on the label

Benzaldehyde — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	B/1400/PB08

C_7H_6O
CAS: 100-52-7
MW: 106.13
Density at 20°C: 1.043
Boiling point: 179°C
Melting point: -26°C
Flash point: 64°C

ADR/RID: 9, III
EINECS: 202-860-4
UN: 1990
GHS: Acute Tox. 4
H302
P280, P301+P310

Assay (CG): >99%

Guaranteed analysis

Colour	<50 APHA	Lead (Pb)	<5 ppm
Sulfated ash	<0.05%	Magnesium (Mg)	<5 ppm
Acidity	<0.1 meq/g	Potassium (K)	<100 ppm
Calcium (Ca)	<20 ppm	Sodium (Na)	<100 ppm
Ionized chloride	<0.05%	Total phosphorus (P)	<5 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<5 ppm

Benzamide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	B/1460/48

C_7H_7NO
CAS: 55-21-0
MW: 121.14
Boiling point: 228°C
Melting point: 125 to 129°C

Flash point: 180°C
EINECS: 200-227-7
GHS: Muta. 2, Acute Tox. 4
H341, H302
P280, P301+P312, P260

Assay: >98%

1.3-Benzenediol *See Resorcinol, page 269*

1.2-Benzenediol *See Catechol, page 80*

Benzenesulfonyl chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 mℓ	Coated Glass bottle	B/1800/PB07

$C_6H_5ClO_2S$
CAS: 98-09-9
MW: 176.63
Density at 20°C: 1.384
Boiling point: 251 to 252°C
Melting point: 14.5°C
Flash point: 128°C
ADR/RID: 8, III

EINECS: 202-636-6
UN: 2225
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H314, H302, EUH029
P301+P330+P331, P280, P305+P351+P338, P310, P402+P404, P301+P312

Benzoic acid — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	B/1950/48
500 g	Plastic jar	B/1950/53
1 kg	Plastic jar	B/1950/60

$C_7H_6O_2$
CAS: 65-85-0
MW: 122.12
Boiling point: 249°C
Melting point: 121 to 123°C
Flash point: 121°C
EINECS: 200-618-2
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H334, H317, H302, H319, H315, H335
P261, P304+P341, P342+P311, P280, P301+P312, P302+P352, P305+P351+P338

Assay: 99.9 to 100.5%

Guaranteed analysis

Water	<0.7%	Magnesium (Mg)	<2 ppm
Substances reducing $KMnO_4$	<0.01%	Potassium (K)	<5 ppm
Freezing Point	: 121 to 123°C	Sodium (Na)	<5 ppm
Heavy metals	<10 ppm	n-Butyl formate	<0.0005%
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<20 ppm
Chlorine (Cl) compounds	<0.005%	Total silicon (Si)	<10 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<20 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm	Readily carbonisable substances test:	Pass
		Residue after ignition	<0.05%

Lot analysis on the label.

Benzoic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	B/1900/53
1 kg	Plastic jar	B/1900/60
25 kg	Fibre Keg	B/1900/70

$C_7H_6O_2$
CAS: 65-85-0
MW: 122.12
Boiling point: 249°C
Melting point: 121 to 123°C
Flash point: 121°C
EINECS: 200-618-2
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H334, H317, H302, H319, H315, H335
P261, P304+P341, P342+P311, P280, P301+P312, P302+P352, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<20 ppm	Zinc (Zn)	<10 ppm

Benzoin — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	B/2050/50

$C_{14}H_{12}O_2$
CAS: 119-53-9
MW: 212.25

Boiling point: 194°C
Melting point: 133 to 137°C
EINECS: 204-331-3

Guaranteed analysis

Residue after ignition ..... <0.2%

p-Benzoquinone — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	B/2150/48

$C_6H_4O_2$
CAS: 106-51-4
MW: 108.10
Density at 20°C: 1.31
Melting point: 112 to 116°C
ADR/RID: 6.1, II
EINECS: 203-405-2
UN: 2587

GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1
H331, H315, H335, H319, H400, H301
P304+P340, P261, P273, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Water ..... <1% Residue after ignition ..... <0.5%

Benzoyl chloride — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	B/2350/PB08

C_7H_5ClO
CAS: 98-88-4
MW: 140.57
Density at 20°C: 1.21
Boiling point: 198°C
Melting point: -1°C
Flash point: 93°C
ADR/RID: 8, II
EINECS: 202-710-8

UN: 1736
GHS: Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1
H317, H302, H314, H312, H332
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P309+P311

Assay: >99.5%

Guaranteed analysis

Colour	<20 APHA	Magnesium (Mg)	<2 ppm
Residue after ignition	<0.02%	Potassium (K)	<5 ppm
Calcium (Ca)	<5 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<0.5 ppm	Total sulphur (S)	<10 ppm
Lead (Pb)	<0.1 ppm	Zinc (Zn)	<1 ppm

Benzoyl chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 mℓ	Coated Glass bottle	B/2300/PB07
500 mℓ	Coated Glass bottle	B/2300/PB08

C_6H_5COCl
CAS: 98-88-4
MW: 140.57
Density at 20°C: 1.21
Boiling point: 198°C
Melting point: -1°C
Flash point: 93°C
ADR/RID: 8, II
EINECS: 202-710-8

UN: 1736
GHS: Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1
H317, H302, H314, H312, H332
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P309+P311

Assay: >98%

Guaranteed analysis

Colour	<30 APHA	Magnesium (Mg)	<10 ppm
Residue after ignition	<0.05%	Potassium (K)	<250 ppm
Calcium (Ca)	<250 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<1 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<100 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<5 ppm

Benzyl alcohol — SLR, Eur.Ph., BP, USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	B/2550/08
2.5 ℓ	Coated Glass bottle	B/2550/PB17

$C_6H_5CH_2OH$
CAS: 100-51-6
MW: 108.14
Density at 20°C: 1.044
Boiling point: 205°C
Melting point: -15°C

Flash point: 96°C
EINECS: 202-859-9
GHS: Acute Tox. 4
H332, H302
P280, P304+P340, P301+P312

Assay (CG): >98%

Guaranteed analysis

Residue after evaporation ..... <500 ppm Benzaldehyde ..... <0.1%
Chlorine (Cl) compounds ..... <0.05%

Benzylamine — SLR
extra pure, 98+%, (acidimetric)

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/2600/PB05

C_7H_9N
CAS: 100-46-9
MW: 107.16
Density at 20°C: 0.980
Boiling point: 182 to 185°C
Melting point: -30°C
Flash point: 72°C
ADR/RID: 8, II

EINECS: 202-854-1
UN: 2735
GHS: Acute Tox. 4, Skin Corr. 1B
H318, H312, H302
P280, P301+P330+P331, P305+P351+P338, P302+P352, P301+P312

Assay: >98%

Benzyl chloroformate
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/2710/PB05

$C_7H_5ClO_2$
CAS: 501-53-1
MW: 170.60
ADR/RID: 8, I
EINECS: 207-925-0
UN: 1739
GHS: Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H410, H314
P301+P330+P331, P280, P305+P351+P338, P310, P261, P273

Beryllium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLBE22Y
250 mℓ	Plastic bottle	SPPLBE22T
500 mℓ	Plastic bottle	SPPLBE22X

H315, H319, H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Beryllium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLBE23Y
500 mℓ	Plastic bottle	SPPLBE23X

H302, H311, H314, H331, H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Beryllium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLBE22Y

H315, H320, H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Bicarbonate indicator solution
pure, Concentrated stock reagent

packaging		Mfr. No
250 mℓ	Glass bottle	J/2300/07
500 mℓ	Glass bottle	J/2300/08

Biphenyl
pure

packaging		Mfr. No
500 g	Plastic jar	B/2975/53

$C_{12}H_{10}$
CAS: 92-52-4
MW: 154.21
Density at 20°C: 0.991
Boiling point: 255°C
Melting point: 68 to 72°C
Flash point: 113°C
ADR/RID: 9, III

EINECS: 202-163-5
UN: 3077
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H315, H410, H319, H335
P261, P273, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Complies with standard IR spectrum: Pass

Bis(2-hydroxyethyl)-imino-tris-(hydroxymethyl)-methane

SLR

specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	B/3010/48

$C_8H_{19}NO_5$
CAS: 6976-37-0
MW: 209.24
Melting point: 103 to 104°C
ADR/RID: 8, III
EINECS: 230-237-7
UN: 3259

GHS: Met. Corr. 1, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H290, H315, H319, H335
P234, P390, P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Bismuth standard metal solution 1000 ppm

for ICP solution in HNO_3 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLBI42Y
500 mℓ	Plastic bottle	SPPLBI42X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Bismuth standard metal solution 10 ppm

for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLBI21AY

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Bismuth(III) chloride

SLR

specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Glass jar	B/3110/46

$BiCl_3$
CAS: 7787-60-2
MW: 315.33
Density at 20°C: 4.75
Boiling point: 447°C
Melting point: 230 to 232°C
EINECS: 232-123-2
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Bismuth nitrate pentahydrate

Certified AR

for analysis

packaging		Mfr. No
100 g	Plastic jar	B/3200/48

$Bi(NO_3)_3.5H_2O$
CAS: 10035-06-0
MW: 485.07
Density at 20°C: 2.83
Boiling point: 80°C
Melting point: 30°C
ADR/RID: 5.1, II
EINECS: 233-791-8
UN: 1477
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H319, H335
P210, P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Ammonia (NH_3)	<0.005%	Sodium (Na)	<100 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<20 ppm		

Lot analysis on the label.

3.3'-Bis[N,N-di(carboxymethyl)aminomethyl] thymolsulfonephthalein, sodium salt

See Thymolsulfonephthaleindi-(methyl-iminodiacetic acid) sodium salt, page 349

Bispyrazolone (3.3'-dimethyl-1.1'diphenyl(4.4'-bi-2-pyrazoline)-5.5'-dione)

pure

packaging		Mfr. No
5 g	Plastic jar	B/3620/44

$C_{20}H_{18}N_4O_2$
CAS: 7477-67-0
MW: 346.39
Melting point: 355°C
EINECS: 231-282-5

Guaranteed analysis
Complies with standard IR spectrum: Pass

Borax

See di-Sodium tetraborate decahydrated, page 305

Boric acid

for electrophoresis

packaging		Mfr. No
500 g	Plastic jar	B/P560/53
1 kg	Plastic jar	B/P560/60
5 kg	Plastic keg	B/P560/65

H_3BO_3
CAS: 10043-35-3
MW: 61.83
Melting point: 169°C
EINECS: 233-139-2
GHS: Repr. 1B
H360FD
P310, P201, P308+P313, P304+P340

Assay: > 99.8%

Boric acid

for electronic use (MOS)

packaging		Mfr. No
500 g	Plastic jar	B/3820/53

H_3BO_3
CAS: 10043-35-3
MW: 61.83
Melting point: 169°C
EINECS: 233-139-2
GHS: Repr. 1B
H360FD
P310, P201, P308+P313, P304+P340

Assay: >99.5%

Guaranteed analysis

Water insoluble matter	<0.005%	Phosphate (PO_4)	<10 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<2 ppm	Sulfate (SO_4)	<0.0002%
Iron (Fe)	<2 ppm	n-Butyl formate	<0.0002%
Lead (Pb)	<2 ppm		

Boric acid

Certified AR

for analysis

packaging		Mfr. No
500 g	Plastic jar	B/3800/53
1 kg	Plastic jar	B/3800/60
2.5 kg	Plastic jar	B/3800/62
25 kg	Fibre Keg	B/3800/70

H_3BO_3
CAS: 10043-35-3
MW: 61.83
Melting point: 169°C
EINECS: 233-139-2
GHS: Repr. 1B
H360FD
P310, P201, P308+P313, P304+P340

Assay: >99.8%

Guaranteed analysis

Water insoluble matter	<0.005%	Potassium (K)	<10 ppm
Insoluble in methanol	: <0.005%	Sodium (Na)	<20 ppm
Non volatile with Methanol	: <0.05%	Total chloride (Cl)	<0.0002%
Calcium (Ca)	<10 ppm	Total phosphorus (P)	<10 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<10 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<10 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<2 ppm	Phosphate (PO_4)	<10 ppm
Non-esterifiable impurities	<0.05%	Sulfate (SO_4)	<0.01%

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Boric acid

SLR, Eur.Ph

extra pure, granular

packaging		Mfr. No
500 g	Plastic jar	B/3750/53
1 kg	Plastic jar	B/3750/60
5 kg	Plastic keg	B/3750/65

H_3BO_3
CAS: 10043-35-3
MW: 61.83
Melting point: 169°C
EINECS: 233-139-2
GHS: Repr. 1B
H360FD
P310, P201, P308+P313, P304+P340

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm

Boric acid

SLR, Eur. Ph.

extra pure, powder

packaging		Mfr. No
500 g	Plastic jar	B/3760/53
1 kg	Plastic jar	B/3760/60
5 kg	Plastic keg	B/3760/65
25 kg	Fibre Keg	B/3760/70

H_3BO_3
CAS: 10043-35-3
MW: 61.83
Melting point: 169°C
EINECS: 233-139-2
GHS: Repr. 1B
H360FD
P310, P201, P308+P313, P304+P340

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm

Boron standard metal solution 1000 ppm

for AAS, solution aqueous

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8006/05
500 mℓ	HDPE Plastic bottle	J/8006/08

Density at 20°C: 1

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Boron standard metal solution 1000 ppm

for ICP, solution aqueous

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8231/08

Density at 20°C: 1

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Boron standard metal solution 10 000 ppm

for ICP, solution NH3 1%

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8230/05

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Boron standard metal solution 1000 ppm

for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLB92Y
250 mℓ	Plastic bottle	SPPLB92T
500 mℓ	Plastic bottle	SPPLB92X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Boron standard metal solution 10 000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLB93Y
500 mℓ	Plastic bottle	SPPLB93X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Boric oxide
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	B/3850/53

B_2O_3
CAS: 1303-86-2
MW: 69.61
Density at 20°C: 2.46
Boiling point: 1860°C
Melting point: 450°C
ADR/RID: 8/III
EINECS: 215-125-8
UN: 3260
GHS: Repr. 1B
H360FD
P201, P308+P313

Assay: >98%

Bromate standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASBRO392Y

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Bromide standard solution 1000 ppm (1 mg/mℓ)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4544/05

Manufactured to a tolerance of ± 1%.

Bromine
Primar
for trace metal analysis

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/4055/PB05

Br_2
CAS: 7726-95-6
MW: 159.82
Density at 20°C: 3.111
Boiling point: 58.7°C
Melting point: -7.2°C
ADR/RID: 8, 6.1, I
EINECS: 231-778-1
UN: 1744
GHS: Acute Tox. 2, Skin Corr. 1A, Eye Dam. 1, Aquatic Acute 1
H314, H330, H400
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P273

Assay: >99.5%

Guaranteed analysis

Other organic impurities test	: Pass	Manganese (Mn)	<0.005 ppm
Aluminium (Al)	<0.02 ppm	Molybdenum (Mo)	<0.005 ppm
Arsenic (As)	<1 ppm	Nickel (Ni)	<0.005 ppm
Barium (Ba)	<0.005 ppm	Potassium (K)	<0.1 ppm
Cadmium (Cd)	<0.005 ppm	Propan--1-ol	<0.005 ppm
Calcium (Ca)	<0.5 ppm	Sodium (Na)	<0.5 ppm
Chromium (Cr)	<0.005 ppm	Strontium (Sr)	<0.005 ppm
Cobalt (Co)	<0.005 ppm	Titanium (Ti)	<0.005 ppm
Copper (Cu)	<0.005 ppm	n-Butyl formate	<0.05%
Iodine	<0.5 ppm	Total phosphorus (P)	<0.05 ppm
Iron (Fe)	<0.05 ppm	Total silicon (Si)	<0.05 ppm
Lead (Pb)	<0.01 ppm	Total sulphur (S)	<0.5 ppm
Lithium (Li)	<0.005 ppm	Vanadium (V)	<0.005 ppm
Magnesium (Mg)	<0.05 ppm	Zinc (Zn)	<0.02 ppm

Bromine
Certified AR
for analysis, 99.5+ %, liquid

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/4050/PB05
500 mℓ	Coated Glass bottle	B/4050/PB08

Br_2
CAS: 7726-95-6
MW: 159.82
Density at 20°C: 3.111
Boiling point: 58.7°C
Melting point: -7.2°C
ADR/RID: 8, 6.1, I
EINECS: 231-778-1
UN: 1744
GHS: Acute Tox. 2, Skin Corr. 1A, Eye Dam. 1, Aquatic Acute 1
H314, H330, H400
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P273

Assay: >99.5%

Guaranteed analysis

Other organic impurities test	: Pass	Potassium (K)	<0.5 ppm
Calcium (Ca)	<0.5 ppm	Sodium (Na)	<1 ppm
Copper (Cu)	<0.2 ppm	n-Butyl formate	<0.05%
Iodine	<1 ppm	Total phosphorus (P)	<0.5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<0.5 ppm
Lead (Pb)	<0.2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<0.5 ppm	Zinc (Zn)	<0.2 ppm

Typical analysis

Aluminium (Al)	<0.2 ppm	Manganese (Mn)	<0.2 ppm
Arsenic (As)	<1 ppm	Molybdenum (Mo)	<0.2 ppm
Barium (Ba)	<0.2 ppm	Nickel (Ni)	<0.2 ppm
Cadmium (Cd)	<0.2 ppm	Silver (Ag)	<0.2 ppm
Chromium (Cr)	<0.2 ppm	Strontium (Sr)	<0.2 ppm
Cobalt (Co)	<0.2 ppm	Titanium (Ti)	<0.2 ppm
Lithium (Li)	<0.2 ppm	Vanadium (V)	<0.2 ppm

Lot analysis on the label

Bromine
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/4000/PB05
500 mℓ	Coated Glass bottle	B/4000/PB08

Br_2
CAS: 7726-95-6
MW: 159.82
Density at 20°C: 3.111
Boiling point: 58.7°C
Melting point: -7.2°C
ADR/RID: 8, 6.1, I
EINECS: 231-778-1
UN: 1744
GHS: Acute Tox. 2, Skin Corr. 1A, Eye Dam. 1, Aquatic Acute 1
H314, H330, H400
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<5 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<2 ppm	n-Butyl formate	<0.5%
Iron (Fe)	<2 ppm	Total phosphorus (P)	<5 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<5 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<5 ppm	Zinc (Zn)	<2 ppm

Bromobenzene
pure

packaging		Mfr. No
250 mℓ	Glass bottle	B/4300/07

C_6H_5Br
CAS: 108-86-1
MW: 157.02
Density at 20°C: 1.49
Boiling point: 156°C
Melting point: -31°C
Flash point: 51°C
ADR/RID: 3, III
EINECS: 203-623-8
UN: 2514
GHS: Flam. Liq. 3, Skin Irrit. 2, Aquatic Chronic 2
H226, H411, H315
P273, P302+P352, P210

Assay (CG): >99%

1-Bromobutane
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/4310/PB05

C_4H_9Br
CAS: 109-65-9
MW: 137.03
Density at 20°C: 1.27
Boiling point: 100 to 104°C
Melting point: -112°C
Flash point: 10°C
ADR/RID: 3, II
EINECS: 203-691-9
UN: 1126
GHS: Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H335, H315
P261, P302+P352, P280, P305+P351+P338, P210, P240

Assay (CG): >98%

Bromocresol green
pure, indicator grade

packaging		Mfr. No
1 g	Glass jar	B/4320/43
5 g	Glass jar	B/4320/44
25 g	Glass jar	B/4320/46

$C_{21}H_{14}Br_4O_5S$
CAS: 76-60-8
MW: 698.01
Melting point: 225°C
EINECS: 200-972-8
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis

pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

Bromocresol green
pure, solution 0.04%, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	B/4320L/08

ADR/RID: 3/II
EINECS: 200-972-8
UN: 1993
GHS: Flam. Liq. 3
H226
P210

Guaranteed analysis

pH colour change test ..... : Pass

Bromocresol purple
pure, solid, indicator grade

packaging		Mfr. No
5 g	Glass jar	B/4330/44
25 g	Glass jar	B/4330/46

$C_{21}H_{16}Br_2O_5S$
CAS: 115-40-2
MW: 540.21
Melting point: 245°C
EINECS: 204-087-8
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis

pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

Bromocresol purple
pure, solution 0.04%, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	B/4330L/08

Density at 20°C: 0.95
Flash point: 32°C
ADR/RID: 3, III
EINECS: 204-087-8
UN: 1993
GHS: Flam. Liq. 3, Skin Corr. 1B
H226, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Guaranteed analysis

pH colour change test ..... : Pass

Bromoethane
pure

packaging		Mfr. No
250 mℓ	Coated Glass bottle	B/4350/PB07
500 mℓ	Coated Glass bottle	B/4350/PB08

C_2H_5Br
CAS: 74-96-4
MW: 108.97
Density at 20°C: 1.46
Boiling point: 37 to 40°C
Melting point: -119°C
Flash point: -23°C
ADR/RID: 6.1, II
EINECS: 200-825-8
UN: 1891
GHS: Flam. Liq. 2, Carc. 2, Acute Tox. 4
H225, H351, H302, H332
P281, P301+P312, P304+P340, P210, P240

Assay (CG): >98%

Bromoform
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/4400/PB05

$CHBr_3$
CAS: 75-25-2
MW: 252.73
Density at 20°C: 2.63
Boiling point: 150 to 151°C
Melting point: 8°C
ADR/RID: 6.1, III
EINECS: 200-854-6
UN: 2515
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 2
H315, H411, H331, H319, H302
P304+P340, P273, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Density at 20°C ..... : 2.58 to 2.68 Ethanol 90 % v/v ..... 3 to 5%

Bromoform
technical, unstabilized

packaging		Mfr. No
250 mℓ	Coated Glass bottle	B/4450/PB07

$CHBr_3$
CAS: 75-25-2
MW: 252.73
Density at 20°C: 2.63
Boiling point: 150 to 151°C
Melting point: 8°C
ADR/RID: 6.1, III
EINECS: 200-854-6
UN: 2515
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 2
H315, H411, H331, H319, H302
P304+P340, P273, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Density at 20°C ..... : 2.86 to 2.9

2-Bromo-2-methylpropane
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/4540/PB05

C_4H_9Br
CAS: 507-19-7
MW: 137.03
Density at 20°C: 1.18
Boiling point: 72 to 74°C
Melting point: -20°C
Flash point: 18°C
ADR/RID: 3, II
EINECS: 208-065-9
UN: 2342
GHS: Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H335, H315
P261, P302+P352, P280, P305+P351+P338, P210, P240

Assay (CG): >97%

1-Bromonaphthalene SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	B/4550/PB05

$C_{10}H_7Br$
CAS: 90-11-9
MW: 207.08
Density at 20°C: 1.489
Boiling point: 279 to 281°C
Melting point: -1°C

Flash point: 110°C
EINECS: 201-965-2
GHS: Acute Tox. 4
H302
P301+P312

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Refractive index ..... 1.657 to 1.66

Bromophenol blue
for electrophoresis

packaging		Mfr. No
5 g	Glass jar	B/P620/44
25 g	Glass jar	B/P620/46

$C_{19}H_{10}Br_4O_5S$
CAS: 115-39-9
MW: 669.96

Melting point: 279°C
EINECS: 204-086-2

Guaranteed analysis
pH colour change test ..... : Pass

Bromophenol blue
pure, indicator grade

packaging		Mfr. No
5 g	Glass jar	B/4630/44
25 g	Glass jar	B/4630/46

$C_{19}H_{10}Br_4O_5S$
CAS: 115-39-9
MW: 669.96

Melting point: 279°C
EINECS: 204-086-2

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

Bromophenol blue
pure, solution 0.2% in Methylated spirits

packaging		Mfr. No
500 mℓ	Glass bottle	B/4631L/08

CAS: 115-39-9
Density at 20°C: 0.8
Boiling point: 63.9°C
Flash point: 11.1°C
ADR/RID: 3, II

EINECS: 204-086-2
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis
pH colour change test ..... : Pass

Bromophenol blue
pure, solution 0.04%, indicator grade

packaging		Mfr. No
100 mℓ	Glass bottle	B/4630L/05
500 mℓ	Glass bottle	B/4630L/08

CAS: 115-39-9
Flash point: 32°C
ADR/RID: 3, III
UN: 1170

GHS: Flam. Liq. 3
H226
P210, P280, P233, P240, P303+P361+P353

Guaranteed analysis
pH colour change test ..... : Pass

Bromophenol red
pure, indicator grade

packaging		Mfr. No
1 g	Glass jar	B/4660/43

$C_{19}H_{12}Br_2O_5S$
CAS: 2800-80-8
MW: 512.19
EINECS: 220-538-1

Guaranteed analysis
pH colour change test ..... : Pass

Bromothymol blue
pure, indicator grade

packaging		Mfr. No
5 g	Glass jar	B/4690/44

$C_{27}H_{28}Br_2O_5S$
CAS: 76-59-5
MW: 624.38

Melting point: 204°C
EINECS: 200-971-2

Guaranteed analysis
Complies with standard IR spectrum: Pass

Bromothymol blue
pure, solution 0.04%, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	B/4690L/08

Density at 20°C: 0.8
Boiling point: 63.9°C
Flash point: 11.1°C
ADR/RID: 3, III
EINECS: 200-971-2

UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis
pH colour change test ..... : Pass

Bromure standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASBR92Y
500 mℓ	Plastic bottle	SPASBR92X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

NIST Buffer Standard solution ready to use for pH measurement

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
pH 2.00 to 7.00 buffer solution are stabilized with 10 ppm of Mercury (II) chloride

designation	packsize	package type		Mfr. No	page
Buffer solution pH 2.00 (glycine)	500 mℓ	HDPE Plastic bottle		J/2800/08	65
	1 L	HDPE Plastic bottle		J/2800/15	65
	2.5 L	HDPE Plastic bottle		J/2800/17	65
Buffer solution pH 3.00 (phthalate)	500 mℓ	HDPE Plastic bottle		J/2810/08	65
	1 L	HDPE Plastic bottle		J/2810/15	65
	2.5 L	HDPE Plastic bottle		J/2810/17	65
Buffer solution pH 4.00 (phthalate)	500 mℓ	HDPE Plastic bottle		J/2820/08	65
	1 L	HDPE Plastic bottle		J/2820/15	65
	2.5 L	HDPE Plastic bottle		J/2820/17	65
	5 L	HDPE Plastic bottle		J/2820/21	65
	10 L	Bag in box		J/2820/24	65
Buffer solution pH 4.00 BS formulated	1 L	HDPE Plastic bottle		J/2821/15	65
Buffer solution pH 5.00 (phthalate)	500 mℓ	HDPE Plastic bottle		J/2830/08	65
	1 L	HDPE Plastic bottle		J/2830/15	65
	2.5 L	HDPE Plastic bottle		J/2830/17	65
Buffer solution pH 6.00 (phosphate)	500 mℓ	HDPE Plastic bottle		J/2840/08	65
	1 L	HDPE Plastic bottle		J/2840/15	65
	2.5 L	HDPE Plastic bottle		J/2840/17	65
Buffer solution pH 6.87 BS formulated	1 L	HDPE Plastic bottle		J/2845/15	65
Buffer solution pH 7.00 (phosphate)	500 mℓ	HDPE Plastic bottle		J/2850/08	66
	1 L	HDPE Plastic bottle		J/2850/15	66
	2.5 L	HDPE Plastic bottle		J/2850/17	66
	5 L	HDPE Plastic bottle		J/2850/21	66
	10 L	Bag in box		J/2850/24	66
Buffer solution pH 8.00 (borate)	500 mℓ	HDPE Plastic bottle		J/2860/08	66
	1 L	HDPE Plastic bottle		J/2860/15	66
	2.5 L	HDPE Plastic bottle		J/2860/17	66
	10 L	Bag in box		J/2860/24	66
Buffer solution pH 9.00 (borate)	2.5 L	HDPE Plastic bottle		J/2865/17	66
Buffer solution pH 9.2 (borate)	500 mℓ	HDPE Plastic bottle		J/2870/08	66
	1 L	HDPE Plastic bottle		J/2870/15	66
	2.5 L	HDPE Plastic bottle		J/2870/17	66
	5 L	HDPE Plastic bottle		J/2870/21	66
	10 L	Bag in box		J/2870/24	66
Buffer solution pH 9.225 BS formulated	1 L	HDPE Plastic bottle		J/2871/15	66
Buffer solution pH 9.23 (borate)	1 L	HDPE Plastic bottle		J/2875/15	66
Buffer solution pH 10.00 (borate)	500 mℓ	HDPE Plastic bottle		J/2880/08	66
	1 L	HDPE Plastic bottle		J/2880/15	66
	2.5 L	HDPE Plastic bottle		J/2880/17	66
	5 L	HDPE Plastic bottle		J/2880/21	66

NIST Buffer colour coded standard solution ready to use for pH measurement

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
pH 4.00 & 7.00 buffer solution are stabilized with 10 ppm of Mercury (II) chloride

designation	packsize	package type		Mfr. No	page
Buffer colour coded solution pH 4.00 (phthalate) Red	500 mℓ	HDPE Plastic bottle		J/2825/08	65
	1 L	HDPE Plastic bottle		J/2825/15	65
	2.5 L	HDPE Plastic bottle		J/2825/17	65
	5 L	HDPE Plastic bottle		J/2825/21	65
	10 L	Bag in box		J/2825/24	65
Buffer colour coded solution pH 7.00 (phosphate) Yellow	500 mℓ	HDPE Plastic bottle		J/2855/08	66
	1 L	HDPE Plastic bottle		J/2855/15	66
	2.5 L	HDPE Plastic bottle		J/2855/17	66
	5 L	HDPE Plastic bottle		J/2855/21	66
	10 L	Bag in box		J/2855/24	66
Buffer colour coded solution pH 10.00 (borate) Blue	500 mℓ	HDPE Plastic bottle		J/2885/08	67
	1 L	HDPE Plastic bottle		J/2885/15	67
	2.5 L	HDPE Plastic bottle		J/2885/17	67
	5 L	HDPE Plastic bottle		J/2885/21	67
	10 L	Bag in box		J/2885/24	67

NIST Buffer concentrated solution for pH measurement

Each ampoule makes up 500mℓ of solution
pH 2.00 to 7.00 buffer solution are stabilized with 10 ppm of Mercury (II) chloride

designation	packsize	package type		Mfr. No	page
Buffer concentrated solution pH 2.00 (glycine)	1	Ampoule		J/2800C/05	66
	6	Ampoule		J/2800C/90	66
Buffer concentrated solution pH 4.00 (phthalate)	6	Ampoule		J/2820C/90	66
Buffer concentrated solution pH 7.00 (phosphate)	1	Ampoule		J/2850C/05	67
	6	Ampoule		J/2850C/90	67
Buffer concentrated solution pH 8.00 (borate)	1	Ampoule		J/2860C/05	67
	6	Ampoule		J/2860C/90	67
Buffer concentrated solution pH 9.2 (borate)	1	Ampoule		J/2870C/05	67
	6	Ampoule		J/2870C/90	67
Buffer concentrated solution pH 10.00 (borate)	6	Ampoule		J/2880C/90	68

NIST Buffer colour coded concentrated solution for pH measurement

Each ampoule makes up 500mℓ of solution
Stabilized with 10 ppm of Mercury (II) chloride (except J/2885C)

designation	packsize	package type		Mfr. No	page
Buffer colour coded concentrated solution pH 4.00 (phthalate) Red	1 ampoule	Ampoule		J/2825C/05	65
	6 ampoule	Ampoule		J/2825C/90	65
Buffer colour coded concentrated solution pH 7.00 (phosphate) Yellow	1 ampoule	Ampoule		J/2855C/05	66
	6 ampoule	Ampoule		J/2855C/90	66
Buffer colour coded concentrated solution pH 10.00 (borate) Blue	1 ampoule	Ampoule		J/2885C/05	67
	6 ampoule	Ampoule		J/2885C/90	67

Buffer Tablets for pH measurement

Each ampoule makes up 100mℓ of solution

designation	packsize	package type		Mfr. No	page
Buffer tablets, pH 4 (phthalate)	50 PC	Glass jar		B/4760/77	65
Buffer tablets, pH 7 (phosphate)	50 PC	Glass jar		B/4765/77	66
Buffer tablets, pH 9.2 (borate)	50 PC	Glass jar		B/4770/77	66

Buffer solution pH 2.00 (glycine)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2800/08
1 ℓ	HDPE Plastic bottle	J/2800/15
2.5 ℓ	HDPE Plastic bottle	J/2800/17

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer concentrated solution pH 2.00 (glycine)
NIST Standard for pH measurement

packaging		Mfr. No
1	Ampoule	J/2800C/05
6	Ampoule	J/2800C/90

GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Each ampoule makes up 500mℓ of solution.
Stabilised with 10 ppm of Mercury (II) chloride

Buffer solution pH 3.00 (phthalate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2810/08
1 ℓ	HDPE Plastic bottle	J/2810/15
2.5 ℓ	HDPE Plastic bottle	J/2810/17

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer solution pH 4.00 (phthalate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2820/08
1 ℓ	HDPE Plastic bottle	J/2820/15
2.5 ℓ	HDPE Plastic bottle	J/2820/17
5 ℓ	HDPE Plastic bottle	J/2820/21
10 ℓ	Bag in box	J/2820/24

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer concentrated solution pH 4 (phthalate)

packaging		Mfr. No
6	Ampoule	J/2820C/90

Buffer colour coded solution pH 4.00 (phthalate) Red
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2825/08
1 ℓ	HDPE Plastic bottle	J/2825/15
2.5 ℓ	HDPE Plastic bottle	J/2825/17
5 ℓ	HDPE Plastic bottle	J/2825/21
10 ℓ	Bag in box	J/2825/24

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer colour coded concentrated solution pH 4.00 (phthalate) Red
NIST Standard for pH measurement

packaging		Mfr. No
1	Ampoule	J/2825C/05
6	Ampoule	J/2825C/90

Each ampoule makes up 500mℓ of solution.
Stabilised with 10 ppm of Mercury (II) chloride.

Buffer solution pH 4.00 BS formulated
Standard solution ready to use for pH measurement

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/2821/15

See the full range of Standard Volumetric solution page 323.

Buffer concentrated solution BS pH 4.00 (phtalate)
Standard for pH measurement

packaging		Mfr. No
1	Ampoule	J/2821C/05

Each ampoule makes up 500mℓ of solution
Stabilised with 10ppm mercury chloride

Buffer tablets, pH 4 (phthalate)
for pH measurement

packaging		Mfr. No
50 PC	Glass jar	B/4760/77

Guaranteed analysis
pH of 10 tablets made up to 1000mℓ ..... : 3.95 to 4.05
pH of tablet made up to 100mℓ.: 3.95 to 4.05

Each tablet makes up 100mℓ of solution.

Buffer solution pH 5.00 (phthalate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2830/08
1 ℓ	HDPE Plastic bottle	J/2830/15
2.5 ℓ	HDPE Plastic bottle	J/2830/17

EINECS: 212-889-4

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer solution pH 6.00 (phosphate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2840/08
1 ℓ	HDPE Plastic bottle	J/2840/15
2.5 ℓ	HDPE Plastic bottle	J/2840/17

EINECS: 231-913-4

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer solution pH 6.87 BS formulated
Standard solution ready to use for pH measurement

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/2845/15

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer concentrated solution BS pH 6.87 (phosphate)
Standard for pH measurement

packaging		Mfr. No
6	Ampoule	J/2845C/90

Each ampoule makes up 500mℓ of solution
Stabilised with 10ppm mercury chloride

Buffer solution pH 7.00 (phosphate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2850/08
1 ℓ	HDPE Plastic bottle	J/2850/15
2.5 ℓ	HDPE Plastic bottle	J/2850/17
5 ℓ	HDPE Plastic bottle	J/2850/21
10 ℓ	Bag in box	J/2850/24

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer concentrated solution pH 7.00 (phosphate)
NIST Standard for pH measurement

packaging		Mfr. No
1	Ampoule	J/2850C/05
6	Ampoule	J/2850C/90

Each ampoule makes up 500 mℓ of solution.
Stabilised with 10 ppm of Mercury (II) Chloride.

Buffer colour coded solution pH 7.00 (phosphate) Yellow
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2855/08
1 ℓ	HDPE Plastic bottle	J/2855/15
2.5 ℓ	HDPE Plastic bottle	J/2855/17
5 ℓ	HDPE Plastic bottle	J/2855/21
10 ℓ	Bag in box	J/2855/24

Manufactured to a tolerance of ± 0.02 pH Units at 20°C
Stabilised with 10 ppm of Mercury (II) chloride

Buffer colour coded concentrated solution pH 7.00 (phosphate) Yellow
NIST Standard for pH measurement

packaging		Mfr. No
1	Ampoule	J/2855C/05
6	Ampoule	J/2855C/90

Each ampoule makes up 500mℓ of solution.
Stabilised with 10 ppm of Mercury (II) chloride.

Buffer tablets, pH 7 (phosphate)
for pH measurement

packaging		Mfr. No
50 PC	Glass jar	B/4765/77

Guaranteed analysis
pH of 10 tablets made up to 1000mℓ ..... : 6.95 to 7.05

Each tablet makes up 100mℓ of solution.

Buffer solution pH 8.00 (borate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2860/08
1 ℓ	HDPE Plastic bottle	J/2860/15
2.5 ℓ	HDPE Plastic bottle	J/2860/17
10 ℓ	Bag in box	J/2860/24

Manufactured to a tolerance of ± 0.02 pH Units at 20°C

Buffer concentrated solution pH 8.00 (borate)
NIST Standard for pH measurement

packaging		Mfr. No
1	Ampoule	J/2860C/05
6	Ampoule	J/2860C/90

Each ampoule makes up 500mℓ of solution.

Buffer solution pH 9.00 (borate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/2865/17

Manufactured to a tolerance of ± 0.02 pH Units at 20°C

Buffer solution pH 9.2 (borate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2870/08
1 ℓ	HDPE Plastic bottle	J/2870/15
2.5 ℓ	HDPE Plastic bottle	J/2870/17
5 ℓ	HDPE Plastic bottle	J/2870/21
10 ℓ	Bag in box	J/2870/24

Manufactured to a tolerance of ± 0.02 pH Units at 20°C

Buffer concentrated solution pH 9.2 (borate)
NIST Standard for pH measurement

packaging		Mfr. No
1	Ampoule	J/2870C/05
6	Ampoule	J/2870C/90

Each ampoule makes up 500mℓ of solution.

Buffer solution pH 9.225 BS formulated
Standard solution ready to use for pH measurement

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/2871/15

Manufactured to a tolerance of ± 0.02pH Units at 20°C
Stabilised with 10ppm mercury chloride

Buffer tablets, pH 9.2 (borate)
for pH measurement

packaging		Mfr. No
50 PC	Glass jar	B/4770/77

GHS: Repr. 1B
H360FD
P201, P281, P308+P313

Guaranteed analysis
pH of tablet made up to 100mℓ.: 9.15 to 9.25

Each tablet makes up 100mℓ of solution.

Buffer solution pH 9.23 (borate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/2875/15

H360FD

Manufactured to a tolerance of ± 0.02 pH Units at 20°C

Buffer solution pH 10.00 (borate)
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2880/08
1 ℓ	HDPE Plastic bottle	J/2880/15
2.5 ℓ	HDPE Plastic bottle	J/2880/17
5 ℓ	HDPE Plastic bottle	J/2880/21

Manufactured to a tolerance of ± 0.02 pH Units at 20°C

Buffer concentrated solution pH 10 (borate)

packaging		Mfr. No
6	Ampoule	J/2880C/90

GHS: Acute Tox. 4, Eye Irrit. 2
H332, H319
P304+P340, P280, P305+P351+P338

Buffer colour coded solution pH 10.00 (borate) Blue
NIST Standard solution ready to use for pH measurement

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/2885/08
1 ℓ	HDPE Plastic bottle	J/2885/15
2.5 ℓ	HDPE Plastic bottle	J/2885/17
5 ℓ	HDPE Plastic bottle	J/2885/21
10 ℓ	Bag in box	J/2885/24

Manufactured to a tolerance of ± 0.02 pH Units at 20°C

Buffer colour coded concentrated solution pH 10.00 (borate) Blue
NIST Standard for pH measurement

packaging		Mfr. No
1	Ampoule	J/2885C/05
6	Ampoule	J/2885C/90

GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P280, P305+P351+P338

Each ampoule makes up 500 mℓ of solution.

Full range indicator, pH range 1-13
for pH measurement

packaging		Mfr. No
100 mℓ	Coated Glass bottle	U/0025/PB05
500 mℓ	Coated Glass bottle	U/0025/PB08

Density at 20°C: 0.8
Flash point: 12°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2, Acute Tox. 4, STOT SE 2
H225, H371, H312, H332, H302
P280, P302+P352, P260,
P304+P340, P210, P240

Guaranteed analysis
pH colour change test ..... : Pass

Universal indicator, pH range 4-10
for pH measurement

packaging		Mfr. No
100 mℓ	Coated Glass bottle	U/0020/PB05
500 mℓ	Coated Glass bottle	U/0020/PB08
2.5 ℓ	Coated Glass bottle	U/0020/PB17

Flash point: 12°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2, Acute Tox. 4, STOT SE 2
H225, H371, H312, H332, H302
P280, P302+P352, P260,
P304+P340, P210, P240

Buffer solution ammonia-ammonium chloride
pure, For water hardness testing

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/2500/PB15
2.5 ℓ	HDPE Plastic bottle	J/2500/17

Density at 20°C: 0.93
ADR/RID: 8, III
EINECS: 235-186-4
UN: 2672
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P280, P301+P330+P331,
P310, P305+P351+P338,
P304+P340, P302+P352

1-Butane sulfonic acid sodium salt
for HPLC — Certified

packaging		Mfr. No
25 g	Plastic jar	B/4791/46

$CH_3(CH_2)_3SO_3Na$
CAS: 2386-54-1
MW: 160.16
Melting point: >300°C
EINECS: 219-201-1
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280,
P305+P351+P338

Assay: >98%

Lot analysis on the label.
Filtered to 0.2 µm.

iso-Butyric acid
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	B/5550/PB08

$C_4H_8O_2$
CAS: 79-31-2
MW: 88.11
Density at 20°C: 0.950
Boiling point: 153 to 154°C
Melting point: -47°C
Flash point: 59°C
ADR/RID: 3, 8, III
EINECS: 201-195-7
UN: 2529
GHS: Acute Tox. 4
H302, H312
P301+P310, P280,
P302+P350, P210

Assay: >99%

Butan-1-ol
For chromatography, for the determination of 17-Ketosteroids

packaging		Mfr. No
500 mℓ	Coated Glass bottle	B/4860/PB08

$C_4H_{10}O$
CAS: 71-36-3
MW: 74.12
Density at 20°C: 0.810
Boiling point: 117.6°C
Melting point: -89°C
Flash point: 35°C
ADR/RID: 3, III
EINECS: 200-751-6
UN: 1120
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H315, H302, H336, H318, H335
P280, P305+P351+P338,
P301+P312, P304+P340,
P210, P303+P361+P353

Assay (CG): >99%

Butan-1-ol — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	B/4850/08
1 ℓ	Glass bottle	B/4850/15
2.5 ℓ	Glass bottle	B/4850/17
2.5 ℓ	Coated Glass bottle	B/4850/PB17
25 ℓ	Metal drum	B/4850/25

$C_4H_{10}O$
CAS: 71-36-3
MW: 74.12
Density at 20°C: 0.810
Boiling point: 117.6°C
Melting point: -89°C
Flash point: 35°C
ADR/RID: 3, III
EINECS: 200-751-6

UN: 1120
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H315, H302, H336, H318, H335
P280, P305+P351+P338, P301+P312, P304+P340, P210, P303+P361+P353

Assay (CG): >99.5%

Guaranteed analysis

Acidity	<0.0005 meq/g	Magnesium (Mg)	<0.1 ppm
Colour	<10 APHA	Potassium (K)	<0.1 ppm
Water	<0.1%	Sodium (Na)	<1 ppm
Residue after evaporation	<10 ppm	Total phosphorus (P)	<0.2 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.02 ppm	Total sulphur (S)	<0.5 ppm
Iron (Fe)	<0.1 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.05 ppm	Butan -2-ol	<0.05%

Typical analysis

Aluminium (Al)	<0.2 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.1 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.05 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

Butan-1-ol NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	B/4800/08
1 ℓ	Glass bottle	B/4800/15
1 ℓ	Metal can	B/4800/MC15
2.5 ℓ	Glass bottle	B/4800/17
2.5 ℓ	Coated Glass bottle	B/4800/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	B/4800/21
25 ℓ	Metal drum	B/4800/25

$C_4H_{10}O$
CAS: 71-36-3
MW: 74.12
Density at 20°C: 0.810
Boiling point: 117.6°C
Melting point: -89°C
Flash point: 35°C
ADR/RID: 3, III
EINECS: 200-751-6

UN: 1120
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H315, H302, H336, H318, H335
P280, P305+P351+P338, P301+P312, P304+P340, P210, P303+P361+P353

Assay (CG): >99%

Guaranteed analysis

Colour	<20 APHA	Magnesium (Mg)	<2 ppm
Water	<0.5%	Potassium (K)	<2 ppm
Residue after evaporation	<50 ppm	Sodium (Na)	<5 ppm
Acidity	<0.005 meq/g	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<5 ppm		

sec-Butanol (Butan-2-ol) — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	B/5210/15
2.5 ℓ	Coated Glass bottle	B/5210/PB17

$C_4H_{10}O$
CAS: 78-92-2
MW: 74.12
Density at 20°C: 0.800
Boiling point: 99°C
Melting point: -115°C
Flash point: 24°C
ADR/RID: 3, III

EINECS: 201-158-5
UN: 1120
GHS: Flam. Liq. 3, Eye Irrit. 2, STOT SE 3
H226, H319, H335, H336
P261, P280, P305+P351+P338, P210

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Potassium (K)	<0.1 ppm
Colour	<10 APHA	Sodium (Na)	<0.5 ppm
Water	<0.2%	Total phosphorus (P)	<0.1 ppm
Residue after evaporation	<20 ppm	Total silicon (Si)	<0.02 ppm
2-Methylpropan-2-ol	: <0.05%	Total sulphur (S)	<1 ppm
Calcium (Ca)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Copper (Cu)	<0.02 ppm	Butan--2-one	<0.05%
Iron (Fe)	<0.1 ppm	Di-n-butyl ether	<0.05%
Lead (Pb)	<0.05 ppm	Propan--2-ol	<0.1%
Magnesium (Mg)	<0.05 ppm		

Typical analysis

Manganese (Mn)	<0.01 ppm	Lithium (Li)	<0.01 ppm
Aluminium (Al)	<0.05 ppm	Molybdenum (Mo)	<0.01 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Vanadium (V)	<0.01 ppm

sec-Butanol (Butan-2-ol) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	B/5200/15
2.5 ℓ	Coated Glass bottle	B/5200/PB17
25 ℓ	Metal drum	B/5200/25

$C_4H_{10}O$
CAS: 78-92-2
MW: 74.12
Density at 20°C: 0.800
Boiling point: 99°C
Melting point: -115°C
Flash point: 24°C
ADR/RID: 3, III

EINECS: 201-158-5
UN: 1120
GHS: Flam. Liq. 3, Eye Irrit. 2, STOT SE 3
H226, H319, H335, H336
P261, P280, P305+P351+P338, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<2 ppm
Water	<0.5%	Sodium (Na)	<5 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<1 ppm		

iso-Butanol — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	B/5150/08
2.5 ℓ	Coated Glass bottle	B/5150/PB17
25 ℓ	Metal drum	B/5150/25

$C_4H_{10}O$
CAS: 78-83-1
MW: 74.12
Density at 20°C: 0.800
Boiling point: 108°C
Melting point: -108°C
Flash point: 28°C
ADR/RID: 3, III

EINECS: 201-148-0
UN: 1212
GHS: Flam. Liq. 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H318, H336, H315, H335
P280, P305+P351+P338, P310, P304+P340, P261, P302+P352, P210

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Potassium (K)	<0.1 ppm
Colour	<10 APHA	Sodium (Na)	<1 ppm
Water	<0.2%	Total phosphorus (P)	<0.1 ppm
Residue after evaporation	<20 ppm	Total silicon (Si)	<0.02 ppm
2-Methylpropan-2-ol	: <0.5%	Total sulphur (S)	<1 ppm
Calcium (Ca)	<0.5 ppm	Zinc (Zn)	<0.2 ppm
Copper (Cu)	<0.1 ppm	Butan -1-ol	<0.5%
Iron (Fe)	<0.2 ppm	Butan -2-ol	<0.5%
Lead (Pb)	<0.2 ppm	Butan--2-one	<0.1%
Magnesium (Mg)	<0.1 ppm	Butyraldehyde	<0.2%

Typical analysis

Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

iso-Butanol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	B/5100/PB17
25 ℓ	Metal drum	B/5100/25
200 ℓ	Metal drum	B/5100/27

$C_4H_{10}O$
CAS: 78-83-1
MW: 74.12
Density at 20°C: 0.800
Boiling point: 108°C
Melting point: -108°C
Flash point: 28°C
ADR/RID: 3, III

EINECS: 201-148-0
UN: 1212
GHS: Flam. Liq. 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H318, H336, H315, H335
P280, P305+P351+P338, P310, P304+P340, P261, P302+P352, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.05 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<2 ppm
Water	<0.5%	Sodium (Na)	<5 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<1 ppm		

tert-Butanol — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	B/5251/08
2.5 ℓ	HDPE Plastic bottle	B/5251/17

$C_4H_{10}O$
CAS: 75-65-0
MW: 74.12
Density at 20°C: 0.780
Boiling point: 83°C
Melting point: 25 to 25.5°C
Flash point: 11°C
ADR/RID: 3, II

EINECS: 200-889-7
UN: 1120
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2, STOT SE 3
H225, H319, H335, H332
P261, P304+P340, P280, P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Potassium (K)	<0.1 ppm
Colour	<10 APHA	Sodium (Na)	<2 ppm
Water	<0.1%	Total phosphorus (P)	<0.1 ppm
Residue after evaporation	<10 ppm	Total silicon (Si)	<0.2 ppm
Calcium (Ca)	<0.5 ppm	Total sulphur (S)	<1 ppm
Copper (Cu)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Iron (Fe)	<0.2 ppm	Butan -2-ol	<0.2%
Lead (Pb)	<0.1 ppm	Butan--2-one	<0.01%
Magnesium (Mg)	<0.1 ppm	Butyraldehyde	<0.01%

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

tert-Butanol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	B/5250/08
2.5 ℓ	HDPE Plastic bottle	B/5250/17
25 ℓ	HDPE Plastic container	B/5250/25

$C_4H_{10}O$
CAS: 75-65-0
MW: 74.12
Density at 20°C: 0.780
Boiling point: 83°C
Melting point: 25 to 25.5°C
Flash point: 11°C
ADR/RID: 3, II

EINECS: 200-889-7
UN: 1120
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2, STOT SE 3
H225, H319, H335, H332
P261, P304+P340, P280, P305+P351+P338, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<2 ppm
Water	<0.3%	Sodium (Na)	<10 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<1 ppm		

2-n-Butoxyethanol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	B/4900/PB08
2.5 ℓ	Coated Glass bottle	B/4900/PB17
25 ℓ	Metal drum	B/4900/25

$C_6H_{14}O_2$
CAS: 111-76-2
MW: 118.18
Density at 20°C: 0.901
Boiling point: 171°C
Melting point: -70°C
Flash point: 62°C
ADR/RID: 6.1/III

EINECS: 203-905-0
UN: 2810
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H319, H315, H302, H312, H332
P280, P307+P311, P302+P350, P305+P351+P338

Assay (CG): >98%

iso-Butyl acetate NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	B/5000/17
5 ℓ	Fluorinated HDPE Plastic bottle	B/5000/21

$C_6H_{12}O_2$
CAS: 110-19-0
MW: 116.16
Density at 20°C: 0.873
Boiling point: 116 to 118°C
Melting point: -99°C
Flash point: 18°C

ADR/RID: 3, II
EINECS: 203-745-1
UN: 1213
GHS: Flam. Liq. 2
H225, EUH066
P210, P240

Assay (CG): >98%

n-Butyl acetate
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	Glass bottle	B/4960/17
5 ℓ	Aluminium can	B/4960/21

$C_6H_{12}O_2$
CAS: 123-86-4
MW: 116.16
Density at 20°C: 0.880
Boiling point: 127 to 126°C
Melting point: -77.9°C
Flash point: 22°C

ADR/RID: 3, III
EINECS: 204-658-1
UN: 1123
GHS: Flam. Liq. 3, STOT SE 3
H226, H336, EUH066
P304+P340, P261, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Nickel (Ni)	<0.01 ppm
Colour	<10 APHA	Potassium (K)	<0.2 ppm
Water	<0.1%	Sodium (Na)	<0.2 ppm
pH colour change test	: Pass	Strontium (Sr)	<0.01 ppm
Residue after evaporation	<10 ppm	Titanium (Ti)	<0.01 ppm
Aluminium (Al)	<0.02 ppm	Total phosphorus (P)	<0.2 ppm
Barium (Ba)	<0.01 ppm	Total silicon (Si)	<0.02 ppm
Cadmium (Cd)	<0.01 ppm	Total sulphur (S)	<0.5 ppm
Calcium (Ca)	<0.2 ppm	Vanadium (V)	<0.01 ppm
Chromium (Cr)	<0.02 ppm	Zinc (Zn)	<0.1 ppm
Cobalt (Co)	<0.02 ppm	Substances darkened	
Copper (Cu)	<0.2 ppm	by H_2SO_4	<20 APHA
Iron (Fe)	<0.1 ppm	Di-n-butyl ether	<0.2%
Lead (Pb)	<0.05 ppm	iso-Butyl acetate	<0.5%
Lithium (Li)	<0.01 ppm	Butan -1-ol	<0.5%
Magnesium (Mg)	<0.02 ppm	n-Butyl formate	<0.1%
Manganese (Mn)	<0.01 ppm	Butyl propanoate	<0.1%
Molybdenum (Mo)	<0.01 ppm		

n-Butyl acetate
for analysis — Certified AR

packaging		Mfr. No
1 ℓ	Glass bottle	B/4951/15
2.5 ℓ	Glass bottle	B/4951/17
10 ℓ	Metal can	B/4951/24
200 ℓ	Metal drum	B/4951/27

$C_6H_{12}O_2$
CAS: 123-86-4
MW: 116.16
Density at 20°C: 0.880
Boiling point: 127 to 126°C
Melting point: -77.9°C
Flash point: 22°C

ADR/RID: 3, III
EINECS: 204-658-1
UN: 1123
GHS: Flam. Liq. 3, STOT SE 3
H226, H336, EUH066
P304+P340, P261, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Total phosphorus (P)	<0.2 ppm
Colour	<10 APHA	Total silicon (Si)	<0.2 ppm
Water	<0.1%	Total sulphur (S)	<0.5 ppm
Residue after evaporation	<10 ppm	Zinc (Zn)	<0.1 ppm
Calcium (Ca)	<0.2 ppm	Butan -1-ol	<0.5%
Copper (Cu)	<0.2 ppm	iso-Butyl acetate	<0.5%
Iron (Fe)	<0.1 ppm	n-Butyl formate	<0.1%
Lead (Pb)	<0.05 ppm	Butyl propanoate	<0.1%
Magnesium (Mg)	<0.02 ppm	Di-n-butyl ether	<0.2%
Manganese (Mn)	<0.01 ppm	Substances darkened	
Potassium (K)	<0.2 ppm	by H_2SO_4	<20 APHA
Sodium (Na)	<0.2 ppm		

Typical analysis

Aluminium (Al)	<0.02 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.

n-Butyl acetate NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	B/4950/08
2.5 ℓ	Glass bottle	B/4950/17
5 ℓ	Fluorinated HDPE Plastic bottle	B/4950/21
10 ℓ	Metal can	B/4950/24
25 ℓ	Metal drum	B/4950/25
200 ℓ	Metal drum	B/4950/27

$C_6H_{12}O_2$
CAS: 123-86-4
MW: 116.16
Density at 20°C: 0.880
Boiling point: 127 to 126°C
Melting point: -77.9°C
Flash point: 22°C

ADR/RID: 3, III
EINECS: 204-658-1
UN: 1123
GHS: Flam. Liq. 3, STOT SE 3
H226, H336, EUH066
P304+P340, P261, P210, P240

Assay (CG): >98%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Potassium (K)	<2 ppm
Colour	<20 APHA	Sodium (Na)	<5 ppm
Water	<0.5%	Total phosphorus (P)	<2 ppm
Residue after evaporation	<50 ppm	Total silicon (Si)	<2 ppm
Calcium (Ca)	<5 ppm	Total sulphur (S)	<5 ppm
Copper (Cu)	<5 ppm	Zinc (Zn)	<2 ppm
Iron (Fe)	<2 ppm	Substances darkened	
Lead (Pb)	<2 ppm	by H_2SO_4	<50 APHA
Magnesium (Mg)	<2 ppm		

n-Butylamine
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
250 mℓ	Coated Glass bottle	B/5260/PB07

$C_4H_{11}N$
CAS: 109-73-9
MW: 73.14
Density at 20°C: 0.740
Boiling point: 78°C
Melting point: -49°C
Flash point: -7°C
ADR/RID: 3, 8, II
EINECS: 203-699-2

UN: 1125
GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1, STOT SE 3
H225, H314, H302, H311, H331, H335
P280, P305+P351+P338, P310, P210, P260, P264

Assay (CG): >98%

n-Butyl bromide
See 1-Bromobutane, page 61

tert-Butyl bromide
See 2-Bromo-2-methylpropane, page 61

sec-Butyl chloride
See 2-Chlorobutane, page 85

n-Butyl chloride
See 1-Chlorobutane, page 85

Butyl digol
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 mℓ	Glass bottle	B/5300/08
2.5 ℓ	Glass bottle	B/5300/17

$C_8H_{18}O_3$
CAS: 112-34-5
MW: 162.23
Density at 20°C: 0.955
Boiling point: 231°C
Melting point: -68°C

Flash point: 100°C
EINECS: 203-961-6
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay (CG): >98%

Butyl iodide
See 1-Iodobutane, page 161

tert-Butyl methyl ether NEW PACK. — Certified
for HPLC

packaging		Mfr. No
2.5 ℓ	Glass bottle	M/4496/17
10 ℓ	Returnable Drum	M/4496/10RSS
25 ℓ	Returnable Drum	M/4496/25RSS
30 ℓ	Returnable Drum	M/4496/30RSS

$C_5H_{12}O$
CAS: 1634-04-4
MW: 88.15
Density at 20°C: 0.740
Boiling point: 54 to 56°C
Melting point: -110°C
Flash point: -28°C

ADR/RID: 3, II
EINECS: 216-653-1
UN: 2398
GHS: Flam. Liq. 2, Skin Irrit. 2
H225, H315
P302+P352, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Residue after evaporation	<2 ppm
Water	<0.02%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

220 nm	<0.25 A.U.	250 nm	<0.05 A.U.
230 nm	<0.15 A.U.	260 nm	<0.02 A.U.
240 nm	<0.1 A.U.	270 nm	<0.01 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

tert-Butyl methyl ether NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	M/4494/08
2.5 ℓ	Glass bottle	M/4494/17
2.5 ℓ	Coated Glass bottle	M/4494/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	M/4494/21
25 ℓ	Metal drum	M/4494/25
200 ℓ	Metal drum	M/4494/27

$C_5H_{12}O$
CAS: 1634-04-4
MW: 88.15
Density at 20°C: 0.740
Boiling point: 54 to 56°C
Melting point: -110°C
Flash point: -28°C

ADR/RID: 3, II
EINECS: 216-653-1
UN: 2398
GHS: Flam. Liq. 2, Skin Irrit. 2
H225, H315
P302+P352, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Water	<0.05%	Residue after evaporation	<20 ppm

n-Butyric acid
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 mℓ	Coated Glass bottle	B/5500/PB08

$C_4H_8O_2$
CAS: 107-92-6
MW: 88.11
Density at 20°C: 0.960
Boiling point: 162 to 165°C
Melting point: -5--7°C
Flash point: 69°C
ADR/RID: 8, III

EINECS: 203-532-3
UN: 2820
GHS: Skin Corr. 1B
H314
P280, P312, P302+P350, P301+P330+P331, P305+P351+P338

Cadmium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8005/05
500 mℓ	HDPE Plastic bottle	J/8005/08

Density at 20°C: 1.0
ADR/RID: 6.1, 8, II
UN: 3289
GHS: Carc. 1B, Acute Tox. 4, Skin Corr. 1B

H350, H314, H312, H302
P280, P305+P351+P338, P301+P330+P331, P201, P308+P313, P302+P352

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Cadmium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8236/08

Density at 20°C: 1.0
ADR/RID: 6.1, 8, II
UN: 3289
GHS: Carc. 1B, Acute Tox. 4, Skin Corr. 1B

H350, H314, H312, H302
P280, P305+P351+P338, P301+P330+P331, P201, P308+P313, P302+P352

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
All ICP standards are manufactured from acids, metal & metal salts Ultra pure quality and contain less than <10 ppm total metal impurites
.
see also the full range of "Standard solution" in the Standard solution section
.

Cadmium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8235/05

ADR/RID: 6.1, 8, II
UN: 3289
GHS: Carc. 1B, Acute Tox. 4, Skin Corr. 1B

H350, H314, H312, H302
P280, P305+P351+P338, P301+P330+P331, P201, P308+P313, P302+P352

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Cadmium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCD22Y
250 mℓ	Plastic bottle	SPPLCD22T
500 mℓ	Plastic bottle	SPPLCD22X

H315, H319, H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cadmium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	PLCD12X

H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cadmium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCD23Y
500 mℓ	Plastic bottle	SPPLCD23X

H314, H341, H350, H412, H373

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cadmium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLCD22Y

H315, H319, H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cadmium
extra pure, metal granulated — SLR

packaging		Mfr. No
100 g	Plastic jar	C/0080/48

Cd
CAS: 7440-43-9
MW: 112.40
Density at 25°C: 8.64
Boiling point: 765°C
Melting point: 321°C
ADR/RID: 6.1, I
EINECS: 231-152-8
UN: 2570

GHS: Carc. 1B, Muta. 2, Repr. 2, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H330, H350, H341, H372, H410, H361fd
P304+P340, P307+P311, P260, P285, P201, P273, P280

Assay: > 99%

Guaranteed analysis

Arsenic (As)	<2 ppm	Lead (Pb)	<200 ppm
Copper (Cu)	<30 ppm	Zinc (Zn)	<100 ppm
Iron (Fe)	<30 ppm		

Cadmium acetate
extra pure, 98+% — SLR

packaging		Mfr. No
500 g	Plastic jar	C/0200/53

$C_4H_6CdO_4.2H_2O$
CAS: 543-90-8
MW: 266.52
Density at 20°C: 2.01
ADR/RID: 6.1, III
UN: 2570

GHS: Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1
H350, H302, H312, H332, H410
P280, P302+P352, P273, P308+P313

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<100 ppm
Copper (Cu)	<100 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<100 ppm	n-Butyl formate	<0.01%
Lead (Pb)	<100 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<200 ppm

Cadmium chloride hydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	C/0280/48

$CdCl_2.H_2O$
CAS: 7790-78-5
MW: 183.32
Boiling point: 967°C
Melting point: 34°C
ADR/RID: 6.1, I
EINECS: 233-296-7
UN: 2570
GHS: Carc. 1B, Muta. 1B,

Repr. 1B, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H350, H340, H360FD, H330, H301, H372, H400, H410
P201, P280, P308+P313, P301+P312, P304+P340, P260, P273

Assay: >79%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<100 ppm	Sodium (Na)	<500 ppm
Iron (Fe)	<100 ppm	Total sulphur (S)	<500 ppm
Lead (Pb)	<100 ppm	Zinc (Zn)	<500 ppm

Cadmium sulfate octahydrate
for analysis — Certified AR

packaging		Mfr. No
100 g	Plastic jar	C/0520/48

$3CdSO_4.8H_2O$
CAS: 7790-84-3
MW: 769.52
Melting point: 41°C
ADR/RID: 6.1, III
EINECS: 233-331-4
UN: 2570
GHS: Carc. 1B, Muta. 1B,

Repr. 1B, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H350, H340, H360FD, H330, H301, H372, H410
P280, P301+P310, P310, P308+P313, P304+P340, P260, P273

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	3 to 6	Sodium (Na)	<10 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<2 ppm		

Lot analysis on the label.

Cadmium sulfate octahydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	C/0480/48
500 g	Plastic jar	C/0480/53

$3CdSO_4.8H_2O$
CAS: 7790-84-3
MW: 769.52
Melting point: 41°C
ADR/RID: 6.1, III
EINECS: 233-331-4
UN: 2570
GHS: Carc. 1B, Muta. 1B,

Repr. 1B, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H350, H340, H360FD, H330, H301, H372, H410
P280, P301+P310, P310, P308+P313, P304+P340, P260, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<100 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<100 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<50 ppm		

Caffeine
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	C/0800/48

$C_8H_{10}N_4O_2$
CAS: 58-08-2
MW: 194.19
Density at 20°C: 1.23
Melting point: 234 to 239°C
ADR/RID: 6.1, III

EINECS: 200-362-1
UN: 1544
GHS: Acute Tox. 4
H302
P301+P312, P280

Guaranteed analysis

Residue after ignition	<0.1%

Calcium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8010/05
500 mℓ	HDPE Plastic bottle	J/8010/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Calcium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8241/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Calcium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8240/05

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Calcium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCA22Y
250 mℓ	Plastic bottle	SPPLCA22T

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Calcium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLCA12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Calcium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCA23Y
250 mℓ	Plastic bottle	SPPLCA23T
500 mℓ	Plastic bottle	SPPLCA23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Calcium standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLCA13X

H318

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Calcium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLCA22Y

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Calcium
SLR
extra pure, metal granulated

packaging		Mfr. No
25 g	Plastic jar	C/0840/46
100 g	Plastic jar	C/0840/48
250 g	Plastic jar	C/0840/50

Ca
CAS: 7440-70-2
MW: 40.07
Boiling point: 1484°C
Melting point: 845°C
ADR/RID: 4.3, II
EINECS: 231-179-5

UN: 1401
GHS: Water-react. 2
H261
P280, P231+P232, P223, P335+P334, P370+P378, P402+P404

Guaranteed analysis
Identity test ..... : Pass

Calcium hardness indicator tablets
pure,no murexide

packaging		Mfr. No
100 PC	Glass jar	C/0885/79

Guaranteed analysis
Identity test ..... : Pass

Calcium acetate
SLR
extra pure, dried

packaging		Mfr. No
250 g	Plastic jar	C/0920/50
500 g	Plastic jar	C/0920/53

$(CH_3COO)_2Ca.xH_2O$
CAS: 62-54-4
MW: 158.16
EINECS: 200-540-9

Assay: >95%

Guaranteed analysis
Loss on drying 200°C ..... : 5 to 7%
Iron (Fe) ..... <20 ppm
Lead (Pb) ..... <10 ppm
Sulfate (SO_4) ..... <0.2%
n-Butyl formate ..... <0.005%

Calcium bromide dihydrate
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	C/0960/50

$CaBr_2.2H_2O$
CAS: 22208-73-7
MW: 235.93
Density at 20°C: 3.35
Melting point: 760°C

EINECS: 232-164-6
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Calcium carbide
Technical

packaging		Mfr. No
500 g	Metal can	C/1000/53

Approx.CaC_2
CAS: 75-20-7
MW: 64.10
Boiling point: 2300°C
Melting point: >447°C
ADR/RID: 4.3, II

EINECS: 200-848-3
UN: 1402
GHS: Water-react. 1
H260
P223, P231+P232, P280

Guaranteed analysis
Identity test ..... : Pass

Calcium carbonate
Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	C/1120/50
500 g	Plastic jar	C/1120/53
1 kg	Plastic jar	C/1120/60
25 kg	Fibre Keg	C/1120/70

$CaCO_3$
CAS: 471-34-1
MW: 100.09
Melting point: 825°C
EINECS: 207-439-9

GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis
Copper (Cu) ..... <5 ppm
Iron (Fe) ..... <10 ppm
Lead (Pb) ..... <5 ppm
Magnesium (Mg) ..... <200 ppm
Potassium (K) ..... <100 ppm
Sodium (Na) ..... <200 ppm
Total chloride (Cl) ..... <0.01%
Total nitrogen (N) ..... <100 ppm
Total phosphorus (P) ..... <50 ppm
Total silicon (Si) ..... <20 ppm
Total sulphur (S) ..... <100 ppm
Zinc (Zn) ..... <10 ppm

Typical analysis
Aluminium (Al) ..... <0.001 %
Silver (Ag) ..... <1 ppm
Arsenic (As) ..... <2 ppm
Barium (Ba) ..... <0.005 %
Cadmium (Cd) ..... <1 ppm
Chromium (Cr) ..... <1 ppm
Cobalt (Co) ..... <1 ppm
Lithium (Li) ..... <1 ppm
Manganese (Mn) ..... <1 ppm
Molybdenum (Mo) ..... <1 ppm
Nickel (Ni) ..... <1 ppm
Strontium (Sr) ..... <0.05 %
Titanium (Ti) ..... <1 ppm
Vanadium (V) ..... <1 ppm

Lot analysis on the label.

Calcium carbonate
SLR, Eur.Ph., BP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	C/1040/60
3 kg	Plastic jar	C/1040/63
5 kg	Plastic keg	C/1040/65
25 kg	Fibre Keg	C/1040/70

$CaCO_3$
CAS: 471-34-1
MW: 100.09
Melting point: 825°C
EINECS: 207-439-9

GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis
Copper (Cu) ..... <100 ppm
Iron (Fe) ..... <200 ppm
Lead (Pb) ..... <10 ppm
Magnesium (Mg) ..... <2000 ppm
Potassium (K) ..... <500 ppm
Sodium (Na) ..... <2000 ppm
n-Butyl formate ..... <0.05%
Total phosphorus (P) ..... <500 ppm
Total silicon (Si) ..... <1000 ppm
Total sulphur (S) ..... <500 ppm
Zinc (Zn) ..... <100 ppm

Calcium chloride
SLR
extra pure, fused, granular

packaging		Mfr. No
500 g	Plastic jar	C/1400/53
1 kg	Plastic jar	C/1400/60
2.5 kg	Plastic jar	C/1400/62

$CaCl_2$
CAS: 10043-52-4
MW: 110.98
Boiling point: 1600°C
Melting point: 782°C

EINECS: 233-140-8
GHS: Eye Irrit. 2
H319
P301+P312, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Particle size 1.0-2.0 mm.

Calcium chloride
Technical, fused, porous lump

packaging		Mfr. No
1 kg	Plastic jar	C/1320/60
3 kg	Plastic jar	C/1320/63
25 kg	Fibre Keg	C/1320/70

$CaCl_2$
CAS: 10043-52-4
MW: 110.98
Boiling point: 1600°C
Melting point: 782°C

EINECS: 233-140-8
GHS: Eye Irrit. 2
H319
P301+P312, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Calcium chloride dihydrate
Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	C/1500/50
500 g	Plastic jar	C/1500/53
1 kg	Plastic jar	C/1500/60
5 kg	Plastic keg	C/1500/65
25 kg	Fibre Keg	C/1500/70

$CaCl_2.2H_2O$
CAS: 10035-04-8
MW: 147.02
Density at 20°C: 0.830
Melting point: 175°C

EINECS: 233-140-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: 99 to 102%

Guaranteed analysis
pH (aqueous solution 5%) ..... 5 to 7
Copper (Cu) ..... <2 ppm
Iron (Fe) ..... <2 ppm
Lead (Pb) ..... <5 ppm
Magnesium (Mg) ..... <50 ppm
Potassium (K) ..... <50 ppm
Sodium (Na) ..... <100 ppm
Total nitrogen (N) ..... <50 ppm
Total phosphorus (P) ..... <50 ppm
Total silicon (Si) ..... <50 ppm
Total sulphur (S) ..... <50 ppm
Zinc (Zn) ..... <20 ppm

Typical analysis
Aluminium (Al) ..... <2 ppm
Silver (Ag) ..... <1 ppm
Arsenic (As) ..... <2 ppm
Barium (Ba) ..... <5 ppm
Cadmium (Cd) ..... <1 ppm
Chromium (Cr) ..... <1 ppm
Cobalt (Co) ..... <1 ppm
Lithium (Li) ..... <1 ppm
Manganese (Mn) ..... <1 ppm
Molybdenum (Mo) ..... <1 ppm
Nickel (Ni) ..... <1 ppm
Strontium (Sr) ..... <0.02 %
Titanium (Ti) ..... <1 ppm
Vanadium (V) ..... <1 ppm

Lot analysis on the label.

Calcium chloride hexahydrate
NEW
SLR
extra pure, 98.5%+

packaging		Mfr. No
500 g	Plastic jar	C/1250/53
1 kg	Plastic jar	C/1250/60
5 kg	Plastic jar	C/1250/65

$CaCl_2.6H_2O$
CAS: 7774-34-7
MW: 219.08
EINECS: 233-140-8

GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >98.5%

Guaranteed analysis
Appearance colourless, hygroscopic crystals
pH (aqueous solution 5%) ..... 5.5 to 7.5
Substances insoluble in Water : <0.005%
Heavy metals (as Pb) ..... : <0.0005%
Barium (Ba) ..... <0.005%
Iron (Fe) ..... <0.0002%
Magnesium (Mg) ..... <0.05%
Potassium (K) ..... <0.01%
Sodium (Na) ..... <0.2%
Sulfate (SO_4) ..... <0.005%

Calcium gluconate
SLR, Eur.Ph., USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	C/1610/53

$C_{12}H_{22}CaO_{14}.H_2O$
CAS: 299-28-5
MW: 448.35

Melting point: 120°C
Flash point: >170°C
EINECS: 206-075-8

Assay: 99 to 104%

Guaranteed analysis
Arsenic (As) ..... <2 ppm
Lead (Pb) ..... <5 ppm
Sulfate (SO_4) ..... <0.15%
n-Butyl formate ..... <0.08%

Calcium hydride
technical

packaging		Mfr. No
100 g	Plastic jar	C/1620/48

CaH_2
CAS: 7789-78-8
MW: 42.09
Density at 20°C: 1.9
Melting point: 675°C
ADR/RID: 4.3, I
EINECS: 232-189-2
UN: 1404
GHS: Water-react. 1
H260
P280, P223, P231+P232, P335+P334, P402+P404, P370+P378

Assay: >95%

Calcium hydroxide — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	C/1642/50
500 g	Plastic jar	C/1642/53
1 kg	Plastic jar	C/1642/60

$Ca(OH)_2$
CAS: 1305-62-0
MW: 74.09
Density at 20°C: 2.24
Boiling point: 2850°C
Melting point: 580°C
ADR/RID: 8/III
EINECS: 215-137-3
UN: 3262
GHS: Eye Dam. 1
H318
P280, P305+P351+P338, P310

Assay: >97%

Guaranteed analysis

Copper (Cu)	<10 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<1000 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<500 ppm	Zinc (Zn)	<100 ppm
Sodium (Na)	<500 ppm	Insoluble Acids	<0.02%
Total chloride (Cl)	<0.1%		

Typical analysis

Aluminium (Al)	<0.001%	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<5 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<0.002%	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.02%
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Calcium hydroxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	C/1640/60
5 kg	Plastic keg	C/1640/65

$Ca(OH)_2$
CAS: 1305-62-0
MW: 74.09
Density at 20°C: 2.24
Boiling point: 2850°C
Melting point: 580°C
ADR/RID: 8/III
EINECS: 215-137-3
UN: 3262
GHS: Eye Dam. 1
H318
P280, P305+P351+P338, P310

Assay: >95%

Guaranteed analysis

Copper (Cu)	<100 ppm	n-Butyl formate	<0.1%
Iron (Fe)	<500 ppm	Total phosphorus (P)	<500 ppm
Lead (Pb)	<100 ppm	Total silicon (Si)	<5000 ppm
Magnesium (Mg)	<5000 ppm	Total sulphur (S)	<1000 ppm
Potassium (K)	<2000 ppm	Zinc (Zn)	<1000 ppm
Sodium (Na)	<500 ppm		

Calcium hypochlorite
Technical

packaging		Mfr. No
500 g	Plastic jar	C/1720/53
1 kg	Plastic jar	C/1720/60

$Ca(OCl)_2$
CAS: 7778-54-3
MW: 142.98
Density at 20°C: 2.35
Melting point: 100°C
ADR/RID: 5.1, 8, II
EINECS: 231-908-7
UN: 3485
GHS: Ox. Sol. 2, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1
H272, H302, H314, H400, EUH031
P280, P210, P301+P330+P331, P310, P305+P351+P338, P273

Guaranteed analysis
Identity test ..... : Pass

Calcium lactate pentahydrate — SLR, Eur.Ph., USP, BP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	C/1820/53
5 kg	Plastic keg	C/1820/65

$C_6H_{10}CaO_6.5H_2O$
CAS: 5743-47-5
MW: 308.29
Melting point: 240°C
EINECS: 212-406-7

Assay: 98 to 102%

Guaranteed analysis

Acidity / Alkalinity	Pass	Barium (Ba)	<10 ppm
Loss on drying	22 to 27%	Iron (Fe)	<50 ppm
Heavy metals	<10 ppm	Lead (Pb)	<10 ppm
Magnesium & alkali salts	: <1%	n-Butyl formate	<0.02%
Arsenic (As)	<2 ppm		

Calcium nitrate tetrahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	C/1882/53
1 kg	Plastic jar	C/1882/60

$Ca(NO_3)_2.4H_2O$
CAS: 13477-34-4
MW: 236.15
Density at 20°C: 1.86
Boiling point: 132°C
Melting point: 45°C
ADR/RID: 5.1, III
EINECS: 233-332-1
UN: 1454
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H319, H315, H335
P280, P305+P351+P338, P210

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 7	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.001%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<200 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<0.002 %	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.01 %
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Tin (Sn)	<1 ppm		

Lot analysis on the label.

Calcium nitrate tetrahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	C/1880/53
1 kg	Plastic jar	C/1880/60
3 kg	Plastic jar	C/1880/63

$Ca(NO_3)_2.4H_2O$
CAS: 13477-34-4
MW: 236.15
Density at 20°C: 1.86
Boiling point: 132°C
Melting point: 45°C
ADR/RID: 5.1, III
EINECS: 233-332-1
UN: 1454
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H319, H315, H335
P280, P305+P351+P338, P210

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	4 to 7	Sodium (Na)	<500 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<500 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<50 ppm

tri-Calcium di-orthophosphate
pure, precipitated

packaging		Mfr. No
500 g	Plastic jar	C/1960/53

$Ca_3(PO)_2$
CAS: 7758-87-4
MW: 310.17
Melting point: 1670°C
EINECS: 231-840-8

Guaranteed analysis
Identity test ..... : Pass

Calcium oxide — SLR
extra pure, lump

packaging		Mfr. No
1 kg	Plastic jar	C/2100/60

CaO
CAS: 1305-78-8
MW: 56.08
Boiling point: 2850°C
Melting point: 2570°C
ADR/RID: 8/III
EINECS: 215-138-9
UN: 1910
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H314, H302, EUH014
P301+P330+P331, P280, P305+P351+P338, P301+P312, P402+P404

Guaranteed analysis
Identity test ..... : Pass

Calcium oxide — SLR
extra pure, powder

packaging		Mfr. No
1 kg	Plastic jar	C/2120/60

CaO
CAS: 1305-78-8
MW: 56.08
Boiling point: 2850°C
Melting point: 2570°C
ADR/RID: 8/III
EINECS: 215-138-9
UN: 1910
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H314, H302, EUH014
P301+P330+P331, P280, P305+P351+P338, P301+P312, P402+P404

Guaranteed analysis
Identity test ..... : Pass

Calcium oxide
pure, powder low in chloride and sulfide

packaging		Mfr. No
250 g	Plastic jar	C/2160/50

CaO
CAS: 1305-78-8
MW: 56.08
Boiling point: 2850°C
Melting point: 2570°C
ADR/RID: 8/III
EINECS: 215-138-9
UN: 1910
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H314, H302, EUH014
P301+P330+P331, P280, P305+P351+P338, P301+P312, P402+P404

Guaranteed analysis
Sulfide (S) ..... <0.005% n-Butyl formate ..... <0.005%

Calcium stearate
Technical

packaging		Mfr. No
500 g	Plastic jar	C/2240/53

$(C_{17}H_{35}.COO)_2Ca$
CAS: 1592-23-0
MW: 607.00
Density at 20°C: 1.03
Melting point: 145 to 160°C
EINECS: 216-472-8
GHS: Eye Irrit. 2, STOT SE 3
H319, H335
P261, P280, P305+P351+P338, P304+P341

Guaranteed analysis
Complies with standard IR spectrum: Pass

Calcium sulfate anhydrous — SLR
extra pure, powder

packaging		Mfr. No
500 g	Plastic jar	C/2440/53
1 kg	Plastic jar	C/2440/60

$CaSO_4$
CAS: 7778-18-9
MW: 136.15
Density at 20°C: 29.6
Melting point: 1450°C
EINECS: 231-900-3

Guaranteed analysis
Identity test ..... : Pass

Calcium sulfate anhydrous
pure, granular, Desiccating agent

packaging		Mfr. No
500 g	Plastic jar	C/2400/53

$CaSO_4$
CAS: 7778-18-9
MW: 136.15
Density at 20°C: 29.6
Melting point: 1450°C
EINECS: 231-900-3

Guaranteed analysis
Identity test ..... : Pass

Calcium sulfate dihydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	C/2360/50
500 g	Plastic jar	C/2360/53
1 kg	Plastic jar	C/2360/60

$CaSO_4.2H_2O$
CAS: 10101-41-4
MW: 172.17
Density at 20°C: 2.32
EINECS: 231-900-3

Assay: 99 to 101%

Guaranteed analysis

Acidity	<0.002 meq/g	Sodium (Na)	<500 ppm
Copper (Cu)	<10 ppm	Total chloride (Cl)	<0.005%
Iron (Fe)	<10 ppm	Total nitrogen (N)	<10 ppm
Lead (Pb)	<10 ppm	Total phosphorus (P)	<50 ppm
Magnesium (Mg)	<100 ppm	Total silicon (Si)	<50 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<0.005 %	Manganese (Mn)	<1 ppm
Silver (Ag)	<5 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<0.005 %	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Strontium (Sr)	<0.02 %
Chromium (Cr)	<5 ppm	Titanium (Ti)	<5 ppm
Cobalt (Co)	<5 ppm	Vanadium (V)	<5 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Calcium sulfate dihydrate — SLR
extra pure, precipitated

packaging		Mfr. No
500 g	Plastic jar	C/2320/53

$CaSO_4.2H_2O$
CAS: 10101-41-4
MW: 172.17
Density at 20°C: 2.32
EINECS: 231-900-3

Assay: >98%

Guaranteed analysis

Copper (Cu)	<50 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<500 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<500 ppm		

Calcium sulfate hemihydrate
Technical

packaging		Mfr. No
3 kg	Plastic jar	C/2280/63

$CaSO_4.1/2H_2O$
CAS: 7778-18-9
MW: 145.15
Melting point: 1450°C
EINECS: 231-900-3

Guaranteed analysis
Identity test ..... : Pass

Calcium tetrahydrogen di-orthophosphate monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	C/2520/53

$CaH_4O_8P_2$
CAS: 10031-30-8
MW: 252.07
EINECS: 231-837-1
GHS: Eye Dam. 1
H318
P280, P305+P351+P338, P310

Assay: 97 to 102%

Guaranteed analysis

Arsenic (As)	<2 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<150 ppm		

DL-Camphor — SLR
extra pure, origin synthetic

packaging		Mfr. No
250 g	Glass jar	C/2560/50

$C_{10}H_{16}O$
CAS: 76-22-2
MW: 152.24
Boiling point: 204°C
ADR/RID: 4.1, III
EINECS: 200-945-0
UN: 2717
GHS: Flam. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H228, H302, H315, H319, H335
P261, P302+P352, P280, P305+P351+P338, P233, P210

Guaranteed analysis
Complies with standard IR spectrum: Pass

Canada balsam
pure, dried in Xylene

packaging		Mfr. No
100 mℓ	Glass bottle	J/2980/05

Density at 20°C: 0.86
Flash point: 24°C
ADR/RID: 3, III
UN: 1993
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2
H226, H312, H315, H332
P210, P282, P302+P350, P260, P304+P340

Canada balsam
For microscopy, filtered

packaging		Mfr. No
100 g	Glass bottle	C/2640/48

CAS: 8007-47-4
Density at 20°C: 0.98

Guaranteed analysis
Complies with standard IR spectrum: Pass

Caproic acid *See n-Hexanoic acid, page 144*

Capryl alcohol *See Octan-1-ol, page 220*

Carbon standard solution 1000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLC92Y
500 mℓ	Plastic bottle	SPPLC92X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Carbon disulfide — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/2920/PB08
2.5 ℓ	Coated Glass bottle	C/2920/PB17

CS_2
CAS: 75-15-0
MW: 76.14
Density at 20°C: 1.262
Boiling point: 46°C
Melting point: -111°C
Flash point: -30°C
ADR/RID: 3, 6.1, I
EINECS: 200-843-6
UN: 1131
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, Eye Irrit. 2, STOT RE 1
H225, H315, H319, H372, H361fd
P260, P302+P352, P280, P305+P351+P338, P210, P240, P243

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Magnesium (Mg)	<0.02 ppm
Colour	<10 APHA	Potassium (K)	<0.05 ppm
Water	<0.05%	Sodium (Na)	<0.1 ppm
Residue after evaporation	<20 ppm	Total phosphorus (P)	<0.1 ppm
Calcium (Ca)	<0.2 ppm	Total silicon (Si)	<0.01 ppm
Copper (Cu)	<0.02 ppm	Zinc (Zn)	<0.1 ppm
Iron (Fe)	<0.05 ppm	Benzene	<0.01%
Lead (Pb)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Tin (Sn)	<0.01 ppm	Vanadium (V)	<0.01 ppm
Lithium (Li)	<0.01 ppm		

Carbon disulfide — SLR
extra pure, 99+%

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/2880/PB08
2.5 ℓ	Coated Glass bottle	C/2880/PB17

CS_2
CAS: 75-15-0
MW: 76.13
Density at 20°C: 1.262
Boiling point: 46°C
Melting point: -111°C
Flash point: -30°C
ADR/RID: 3, 6.1, I
EINECS: 200-843-6
UN: 1131
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, Eye Irrit. 2, STOT RE 1
H225, H315, H319, H372, H361fd
P260, P302+P352, P280, P305+P351+P338, P210, P240, P243

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<5 ppm
Colour	<20 APHA	Magnesium (Mg)	<2 ppm
Water	<0.1%	Potassium (K)	<2 ppm
Residue after evaporation	<100 ppm	Sodium (Na)	<5 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Carborundum — SLR
extra pure, powder, fine about 180 grit

packaging		Mfr. No
500 g	Plastic jar	C/3092/53

CAS: 409-21-2
Density at 20°C: 3.2
Melting point: 2700°C
EINECS: 206-991-8

Guaranteed analysis
Identity test ..... : Pass

Carborundum — SLR
extra pure, fine powder, extra fine about 300 grit

packaging		Mfr. No
500 g	Plastic jar	C/3093/53

CAS: 409-21-2
Density at 20°C: 3.2
Melting point: 2700°C
EINECS: 206-991-8

Guaranteed analysis
Identity test ..... : Pass

Carborundum — SLR
extra pure, powder, coarse, about 24 grit

packaging		Mfr. No
500 g	Plastic jar	C/3090/53

CAS: 409-21-2
Density at 20°C: 3.2
Melting point: 2700°C
EINECS: 206-991-8

Guaranteed analysis
Identity test ..... : Pass

Carborundum
pure

packaging		Mfr. No
500 g	Plastic jar	C/3091/53

CAS: 409-21-2
Density at 20°C: 3.2
Melting point: 2700°C
EINECS: 206-991-8

Guaranteed analysis
Identity test ..... : Pass

Carboxymethyl cellulose — SLR
extra pure, low viscosity

packaging		Mfr. No
500 g	Plastic jar	C/3100/53

CAS: 9004-32-4
Melting point: >300°C

Guaranteed analysis

pH at 20°C	: 6 to 8	Lead (Pb)	<10 ppm
Viscosity	29 to 70 cP		

Carmine
pure

packaging		Mfr. No
5 g	Glass jar	C/3160/44

CAS: 1390-65-4
EINECS: 215-724-4

Guaranteed analysis
Complies with standard IR spectrum: Pass

Casein — SLR
extra pure, light white soluble

packaging		Mfr. No
500 g	Plastic jar	C/3240/53

CAS: 9000-71-9
Density at 20°C: 1.25
Melting point: 280°C
EINECS: 232-555-1

Guaranteed analysis
Complies with standard IR spectrum: Pass

Castor oil
pure

packaging		Mfr. No
500 mℓ	Glass bottle	C/3280/08
2.5 ℓ	Glass bottle	C/3280/17

CAS: 8001-79-4
Density at 20°C: 0.957
Boiling point: 229°C
Melting point: -10°C
Flash point: 229°C
EINECS: 232-293-8

Guaranteed analysis
Complies with standard IR spectrum: Pass

Catechol
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	C/3320/48
500 g	Plastic jar	C/3320/53

$C_6H_6O_2$
CAS: 120-80-9
MW: 110.11
Density at 20°C: 1.344
Boiling point: 245°C
Melting point: 103 to 106°C
Flash point: 131°C
ADR/RID: 6.1, III
EINECS: 204-427-5
UN: 2811
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H319, H315, H302, H312
P280, P312, P302+P350, P302+P352, P305+P351+P338

Assay (CG): >99%

Catecholsulfonphthalein
pure, Metal indicator

packaging		Mfr. No
5 g	Glass jar	C/3360/44

$C_{19}H_{14}O_7S$
CAS: 115-41-3
MW: 386.36
EINECS: 204-088-3

Guaranteed analysis
Complies with standard IR spectrum: Pass

Cation standard mixed concentrate
for Ion pair chromatography (for check column)

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4554/05

Guaranteed analysis
Lithium (Li) ..... 28 to 32 ppm
Sodium (Na) ..... 48 to 52 ppm
Potassium (K) ..... 95 to 105 ppm

Manufactured to a tolerance of ± 1%.
100mℓ, to make 1000mℓ consisting of: 3ppm Li^+, 5ppm Na^+, 5ppm NH_4^+, 10ppm K^+

Cedarwood oil
For microscopy, thickened

packaging		Mfr. No
100 mℓ	Glass bottle	C/3440/05

CAS: 8000-27-9
Flash point: 110°C

Guaranteed analysis
Complies with standard IR spectrum: Pass

Cedarwood oil
For microscopy, natural

packaging		Mfr. No
500 mℓ	Glass bottle	C/3400/08

CAS: 8000-27-9
Flash point: 110°C

Guaranteed analysis
Complies with standard IR spectrum: Pass

Cellosolve
See 2-Ethoxyethanol, page 123

Cellosolve acetate
See 2-Ethoxyethyl acetate, page 124

Cerium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCE22Y
500 mℓ	Plastic bottle	SPPLCE22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cerium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCE23Y
500 mℓ	Plastic bottle	SPPLCE23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cerium(III) nitrate
SLR
extra pure, low in other rare earths

packaging		Mfr. No
100 g	Plastic jar	C/3780/48

$Ce(NO_3)_3.6H_2O$
CAS: 10294-41-4
MW: 434.23
Density at 200°C: 1.67
ADR/RID: 5.1, II
EINECS: 233-297-2
UN: 1477
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 3
H272, H315, H412, H319
P210, P273, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis
Sulfate (SO_4) ..... <0.05%
Other rare earths ..... <1%
n-Butyl formate ..... <0.02%

Cerium(IV) oxide
SLR
extra pure, low in other rare earths

packaging		Mfr. No
100 g	Plastic jar	C/3680/48

CeO_2
CAS: 1306-38-3
MW: 172.12
Melting point: 2600°C
EINECS: 215-150-4

Guaranteed analysis
Identity test ..... : Pass

Cerium(IV) sulfate tetrahydrate
SLR
extra pure, low in other rare earths

packaging		Mfr. No
100 g	Plastic jar	C/3720/48

$Ce(SO_4)_2.4H_2O$
CAS: 10294-42-5
MW: 404.29
Density at 20°C: 3.91
Melting point: 350°C
ADR/RID: 5.1, 8, II
EINECS: 237-029-5
UN: 3085
GHS: Ox. Sol. 2, Skin Corr. 1A
H272, H318
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: 98 to 102%

Guaranteed analysis
n-Butyl formate ..... <0.01%
Other rare earths ..... <1%

Cerium(IV) sulfate solution 0.1, (0.1N)
Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/3000/15
2.5 ℓ	Glass bottle	J/3000/17
10 ℓ	Bag in box	J/3000/24

CAS: 13590-82-4
Density at 20°C: 1.1
ADR/RID: 8, II
EINECS: 237-029-5
UN: 3264
GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P280, P305+P351+P338

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Cerium(IV) sulfate, concentrated solution 0.05M, (0.05N)
Standard concentrate, For volumetric analysis

packaging		Mfr. No
6	Ampoule	J/3010C/90

ADR/RID: 8, II
UN: 2796
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P302+P350, P301+P330+P331, P305+P351+P338, P315

Each ampoule makes up 500mℓ of solution

Cesium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCS22Y
500 mℓ	Plastic bottle	SPPLCS22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cesium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCS23Y
500 mℓ	Plastic bottle	SPPLCS23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cesium chloride
for ultra centrifuge work , 99.9+%

packaging		Mfr. No
100 g	Plastic jar	C/0682/48

$CsCl_2$
CAS: 7647-17-8
MW: 168.36
Density at 20°C: 3.983
Boiling point: 1290°C
Melting point: 646°C
EINECS: 231-600-2

Assay: >99.9%

Guaranteed analysis
Chromium (Cr) ..... <0.5 ppm
Copper (Cu) ..... <0.5 ppm
Iron (Fe) ..... <0.5 ppm
Lead (Pb) ..... <1 ppm
Manganese (Mn) ..... <0.5 ppm
Zinc (Zn) ..... <0.5 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
260 nm (sol. aqu. 60%) ..... : <0.05 A.U.
280 nm (sol. aqu. 60%) ..... : <0.05 A.U.

Cesium chloride
Certified AR
for analysis

packaging		Mfr. No
25 g	Plastic jar	C/0680/46
100 g	Plastic jar	C/0680/48
250 g	Plastic jar	C/0680/50
1 kg	Plastic jar	C/0680/60

$CsCl_2$
CAS: 7647-17-8
MW: 168.36
Density at 20°C: 3.983
Boiling point: 1290°C
Melting point: 646°C
EINECS: 231-600-2

Assay: >99.5%

Guaranteed analysis
pH (aqueous solution 5%) ..... 5 to 8
Calcium (Ca) ..... <10 ppm
Copper (Cu) ..... <2 ppm
Iron (Fe) ..... <2 ppm
Lead (Pb) ..... <2 ppm
Magnesium (Mg) ..... <5 ppm
Potassium (K) ..... <20 ppm
Sodium (Na) ..... <100 ppm
Total nitrogen (N) ..... <20 ppm
Total phosphorus (P) ..... <10 ppm
Total silicon (Si) ..... <20 ppm
Total sulphur (S) ..... <50 ppm
Zinc (Zn) ..... <2 ppm

Typical analysis
Aluminium (Al) ..... <2 ppm
Silver (Ag) ..... <1 ppm
Arsenic (As) ..... <2 ppm
Barium (Ba) ..... <0.002 %
Cadmium (Cd) ..... <1 ppm
Chromium (Cr) ..... <1 ppm
Cobalt (Co) ..... <1 ppm
Lithium (Li) ..... <1 ppm
Manganese (Mn) ..... <1 ppm
Molybdenum (Mo) ..... <1 ppm
Nickel (Ni) ..... <1 ppm
Titanium (Ti) ..... <1 ppm
Vanadium (V) ..... <1 ppm

Lot analysis on the label.

Cesium chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	C/0640/46
100 g	Plastic jar	C/0640/48

$CsCl_2$
CAS: 7647-17-8
MW: 168.36
Density at 20°C: 3.983
Boiling point: 1290°C
Melting point: 646°C
EINECS: 231-600-2

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 8	Potassium (K)	<100 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm

Cetyl trimethylammonium bromide — Certified
for Ion pair chromatography

packaging		Mfr. No
25 g	Plastic jar	C/3961/46

$C_{19}H_{42}BrN$
CAS: 57-09-0
MW: 364.46
Melting point: 230°C
Flash point: 244°C
ADR/RID: 6.1, III
EINECS: 200-311-3
UN: 2811
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H319, H302, H410, H315, H335
P261, P273, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Cetyl trimethylammonium bromide — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	C/3962/48
500 g	Plastic jar	C/3962/53

$C_{19}H_{42}BrN$
CAS: 57-09-0
MW: 364.46
Melting point: 230°C
Flash point: 244°C
ADR/RID: 6.1, III
EINECS: 200-311-3
UN: 2811
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H319, H302, H410, H315, H335
P261, P273, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Loss on drying	<1%	Potassium (K)	<10 ppm
Calcium (Ca)	<20 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm

Lot analysis on the label.

Cetyl trimethylammonium bromide
pure

packaging		Mfr. No
500 g	Plastic jar	C/3960/53
25 kg	Fibre Keg	C/3960/70

$C_{19}H_{42}BrN$
CAS: 57-09-0
MW: 364.46
Melting point: 230°C
Flash point: 244°C
ADR/RID: 6.1, III
EINECS: 200-311-3
UN: 2811
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H319, H302, H410, H315, H335
P261, P273, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Charcoal — SLR
extra pure, lump, wood

packaging		Mfr. No
1 kg	Plastic jar	C/4020/60

CAS: 7440-44-0
MW: 12.00
ADR/RID: 4.2/III
EINECS: 231-153-3
UN: 1361

Guaranteed analysis
Identity test ..... : Pass

Charcoal
pure, powder wood

packaging		Mfr. No
1 kg	Plastic jar	C/4010/60

CAS: 7440-44-0
MW: 12.00
ADR/RID: 4.2/III
EINECS: 231-153-3
UN: 1361

Guaranteed analysis
Identity test ..... : Pass

Charcoal
pure, powder, animal

packaging		Mfr. No
1 kg	Plastic jar	C/3990/60

CAS: 7440-44-0
MW: 12.00
EINECS: 231-153-3

Guaranteed analysis
Identity test ..... : Pass

Charcoal
pure, animal, granular for filters

packaging		Mfr. No
1 kg	Plastic jar	C/4000/60

CAS: 7440-44-0
MW: 12.00
EINECS: 231-153-3

Guaranteed analysis
Identity test ..... : Pass

Charcoal
pure, decolourising powder, activated

packaging		Mfr. No
500 g	Plastic jar	C/4040/53
1 kg	Plastic jar	C/4040/60
5 kg	Plastic keg	C/4040/65
25 kg	Fibre Keg	C/4040/70

CAS: 7440-44-0
MW: 12.00
Density at 20°C: 1.8 to 2.1
Melting point: 3652°C
ADR/RID: 4.2/III
EINECS: 231-153-3
UN: 1362

Guaranteed analysis
Identity test ..... : Pass

Charcoal
pure, decolourising powder,activated, acid washed

packaging		Mfr. No
250 g	Plastic jar	C/4080/50

CAS: 7440-44-0
MW: 12.00
ADR/RID: 4/2III
EINECS: 231-153-3
UN: 1361

Guaranteed analysis
Identity test ..... : Pass

Charcoal
pure, activated for gas adsorption, approx.18 mesh (1mm), granular

packaging		Mfr. No
500 g	Plastic jar	C/4120/53
1 kg	Plastic jar	C/4120/60

C
CAS: 7440-44-0
MW: 12.00
ADR/RID: 4.2/III
EINECS: 231-153-3
UN: 1361

Guaranteed analysis
Identity test ..... : Pass

Chemical binder spillage treatment
pure

packaging		Mfr. No
500 g	Plastic jar	S/7435/53

Guaranteed analysis
Identity test ..... : Pass

Chlorate standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASCLO392Y
500 mℓ	Plastic bottle	SPASCLO392X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Chloral hydrate — SLR, Eur.Ph., BP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	C/4280/53
10 kg	Plastic keg	C/4280/68

$C_2H_3Cl_3O_2$
CAS: 302-17-0
MW: 165.41
Density at 20°C: 1.908
Boiling point: 97°C
Melting point: 57°C
ADR/RID: 6.1, II
EINECS: 206-117-5
UN: 2811
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2
H301, H319, H315
P301+P310, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis
Residue after ignition ..... <0.1% n-Butyl formate ..... <0.01%

Chloramine-T Sodium salt — SLR, Eur.Ph., BP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	C/4320/50
500 g	Plastic jar	C/4320/53

$C_7H_7ClNNaO_2S.3H_2O$
CAS: 7080-50-4
MW: 281.69
Melting point: 170 to 177°C
Flash point: 192°C
ADR/RID: 8, III
EINECS: 204-854-7
UN: 3263
GHS: Acute Tox. 4, Skin Corr. 1B, Resp. Sens. 1
H314, H302, H334, EUH031
P301+P330+P331, P280, P305+P351+P338, P261, P304+P341, P301+P312

Assay: >98%

Guaranteed analysis
sodium chloride ..... <1.5%

Chloramphenicol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
50 g	Plastic jar	C/4322/47

$C_{11}H_{12}Cl_2N_2O_5$
CAS: 56-75-7
MW: 323.14
Melting point: 149 to 153°C
EINECS: 200-287-4
GHS: Carc. 1B
H350
P201, P308+P313

Assay: >99%

Chloride standard 100 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASCL91Y
500 mℓ	Plastic bottle	SPASCL91X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Chloride standard solution 1000 ppm (1 mg/mℓ)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4546/05

CAS: 7447-40-7
EINECS: 231-211-8

Manufactured to a tolerance of ± 1%.

Chloride standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASCL92Y
500 mℓ	Plastic bottle	SPASCL92X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Chloride Colour Reagent
pure

packaging		Mfr. No
4.5 ℓ	HDPE Plastic bottle	C/4345/20

Density at 20°C: 0.992 to 1.002
ADR/RID: 3, III
UN: 1993
GHS: Flam. Liq. 3, Acute Tox. 4, STOT SE 1
H226, H302, H312, H332, H370
P280, P301+P312, P302+P350, P304+P340, P210, P311

Made up to 1ℓ with Analytical Reagent water.

Chlorite standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASCLO292Y
500 mℓ	Plastic bottle	SPASCLO292X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Chloroacetic acid — Certified AR
for analysis

packaging		Mfr. No
500 g	Glass jar	C/4400/53
25 kg	Plastic keg	C/4400/70

$ClCH_2COOH$
CAS: 79-11-8
MW: 94.50
Density at 20°C: 1.58
Boiling point: 189°C
Melting point: 61 to 63°C
Flash point: 126°C
ADR/RID: 6.1, 8, II
EINECS: 201-178-4
UN: 1751

GHS: Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1, STOT SE 3, Aquatic Acute 1
H301, H335, H311, H314, H400, H330
P301+P310, P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P261, P273

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Potassium (K)	<10 ppm
Chromium (Cr)	<1 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<5 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<50 ppm
Nickel (Ni)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Strontium (Sr)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Chloroacetic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Glass jar	C/4360/50
500 g	Glass jar	C/4360/53

$ClCH_2COOH$
CAS: 79-11-8
MW: 94.50
Density at 20°C: 1.58
Boiling point: 189°C
Melting point: 61 to 63°C
Flash point: 126°C
ADR/RID: 6.1, 8, II
EINECS: 201-178-4
UN: 1751

GHS: Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1, STOT SE 3, Aquatic Acute 1
H301, H335, H311, H314, H400, H330
P301+P310, P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P261, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<50 ppm		

4-Chloroaniline — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	C/4600/48

C_6H_4ClN
CAS: 106-47-8
MW: 127.57
Density at 20°C: 1.169
Boiling point: 232°C
Melting point: 68 to 72°C
Flash point: >188°C
ADR/RID: 6.1, II
EINECS: 203-401-0

UN: 2018
GHS: Carc. 1B, Acute Tox. 3, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H350, H331, H410, H317, H311, H301
P280, P302+P350, P201, P308+P313, P304+P340, P273

Assay (CG): >99%

Chloroauric (III) acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 g	Vial	C/4640/43

$HAuCl_4.xH_2O$
CAS: 16903-35-8
MW: 339.78
Melting point: 30°C
ADR/RID: 8, III
EINECS: 240-948-4
UN: 3260

GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H302, H314
P301+P330+P331, P280, P305+P351+P338, P310, P301+P312

Assay: >49%

The price charged for this item is subject to alteration and will be that ruling at time of despatch.

4-Chlorobenzenamine
See 4-Chloroaniline, page 84

Chlorobenzene — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	C/4681/15
2.5 ℓ	Glass bottle	C/4681/17
2.5 ℓ	Coated Glass bottle	C/4681/PB17

C_6H_5Cl
CAS: 108-90-7
MW: 112.56
Density at 20°C: 1.108
Boiling point: 131°C
Melting point: -45°C
Flash point: 23°C

ADR/RID: 3, III
EINECS: 203-628-5
UN: 1134
GHS: Flam. Liq. 3, Acute Tox. 4, Aquatic Chronic 2
H226, H411, H332
P273, P304+P340, P210

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Potassium (K)	<0.02 ppm
Colour	<10 APHA	Sodium (Na)	<0.5 ppm
Water	<0.05%	Total phosphorus (P)	<0.5 ppm
Residue after evaporation	<10 ppm	Total silicon (Si)	<0.02 ppm
Calcium (Ca)	<0.2 ppm	Total sulphur (S)	<0.5 ppm
Copper (Cu)	<0.02 ppm	Zinc (Zn)	<0.1 ppm
Iron (Fe)	<0.2 ppm	Benzene	<0.02%
Lead (Pb)	<0.05 ppm	o-Dichlorobenzene	<0.01%
Magnesium (Mg)	<0.2 ppm	p-Dichlorobenzene	<0.02%

Typical analysis

Aluminium (Al)	<0.02 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.

Chlorobenzene — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	C/4680/15
2.5 ℓ	Glass bottle	C/4680/17
2.5 ℓ	Coated Glass bottle	C/4680/PB17
25 ℓ	Metal drum	C/4680/25

C_6H_5Cl
CAS: 108-90-7
MW: 112.56
Density at 20°C: 1.108
Boiling point: 131°C
Melting point: -45°C
Flash point: 23°C

ADR/RID: 3, III
EINECS: 203-628-5
UN: 1134
GHS: Flam. Liq. 3, Acute Tox. 4, Aquatic Chronic 2
H226, H411, H332
P273, P304+P340, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<2 ppm
Water	<0.5%	Sodium (Na)	<5 ppm
Residue after evaporation	<100 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm		

1-Chlorobutane
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	C/4756/15
2.5 ℓ	Glass bottle	C/4756/17

C_4H_9Cl
CAS: 109-69-3
MW: 92.57
Density at 20°C: 0.880
Boiling point: 77 to 78°C
Melting point: -123°C
Flash point: -12°C

ADR/RID: 3, II
EINECS: 203-696-6
UN: 1127
GHS: Flam. Liq. 2
H225
P210, P240, P304+P340

Assay (CG): >99.7%

Guaranteed analysis

Acidity / Alkalinity	<0.0003 meq/g	Residue after evaporation	<2 ppm
Water	<0.02%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

220 nm	<1 A.U.	260 nm	<0.005 A.U.
230 nm	<0.2 A.U.	270 nm	<0.005 A.U.
240 nm	<0.05 A.U.	Wavelength at 1 A.U.	: <220 nM
250 nm	<0.01 A.U.		

Lot analysis on the label.
Filtered to 0.2 µm.

1-Chlorobutane
for protein sequencing

packaging		Mfr. No
2.5 ℓ	Glass bottle	C/4758/17

C_4H_9Cl
CAS: 109-69-3
MW: 92.57
Density at 20°C: 0.880
Boiling point: 77 to 78°C
Melting point: -123°C
Flash point: -12°C

ADR/RID: 3, II
EINECS: 203-696-6
UN: 1127
GHS: Flam. Liq. 2
H225
P210, P240, P304+P340

Assay (CG): >99.5%

Guaranteed analysis

Water	<0.02%	Residue after evaporation	<2 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

220 nm	<1 A.U.	290 nm (sol. aqu. 1%)	: <0.005 A.U.
250 nm	<0.01 A.U.		

1-Chlorobutane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	C/4750/05

C_4H_9Cl
CAS: 109-69-3
MW: 92.57
Density at 20°C: 0.880
Boiling point: 77 to 78°C
Melting point: -123°C
Flash point: -12°C

ADR/RID: 3, II
EINECS: 203-696-6
UN: 1127
GHS: Flam. Liq. 2
H225
P210, P240, P304+P340

Assay (CG): >98%

Guaranteed analysis

Residue after evaporation	<50 ppm		

2-Chlorobutane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	C/4759/05

C_4H_9Cl
CAS: 78-86-4
MW: 92.57
Density at 20°C: 0.870
Boiling point: 68 to 70°C
Melting point: -140°C
Flash point: -15°C

ADR/RID: 3, II
EINECS: 201-151-7
UN: 1127
GHS: Flam. Liq. 2
H225
P210, P240

Assay (CG): >95%

2-Chloroethanol
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/4880/PB08

C_2H_5ClO
CAS: 107-07-3
MW: 80.52
Density at 20°C: 1.2
Boiling point: 129 to 130°C
Melting point: -63°C
Flash point: 55°C
ADR/RID: 6.1, 3, I

EINECS: 203-459-7
UN: 1135
GHS: Flam. Liq. 3, Acute Tox. 1, Eye Dam. 1
H226, H330, H310, H300, H318
P280, P361, P302+P350, P310, P304+P340, P210

Assay (CG): >99%

Chloroform stabilized with amylene — NEW PACK — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	C/4966/15
2.5 ℓ	Glass bottle	C/4966/17
2.5 ℓ	Coated Glass bottle	C/4966/PB17
10 ℓ	Returnable Drum	C/4966/10RSS
25 ℓ	Returnable Drum	C/4966/25RSS
30 ℓ	Returnable Drum	C/4966/30RSS

$CHCl_3$
CAS: 67-66-3
MW: 119.38
Density at 20°C: 1.48
Boiling point: 61°C
Melting point: -63°C
ADR/RID: 6.1, III

EINECS: 200-663-8
UN: 1888
GHS: Carc. 2, Acute Tox. 4, Skin Irrit. 2, STOT RE 2
H315, H351, H302, H373
P281, P260, P301+P312, P302+P352

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Residue after evaporation	<5 ppm
Water	<0.05%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

250 nm	<0.5 A.U.	270 nm	<0.01 A.U.
260 nm	<0.075 A.U.	280 nm	<0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Chloroform stabilized with amylene — Certified
for Gel Permeation Chromatography (GPC)

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	C/4970/PB17

$CHCl_3$
CAS: 67-66-3
MW: 119.38
Density at 20°C: 1.48
Boiling point: 61°C
Melting point: -63°C
ADR/RID: 6.1, III

EINECS: 200-663-8
UN: 1888
GHS: Carc. 2, Acute Tox. 4, Skin Irrit. 2, STOT RE 2
H315, H351, H302, H373
P281, P260, P301+P312, P302+P352

Guaranteed analysis

Colour	<5 APHA	Residue after evaporation	<5 ppm
Water	<0.02%		

Chloroform stabilized with amylene — Primar
for trace metal analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	C/4961/17

$CHCl_3$
CAS: 67-66-3
MW: 119.38
Density at 20°C: 1.48
Boiling point: 61°C
Melting point: -63°C
ADR/RID: 6.1, III

EINECS: 200-663-8
UN: 1888
GHS: Carc. 2, Acute Tox. 4, Skin Irrit. 2, STOT RE 2
H315, H351, H302, H373
P281, P260,
P301+P312, P302+P352

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Nickel (Ni)	<0.005 ppm
Colour	<5 APHA	Potassium (K)	<0.05 ppm
Water	<0.01%	Propan--1-ol	<0.005 ppm
Residue after evaporation	<2 ppm	Sodium (Na)	<0.2 ppm
Free Chlorine (Cl_2)	<100 ppm	Strontium (Sr)	<0.005 ppm
Aluminium (Al)	<0.02 ppm	Titanium (Ti)	<0.005 ppm
Barium (Ba)	<0.005 ppm	Total phosphorus (P)	<0.02 ppm
Cadmium (Cd)	<0.005 ppm	Total silicon (Si)	<0.02 ppm
Calcium (Ca)	<0.05 ppm	Total sulphur (S)	<0.1 ppm
Chromium (Cr)	<0.005 ppm	Vanadium (V)	<0.005 ppm
Cobalt (Co)	<0.005 ppm	Zinc (Zn)	<0.01 ppm
Copper (Cu)	<0.01 ppm	Substances darkened	
Iron (Fe)	<0.05 ppm	by H_2SO_4	<5 APHA
Lead (Pb)	<0.005 ppm	Carbon tetrachloride	<0.002%
Lithium (Li)	<0.005 ppm	Dichloromethane	<0.002%
Magnesium (Mg)	<0.02 ppm	Tetrachloroethylene	<0.002%
Manganese (Mn)	<0.005 ppm	Trichloroethylene	<0.002%
Molybdenum (Mo)	<0.005 ppm		

Chloroform stabilized with amylene — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	C/4963/15
2.5 ℓ	Glass bottle	C/4963/17

$CHCl_3$
CAS: 67-66-3
MW: 119.38
Density at 20°C: 1.48
Boiling point: 61°C
Melting point: -63°C
ADR/RID: 6.1, III

EINECS: 200-663-8
UN: 1888
GHS: Carc. 2, Acute Tox. 4, Skin Irrit. 2, STOT RE 2
H315, H351, H302, H373
P281, P260,
P301+P312, P302+P352

Guaranteed analysis

Water	<0.05%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachlo-réoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile:
(1) 50°C for 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Chloroform stabilized with amylene
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Glass bottle	C/4962/15
2.5 ℓ	Glass bottle	C/4962/17

$CHCl_3$
CAS: 67-66-3
MW: 119.38
Density at 20°C: 1.480
Boiling point: 61°C
Melting point: -63°C
ADR/RID: 6.1, III

EINECS: 200-663-8
UN: 1888
GHS: Carc. 2, Acute Tox. 4, Skin Irrit. 2, STOT RE 2
H315, H351, H302, H373
P281, P260,
P301+P312, P302+P352

Guaranteed analysis

Water	<0.01%	Residue after evaporation	<2 ppm

Chloroform stabilised with amylene — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/4960/PB08
1 ℓ	Glass bottle	C/4960/15
1 ℓ	Coated Glass bottle	C/4960/PB15
2.5 ℓ	Glass bottle	C/4960/17
2.5 ℓ	Coated Glass bottle	C/4960/PB17
25 ℓ	Metal drum	C/4960/25
200 ℓ	Metal drum	C/4960/27

$CHCl_3$
CAS: 67-66-3
MW: 119.38
Density at 20°C: 1.48
Boiling point: 61°C
Melting point: -63°C
ADR/RID: 6.1, III

EINECS: 200-663-8
UN: 1888
GHS: Carc. 2, Acute Tox. 4, Skin Irrit. 2, STOT RE 2
H315, H351, H302, H373
P281, P260,
P301+P312, P302+P352

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<0.02 ppm
Colour	<5 APHA	Magnesium (Mg)	<0.05 ppm
Water	<0.02%	Potassium (K)	<0.1 ppm
Residue after evaporation	<5 ppm	Sodium (Na)	<0.2 ppm
Substances darkened		Total phosphorus (P)	<0.1 ppm
by (H_2SO_4)	<5 APHA	Total silicon (Si)	<0.05 ppm
Acetone & Aldehyde	: Pass	Total sulphur (S)	<0.5 ppm
Acid & Chloride	: Pass	Zinc (Zn)	<0.05 ppm
Calcium (Ca)	<0.1 ppm	Carbon tetrachloride	<0.005%
Free Chlorine (Cl_2)	<5 ppm	Dichloromethane	<0.005%
Copper (Cu)	<0.02 ppm	Tetrachloroethylene	<0.005%
Iron (Fe)	<0.1 ppm	Trichloroethylene	<0.005%

Typical analysis

Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Selenium (Se)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Tin (Sn)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Suitable for use with dithizone.
Lot analysis on the label.
Stabilised with 100 ppm amylene.

Chloroform stabilised with amylene — NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	C/4920/08
1 ℓ	Glass bottle	C/4920/15
2.5 ℓ	Glass bottle	C/4920/17
2.5 ℓ	Coated Glass bottle	C/4920/PB17
5 ℓ	HDPE Plastic bottle	C/4920/21
5 ℓ	HDPE Plastic bottle	C/4920/PC21
25 ℓ	Metal drum	C/4920/25
200 ℓ	Metal drum	C/4920/27

$CHCl_3$
CAS: 67-66-3
MW: 119.38
Density at 20°C: 1.48
Boiling point: 61°C
Melting point: -63°C
ADR/RID: 6.1, III

EINECS: 200-663-8
UN: 1888
GHS: Carc. 2, Acute Tox. 4, Skin Irrit. 2, STOT RE 2
H315, H351, H302, H373
P281, P260,
P301+P312, P302+P352

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Lead (Pb)	<5 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.1%	Potassium (K)	<2 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<5 ppm
Substances darkened		Total phosphorus (P)	<2 ppm
by (H_2SO_4)	<20 APHA	Total silicon (Si)	<2 ppm
Calcium (Ca)	<5 ppm	Total sulphur (S)	<2 ppm
Copper (Cu)	<2 ppm	Zinc (Zn)	<2 ppm
Iron (Fe)	<5 ppm		

Stabilised with 100ppm amylene

2-Chloro-2-methyl propane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	C/4990/08

C_4H_9Cl
CAS: 507-20-0
MW: 92.57
Density at 20°C: 0.850
Boiling point: 51 to 52°C
Melting point: -25°C
Flash point: -27°C

ADR/RID: 3, II
EINECS: 208-066-4
UN: 1127
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis
Complies with standard IR spectrum: Pass

2-Chlorophenol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/5040/PB08

C_6H_5ClO
CAS: 95-57-8
MW: 128.56
Density at 20°C: 1.262
Boiling point: 173 to 175°C
Melting point: 8°C
Flash point: 63°C
ADR/RID: 6.1, III
EINECS: 202-433-2

UN: 2021
GHS: Acute Tox. 4, Aquatic Chronic 2
H411, H312, H302, H332
P280, P301+P330+P331, P305+P351+P338, P310, P304+P340, P302+P352, P273, P301+P312

Guaranteed analysis
Complies with standard IR spectrum: Pass

N-Chloro-p-toluenesulfonamide sodium salt
See Chloramine-T, page 83

Chlorotrimethylsilane
for gas chromatography

packaging		Mfr. No
250 g	Glass bottle	T/3520/50

C_3H_9ClSi
CAS: 75-77-4
MW: 108.65
Density at 20°C: 0.850
Boiling point: 57°C
Melting point: -58°C
Flash point: -28°C
ADR/RID: 3, 8, II
EINECS: 200-900-5
UN: 1298

GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1
H225, H314, H332, H301, H312, EUH014, EUH071
P301+P310, P280, P301+P330+P331, P305+P351+P338, P310, P302+P352, P402+P404, P304+P340, P210, P240

Assay (CG): >98%

Cholesterol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	C/5360/48

$C_{27}H_{46}O$
CAS: 57-88-5
MW: 386.67
Density at 20°C: 1.06

Boiling point: 360°C
Melting point: 147 to 150°C
Flash point: 250°C
EINECS: 200-353-2

Guaranteed analysis

Water	<0.5%	Residue after ignition	<0.1%
Specific rotation	-40.5° to -38.5°		

Chromic Acid
pure, Mix detergent

packaging		Mfr. No
1 ℓ	Coated Glass bottle	J/3500/PC15

Density at 20°C: 1.84
Boiling point: 290 to 338°C
Melting point: 10°C
ADR/RID: 8, I
EINECS: 231-639-5
UN: 2240
GHS: Carc. 1B, Muta. 1B, Repr. 1B, Skin Corr. 1A, Eye

Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT RE 1
H350, H340, H360FD, H372, H314, H334, H317
P280, P301+P330+P331, P310, P304+P341, P303+P361+P353, P305+P351+P338

Chromium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8015/05
500 mℓ	HDPE Plastic bottle	J/8015/08

ADR/RID: 8, II
UN: 3264
GHS: Muta. 1B, Skin Corr. 1B, Eye Dam. 1
H314, H340, H350

P280, P201, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Chromium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8246/08

ADR/RID: 8, II
UN: 3264
GHS: Muta. 1B, Skin Corr. 1B, Eye Dam. 1
H314, H340, H350

P280, P201, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Chromium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8245/05

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 3264
GHS: Muta. 1B, Skin Corr. 1B, Resp. Sens. 1, Skin Sens. 1

H350, H340, H314, H334, H317, EUH044
P280, P301+P330+P331, P310, P303+P361+P353, P305+P351+P338, P308+P313

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Chromium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCR22Y
250 mℓ	Plastic bottle	SPPLCR22T
500 mℓ	Plastic bottle	SPPLCR22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Chromium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLCR12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Chromium standard metal solution 1000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLCR92X

H317, H333, H334, H340, H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Optima LC/MS
Fisher Chemical OPTIMA® LC/MS solvents, blends, additives and modifiers have set the standard of excellence for consistent, reproducible performance in the mobile phase of LC/MS.
Find out more on page 308

Chromium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCR23Y
500 mℓ	Plastic bottle	SPPLCR23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Chromium standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	PLCR13X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Chromium standard metal solution 10 000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLCR93X

H315, H317, H319, H334, H340, H350, H360, H373, H412

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Chromium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLCR22Y

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Chromium(III) chloride hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	C/5480/48
500 g	Glass jar	C/5480/53

$CrCl_3.6H_2O$
CAS: 10060-12-5
MW: 266.45
Melting point: 83°C
ADR/RID: 8, 6.1, III
EINECS: 233-038-3
UN: 2923

GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H312, H314, H332
P280, P301+P330+P331, P305+P351+P338, P310, P302+P352, P304+P340

Assay: >95%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<200 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<200 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<100 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<200 ppm		

Chromium(III) nitrate monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Glass jar	C/5560/53

$Cr(NO_3)_3.9H_2O$
CAS: 7789-02-8
MW: 400.15
Melting point: 60°C
ADR/RID: 5.1, III
EINECS: 236-921-1

UN: 2720
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2
H272, H315, H319
P280, P305+P351+P338, P302+P352, P210

Assay: >95%

Guaranteed analysis

Iron (Fe)	<500 ppm	n-Butyl formate	<0.003%
Sulfate (SO_4)	<0.01%		

Chromium(III) oxide, green — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	C/5680/53

Cr_2O_3
CAS: 1308-38-9
MW: 151.99
Density at 20°C: 5.21

Boiling point: 4000°C
Melting point: 2435°C
EINECS: 215-160-9

Guaranteed analysis

Identity test ..... : Pass

Chromium(IV) oxide — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	C/5920/50
500 g	Plastic jar	C/5920/53

CrO_3
CAS: 1333-82-0
MW: 99.99
Density at 20°C: 2.7
Melting point: 196°C
ADR/RID: 5.1, 6.1. 8, II
EINECS: 215-607-8
UN: 1463
GHS: Ox. Sol. 1, Muta. 1B, Repr. 2, Acute Tox. 2, Skin Corr. 1A, Eye Dam. 1, Resp.

Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H271, H350, H340, H361f, H330, H301, H372, H314, H334, H317, H410, H335, H310
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P210, P260, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total nitrogen (N)	<100 ppm
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<300 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm
Sodium (Na)	<1000 ppm		

Typical analysis

Aluminium (Al)	<0.005%	Molybdenum (Mo)	<0.001%
Barium (Ba)	<0.001%	Nickel (Ni)	<0.005%
Cadmium (Cd)	<0.002%	Silver (Ag)	<0.001%
Cobalt (Co)	<0.002%	Strontium (Sr)	<0.001%
Lithium (Li)	<0.001%	Titanium (Ti)	<0.001%
Manganese (Mn)	<0.002%	Vanadium (V)	<0.001%

Lot analysis on the label

Chromium(VI) oxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	C/5880/50
500 g	Plastic jar	C/5880/53

CrO_3
CAS: 1333-82-0
MW: 99.99
Density at 20°C: 2.7
Melting point: 196°C
ADR/RID: 5.1, 6.1. 8, II
EINECS: 215-607-8
UN: 1463
GHS: Ox. Sol. 1, Muta. 1B, Repr. 2, Acute Tox. 2, Skin Corr. 1A, Eye Dam. 1, Resp.

Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H271, H350, H340, H361f, H330, H301, H372, H314, H334, H317, H410, H335, H310
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P210, P260, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<2000 ppm
Copper (Cu)	<200 ppm	n-Butyl formate	<0.14%
Iron (Fe)	<200 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<100 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<140 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<140 ppm

Chromium(VI) oxide
Technical

packaging		Mfr. No
500 g	Plastic jar	C/5840/53
2.5 kg	Plastic jar	C/5840/62

CrO_3
CAS: 1333-82-0
MW: 99.99
Density at 20°C: 2.7
Melting point: 196°C
ADR/RID: 5.1, 6.1. 8, II
EINECS: 215-607-8
UN: 1463
GHS: Ox. Sol. 1, Muta. 1B, Repr. 2, Acute Tox. 2, Skin Corr. 1A, Eye Dam. 1, Resp.

Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H271, H350, H340, H361f, H330, H301, H372, H314, H334, H317, H410, H335, H310
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P210, P260, P273

Reagents, Solvents & Volumetric solutions comply with the European Pharmacopeia
Read more on page 234

Chromium(III) potassium sulfate dodecahydrate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	C/5720/53

$KCr(SO_4)_2.12H_2O$
CAS: 7788-99-0
MW: 499.39
Density at 20°C: 1.83
Melting point: 89°C

GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280,
P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<1000 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<200 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<200 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<100 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm

Chromotropic acid sodium salt dihydrate SLR
extra pure, for formaldehyde determination

packaging		Mfr. No
25 g	Plastic jar	C/6002/46

$C_{10}H_6O_8S_2Na_2.2H_2O$
CAS: 5808-22-0
MW: 400.28
Melting point: 300°C
EINECS: 204-972-9

GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H335, H315, H319
P261, P302+P352, P280,
P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Cinnamaldehyde SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	C/6098/08

C_9H_8O
CAS: 104-55-2
MW: 132.16
EINECS: 203-213-9

Assay (CG): > 98%

Guaranteed analysis
Complies with standard IR spectrum: Pass

Cinnamic acid
technical, 99+%

packaging		Mfr. No
100 g	Plastic jar	C/6100/48

$C_9H_8O_2$
CAS: 621-82-9
MW: 148.05
Boiling point: 300°C
Melting point: 133°C
Flash point: 100°C

EINECS: 210-708-3
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H319, H315, H335
P261, P280, P302+P352,
P305+P351+P338, P304+P341

Assay: >99%

Citric acid, anhydrous SLR, Eur.Ph., BP,USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	C/6240/53

$C_6H_8O_7$
CAS: 77-92-9
MW: 192.13
Melting point: 153°C
Flash point: 100°C

EINECS: 201-069-1
GHS: Eye Irrit. 2
H319
P264, P305+P351+P338,
P337+P313, P280

Assay: >99%

Citric acid monohydrate Certified
HPLC for electrochemical detection

packaging		Mfr. No
500 g	Plastic jar	C/6230/53

$C_6H_8O_7.H_2O$
CAS: 5949-29-1
MW: 210.14
Melting point: 135 to 152°C
Flash point: 174°C

GHS: Eye Irrit. 2
H319
P264, P280,
P305+P351+P338, P337+P313

Assay: >99.8%

Guaranteed analysis

Electrochemical test	Pass	Lead (Pb)	<1 ppm
Iron (Fe)	<1 ppm	n-Butyl formate	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.5 A.U. 270 nm (sol. aqu. 1 M) : <0.1 A.U.

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

Citric acid monohydrate
For foodstuffs analysis, low in lead

packaging		Mfr. No
500 g	Plastic jar	C/6180/53

$C_6H_8O_7.H_2O$
CAS: 5949-29-1
MW: 210.14
Melting point: 135 to 152°C
Flash point: 174°C

GHS: Eye Irrit. 2
H319
P264, P280,
P305+P351+P338, P337+P313

Guaranteed analysis
Lead (Pb) <0.5 ppm

Citric acid monohydrate
for amino acid analysis

packaging		Mfr. No
500 g	Plastic jar	C/P330/53
1 kg	Plastic jar	C/P330/60

$C_6H_8O_7.H_2O$
CAS: 5949-29-1
MW: 210.14
Melting point: 135 to 152°C
Flash point: 174°C

GHS: Eye Irrit. 2
H319
P264, P280,
P305+P351+P338, P337+P313

Assay: >99.9%

Guaranteed analysis

Tartarate	: Pass	Lead (Pb)	<1 ppm
Ninhydrin reaction test	: Pass	n-Butyl formate	<0.0005%
Copper (Cu)	<0.5 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<50 ppm

Component of electrophoresis buffers.

Citric acid monohydrate Certified AR ,Eur.Ph.,USP
for analysis

packaging		Mfr. No
500 g	Plastic jar	C/6200/53
1 kg	Plastic jar	C/6200/60
2.5 kg	Plastic jar	C/6200/62
5 kg	Plastic keg	C/6200/65
25 kg	Fibre Keg	C/6200/70

$C_6H_8O_7.H_2O$
CAS: 5949-29-1
MW: 210.14
Melting point: 135 to 152°C
Flash point: 174°C

GHS: Eye Irrit. 2
H319
P264, P280,
P305+P351+P338, P337+P313

Assay: 99.8 to 102%

Guaranteed analysis

Insoluble matter	<0.005%	Total chloride (Cl)	<0.0005%
Solution	: Pass	Total phosphorus (P)	<3 ppm
Calcium (Ca)	<50 ppm	Total silicon (Si)	<5 ppm
Copper (Cu)	<0.5 ppm	Total sulphur (S)	<7 ppm
Iron (Fe)	<1 ppm	Zinc (Zn)	<1 ppm
Lead (Pb)	<1 ppm	Phosphate (PO_4)	<0.001%
Magnesium (Mg)	<5 ppm	Sulfate (SO_4)	<0.002%
Oxalate (C_2O_4)	<0.005%	Readily carbonisable substances test:	Pass
Potassium (K)	<10 ppm	Residue after ignition	<0.02%
Sodium (Na)	<10 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Citric acid monohydrate SLR
extra pure, granular

packaging		Mfr. No
500 g	Plastic jar	C/6160/53
1 kg	Plastic jar	C/6160/60
2.5 kg	Plastic jar	C/6160/62
5 kg	Plastic keg	C/6160/65
25 kg	Fibre Keg	C/6160/70

$C_6H_8O_7.H_2O$
CAS: 5949-29-1
MW: 210.14
Melting point: 135 to 152°C
Flash point: 174°C

GHS: Eye Irrit. 2
H319
P264, P280,
P305+P351+P338, P337+P313

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<10 ppm

Cleve's acid
See 1-Naphthylamine-7- sulfonic acid, page 211

Clove oil SLR
extra-pure

packaging		Mfr. No
100 mℓ	Glass bottle	C/6280/05

CAS: 8000-34-8
Boiling point: 250°C
GHS: Skin Irrit. 2, Eye Irrit. 2

H315, H319
P280, P261, P302+P352,
P305+P351+P338

Guaranteed analysis
Refractive index 1.535 to 1.545

Cobalt standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8020/05
500 mℓ	HDPE Plastic bottle	J/8020/08

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338,
P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Cobalt standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8251/08

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338,
P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
All ICP standards are manufactured from acids, metal & metal salts Ultra pure quality and contain less than <10 ppm total metal impurites
.

Cobalt standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8250/05

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Cobalt standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCO22Y
250 mℓ	Plastic bottle	SPPLCO22T
500 mℓ	Plastic bottle	SPPLCO22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cobalt standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLCO12X

H350

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cobalt standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCO23Y
500 mℓ	Plastic bottle	SPPLCO23X

H314, H317, H334

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cobalt standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLCO22Y

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Cobalt SLR
extra pure, metal powder

packaging		Mfr. No
100 g	Plastic jar	C/6360/48

Co
CAS: 7440-48-4
MW: 58.93
Boiling point: 2870°C
ADR/RID: 4.1, III
EINECS: 231-158-0
UN: 3089

GHS: Flam. Sol. 2, Resp. Sens. 1, Skin Sens. 1, Aquatic Chronic 4
H228, H317, H334, H413
P261, P304+P341, P342+P311, P280, P302+P352, P210

Guaranteed analysis
Identity test ..... : Pass

Cobalt(II) acetate tetrahydrate
pure

packaging		Mfr. No
250 g	Plastic jar	C/6400/50

$C_4H_6CoO_4.4H_2O$
CAS: 6147-53-1
MW: 249.08
Melting point: 140°C
ADR/RID: 9, III
UN: 3077
GHS: Carc. 1B, Muta. 2,

Repr. 1B, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H317, H341, H334, H410, H350i, H360F
P261, P280, P342+P311, P201, P308+P313, P273

Guaranteed analysis
Identity test ..... : Pass

Cobalt(II) carbonate
technical

packaging		Mfr. No
100 g	Plastic jar	C/6459/48

CO_3Co
CAS: 513-79-1
MW: 118.94
ADR/RID: 9, III
EINECS: 208-169-4
UN: 3077
GHS: Carc. 1B, Muta. 2,

Repr. 1B, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H350i, H341, H360F, H317, H334, H410
P261, P280, P308+P313, P304+P341, P302+P352

Guaranteed analysis
Assay as Cobalt (Co) ..... : 43 to 47%

Cobalt(II) chloride anhydrous SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	C/6600/48

$CoCl_2$
CAS: 7646-79-9
MW: 129.84
Boiling point: 1049°C
Melting point: 735°C
ADR/RID: 6.1, III
EINECS: 231-589-4
UN: 3288
GHS: Carc. 1B, Muta. 2,

Repr. 1B, Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H350i, H341, H360F, H302, H334, H317, H410
P280, P301+P310, P304+P341, P308+P313, P261, P273

Guaranteed analysis
Identity test ..... : Pass

Cobalt(II) chloride hexahydrate Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	C/6560/48
500 g	Plastic jar	C/6560/53
1 kg	Plastic jar	C/6560/60
5 kg	Plastic jar	C/6560/65

$CoCl_2.6H_2O$
CAS: 7791-13-1
MW: 237.93
Melting point: 86°C
ADR/RID: 9, III
UN: 3077
GHS: Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1,

STOT SE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H302, H341, H317, H334, H350i, H360F
P261, P304+P341, P342+P311, P280, P281, P201, P308+P313, P260, P273, P301+P312

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	4 to 6	Sodium (Na)	<100 ppm
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<50 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<20 ppm		

Lot analysis on the label.

Cobalt(II) chloride hexahydrate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	C/6520/48
500 g	Plastic jar	C/6520/53
1 kg	Plastic jar	C/6520/60

$CoCl_2.6H_2O$
CAS: 7791-13-1
MW: 237.93
Melting point: 86°C
ADR/RID: 9, III
UN: 3077
GHS: Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1,

STOT SE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H302, H341, H317, H334, H350i, H360F
P261, P304+P341, P342+P311, P280, P281, P201, P308+P313, P260, P273, P301+P312

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<500 ppm		

Cobalt(II) chloride hexahydrate
technical

packaging		Mfr. No
100 g	Plastic jar	C/6500/48
500 g	Plastic jar	C/6500/53

$CoCl_2.6H_2O$
CAS: 7791-13-1
MW: 237.93
Melting point: 86°C
ADR/RID: 9, III
UN: 3077
GHS: Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1,

STOT SE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H302, H341, H317, H334, H350i, H360F
P261, P304+P341, P342+P311, P280, P281, P201, P308+P313, P260, P273, P301+P312

Assay: >96.5%

Cobalt(II) nitrate hexahydrate Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	C/6680/48
250 g	Plastic jar	C/6680/50

$Co(NO_3)_2.6H_2O$
CAS: 10026-22-9
MW: 291.03
Density at 20°C: 1.88
Melting point: 55 to 56°C
ADR/RID: 9, III
EINECS: 233-402-1
UN: 3077

GHS: Carc. 1B, Muta. 2, Repr. 1B, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H317, H334, H350i, H341, H360F, H400, H410
P261, P281, P307+P311, P273

Assay: 99 to 101%

Guaranteed analysis

Ammonium (NH_4)	<0.05%	Sodium (Na)	<500 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<20 ppm		

Lot analysis on the label.

Cobalt(II) nitrate hexahydrate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	C/6640/48
500 g	Plastic jar	C/6640/53

$Co(NO_3)_2.6H_2O$
CAS: 10026-22-9
MW: 291.03
Density at 20°C: 1.88
Melting point: 55 to 56°C
ADR/RID: 9, III
EINECS: 233-402-1
UN: 3077

GHS: Carc. 1B, Muta. 2, Repr. 1B, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H317, H334, H350i, H341, H360F, H400, H410
P261, P281, P307+P311, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<200 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<100 ppm

Cobalt(II) sulfate heptahydrate Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	C/6880/48

$CoSO_4.7H_2O$
CAS: 10026-24-1
MW: 281.09
Density at 20°C: 2.03
Melting point: 98°C
ADR/RID: 9, III
UN: 3077
GHS: Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4,

Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H317, H410, H334, H350i, H341, H360F, H302
P261, P304+P341, P342+P311, P280, P201, P308+P313, P273

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	4 to 6	Sodium (Na)	<50 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<10 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<20 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<20 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<0.01%
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<1 ppm
Lithium (Li)	<1 ppm	Titanium (Ti)	<1 ppm
Manganese (Mn)	<0.001%	Vanadium (V)	<1 ppm

Lot analysis on the label

Cobalt(II) sulfate heptahydrate
specified reagents for general laboratory work- extra pure SLR

packaging		Mfr. No
250 g	Plastic jar	C/6840/50
500 g	Plastic jar	C/6840/53

$CoSO_4.7H_2O$
CAS: 10026-24-1
MW: 281.09
Density at 20°C: 2.03
Melting point: 98°C
ADR/RID: 9, III
UN: 3077
GHS: Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4,
Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H317, H410, H334, H350i, H341, H360F, H302
P261, P304+P341, P342+P311, P280, P201, P308+P313, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<500 ppm		

2.4,6-Collidine
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	C/6940/PB05

$C_8H_{11}N$
CAS: 108-75-8
MW: 121.18
Density at 20°C: 0.910
Boiling point: 171 to 172°C
Melting point: -43°C
Flash point: 57°C
ADR/RID: 3, 6.1, III
EINECS: 203-613-3
UN: 1992
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H226, H315, H312, H319, H332, H335
P280, P302+P352, P261, P304+P340, P305+P351+P338, P210

Assay (CG): >98%

Collodion
pure

packaging		Mfr. No
500 mℓ	Glass bottle	C/7000/08

CAS: 9004-70-0
ADR/RID: 3, I
UN: 2059
GHS: Flam. Liq. 1, Acute
Tox. 4, STOT SE 3
H224, H302, H336, EUH019, EUH066
P280, P210, P243, P301+P310

Congo red C.I. 22120
pure, pH and adsorption indicator

packaging		Mfr. No
25 g	Glass jar	C/7020/46

$C_{32}H_{22}N_6Na_2O_6S_2$
CAS: 573-58-0
MW: 696.65
Melting point: >360°C
ADR/RID: 4.1, III
EINECS: 209-358-4
UN: 1325
GHS: Carc. 1B, Repr. 2
H350, H361d
P201, P308+P313, P281, P233

Guaranteed analysis
pH colour change test ..... : Pass

Coomassie Blue G250
for electrophoresis, (page blue G90), C.I. 42655

packaging		Mfr. No
25 g	Glass jar	C/P541/46

$C_{47}H_{48}N_3NaO_7S_2$
CAS: 6104-58-1
MW: 854.02
Density at 20°C: >> 1.0
Melting point: 100°C
EINECS: 228-058-4

Suitable for use as a protein stain.

Coomassie Blue R250
for electrophoresis, (page blue 83) C.I. 42660

packaging		Mfr. No
25 g	Glass jar	C/P540/46

$C_{45}H_{44}N_3NaO_7S_2$
CAS: 6104-59-1
MW: 825.96
Melting point: 174 to 180°C
EINECS: 228-060-5

Solutions of dye in methanol/acetic acid permit the detection of 0.5µg protein, after staining and destaining.

Copper standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8256/08

ADR/RID: 8, II
EINECS: 221-838-5
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Copper standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8025/05
500 mℓ	HDPE Plastic bottle	J/8025/08

ADR/RID: 8, II
EINECS: 221-838-5
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Copper standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8255/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Copper standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCU22Y
250 mℓ	Plastic bottle	SPPLCU22T
500 mℓ	Plastic bottle	SPPLCU22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Copper standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLCU12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Copper standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLCU23Y
500 mℓ	Plastic bottle	SPPLCU23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Copper standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLCU13X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Copper standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLCU22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Copper
extra pure, metal powder SLR

packaging		Mfr. No
100 g	Glass jar	C/7120/48
250 g	Glass jar	C/7120/50
500 g	Glass jar	C/7120/53

Cu
CAS: 7440-50-8
MW: 63.54
Density at 20°C: 89.2
Boiling point: 2580°C
Melting point: 1083°C
ADR/RID: 4.1, III
EINECS: 231-159-6
UN: 3089
GHS: Flam. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H228, H315, H319, H335
P261, P302+P352, P280, P305+P351+P338, P233, P210

Guaranteed analysis
Identity test ..... : Pass

Copper
extra pure, metal granular SLR

packaging		Mfr. No
250 g	Plastic jar	C/7170/50

Cu
CAS: 7440-50-8
MW: 63.54
Boiling point: 2595°C
Melting point: 1083°C
EINECS: 231-159-6

Guaranteed analysis
Identity test ..... : Pass

Copper
extra pure, metal turning SLR

packaging		Mfr. No
500 g	Plastic jar	C/7160/53
1 kg	Plastic jar	C/7160/60

Cu
CAS: 7440-50-8
MW: 63.54
Boiling point: 2595°C
Melting point: 1083°C
EINECS: 231-159-6

Guaranteed analysis
Identity test ..... : Pass

Copper
Technical, metal foil (about 0.1 mm)

packaging		Mfr. No
250 g	Plastic jar	C/7050/50
500 g	Plastic jar	C/7050/53

Cu
CAS: 7440-50-8
MW: 63.54
Boiling point: 2595°C
Melting point: 1083°C
EINECS: 231-159-6

Guaranteed analysis
Identity test ..... : Pass

Copper
pure, metal wire about 0.91 mm(20 swg)

packaging		Mfr. No
500 g	Plastic jar	C/7210/53

Cu
CAS: 7440-50-8
MW: 63.54
Boiling point: 2595°C
Melting point: 1083°C
EINECS: 231-159-6

Guaranteed analysis
Identity test ..... : Pass

Copper(II) acetate monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	C/7760/50
500 g	Plastic jar	C/7760/53

$C_4H_6CuO_4$
CAS: 142-71-2
MW: 199.65
Melting point: 115°C
ADR/RID: 9, III
EINECS: 205-553-3
UN: 3077
GHS: Acute Tox. 4, Skin Irrit.
2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H335, H315, H319, H302, H410
P261, P273, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<100 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<100 ppm
Sodium (Na)	<200 ppm		

Copper(II) bromide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Glass jar	C/7840/50

$CuBr_2$
CAS: 7789-45-9
MW: 233.36
Density at 20°C: 47.7
Boiling point: 900°C
Melting point: 498°C
ADR/RID: 8, III
EINECS: 232-167-2
UN: 1759
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H314, H302
P280, P260, P301+P330+P331, P305+P351+P338, P310, P264

Guaranteed analysis
Identity test ..... : Pass

Copper(II) carbonate basic — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	C/7880/50
500 g	Plastic jar	C/7880/53
25 kg	Fibre Keg	C/7880/70

$CuCO_3.Cu(OH)_2$
CAS: 12069-69-1
MW: 221.10
Density at 20°C: 4.0
Melting point: 200°C
ADR/RID: 6.1, III
EINECS: 235-113-6
UN: 3288
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315, H301
P264, P270, P261, P302+P352, P280, P305+P351+P338

Assay: 54 to 56%

Guaranteed analysis
Iron (Fe) ..... <2000 ppm Sulfate (SO_4) ..... <0.2%

Copper(II) carbonate basic
technical

packaging		Mfr. No
500 g	Plastic jar	C/7879/53
3 kg	Plastic jar	C/7879/63

$CuCO_3.Cu(OH)_2$
CAS: 12069-69-1
MW: 221.10
Density at 20°C: 4.0
Boiling point: 240°C
Melting point: 200°C
ADR/RID: 6.1, III
EINECS: 235-113-6
UN: 3288
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315, H301
P264, P270, P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Copper (I) chloride — SLR
extra pure, min. 96%

packaging		Mfr. No
100 g	Plastic jar	C/8680/48

ClCu
CAS: 7758-89-6
MW: 99.00
Density at 20°C: 4.14
Boiling point: 1490°C
Melting point: 430°C
ADR/RID: 8, III
EINECS: 231-842-9
UN: 2802
GHS: Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1
H302, H410, H400
P301+P310, P273

Assay: >96%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<500 ppm
Iron (Fe)	<100 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<50 ppm		

Copper(II) chloride dihydrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	C/7960/48
1 kg	Plastic jar	C/7960/60

$CuCl_2.2H_2O$
CAS: 10125-13-0
MW: 170.48
Density at 20°C: 2.54
Melting point: 100°C
ADR/RID: 8, III
UN: 2802
GHS: Met. Corr. 1, Acute
Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H301, H335, H319, H315, H410, H290
P261, P273, P302+P352, P280, P305+P351+P338, P301+P310

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	3 to 4	Sodium (Na)	<20 ppm
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<20 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<5 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<2 ppm
Arsenic (As)	<2 ppm	Manganese (Mn)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<2 ppm	Titanium (Ti)	<2 ppm
Chromium (Cr)	<2 ppm	Vanadium (V)	<2 ppm
Cobalt (Co)	<2 ppm		

Lot analysis on the label.

Copper(II) chloride dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	C/7920/48
250 g	Plastic jar	C/7920/50
500 g	Plastic jar	C/7920/53
5 kg	Plastic keg	C/7920/65

$CuCl_2.2H_2O$
CAS: 10125-13-0
MW: 170.48
Density at 20°C: 2.54
Melting point: 100°C
ADR/RID: 8, III
UN: 2802
GHS: Met. Corr. 1, Acute
Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H301, H335, H319, H315, H410, H290
P261, P273, P302+P352, P280, P305+P351+P338, P301+P310

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<100 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<100 ppm

Copper(I) iodide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	C/8800/48

CuI
CAS: 7681-65-4
MW: 190.44
Boiling point: 1290°C
Melting point: 605°C
ADR/RID: 9, III
EINECS: 231-674-6
UN: 3077
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H302, H335, H410, H319, H315
P261, P273, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Copper(II) nitrate trihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Glass jar	C/8080/50
500 g	Glass jar	C/8080/53

$Cu(NO_3)_2.3H_2O$
CAS: 10031-43-3
MW: 241.60
Melting point: 114°C
ADR/RID: 5.1, II
EINECS: 221-838-5
UN: 1477
GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1
H272, H315, H319, H302, H400, H410
P210, P301+P312, P273, P302+P352, P280, P305+P351+P338

Assay: >95%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<100 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<100 ppm
Sodium (Na)	<200 ppm		

Copper(I) oxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	C/8840/50

Cu_2O
CAS: 1317-39-1
MW: 143.08
Density at 20°C: 6.0
Boiling point: 1800°C
Melting point: 1232°C
ADR/RID: 9, III
EINECS: 215-270-7
UN: 3077
GHS: Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1
H410, H302
P301+P312, P273

Guaranteed analysis
Identity test ..... : Pass

Copper(II) oxide — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	C/8360/50

CuO
CAS: 1317-38-0
MW: 79.54
Melting point: 1326°C
ADR/RID: 9, III
EINECS: 215-269-1
UN: 3077
GHS: Acute Tox. 4, Aquatic Acute 1
H302, H400
P273, P301+P312

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<500 ppm	Total nitrogen (N)	<0.005 ppm
Lead (Pb)	<200 ppm	Total phosphorus (P)	<100 ppm
Magnesium (Mg)	<50 ppm	Total silicon (Si)	<200 ppm
Potassium (K)	<50 ppm	Total sulphur (S)	<100 ppm
Sodium (Na)	<200 ppm	Zinc (Zn)	<200 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<0.001%
Cadmium (Cd)	<2 ppm	Tin (Sn)	<5 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm
Lithium (Li)	<2 ppm		

Lot analysis on the label

Copper(II) oxide
Technical, powder

packaging		Mfr. No
250 g	Glass jar	C/8200/50
500 g	Glass jar	C/8200/53

CuO
CAS: 1317-38-0
MW: 79.54
Melting point: 1326°C
ADR/RID: 9, III
EINECS: 215-269-1
UN: 3077
GHS: Acute Tox. 4, Aquatic Acute 1
H302, H400
P273, P301+P312

Assay: >98%

Copper(II) oxide
pure, wire form

packaging		Mfr. No
100 g	Plastic jar	C/8320/48
500 g	Plastic jar	C/8320/53

CuO
CAS: 1317-38-0
MW: 79.54
Melting point: 1326°C
ADR/RID: 9, III
EINECS: 215-269-1
UN: 3077
GHS: Acute Tox. 4, Aquatic Acute 1
H302, H400
P273, P301+P312

Guaranteed analysis
Identity test ..... : Pass

Copper(II) sulfate anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	C/8600/50
1 kg	Plastic jar	C/8600/60

$CuSO_4$
CAS: 7758-98-7
MW: 159.61
Density at 20°C: 3.6
Melting point: 200°C
ADR/RID: 6.1, III
EINECS: 231-847-6
UN: 3288
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H319, H302, H315
P280, P302+P352, P273, P301+P312, P305+P351+P338

Assay: >98%

Guaranteed analysis

Iron (Fe)	<1000 ppm	n-Butyl formate	<0.01%
Lead (Pb)	<100 ppm		

Copper(II) sulfate pentahydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	C/8560/50
500 g	Plastic jar	C/8560/53
1 kg	Plastic jar	C/8560/60
3 kg	Plastic jar	C/8560/63
5 kg	Plastic jar	C/8560/65
25 kg	Plastic keg	C/8560/70

$CuSO_4.5H_2O$
CAS: 7758-99-8
MW: 249.68
Melting point: 110°C
ADR/RID: 9, III
UN: 3077
GHS: Acute Tox. 4, Skin Irrit.
2, Eye Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1
H315, H410, H302, H319
P273, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	3.5 to 4	Sodium (Na)	<20 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.001%
Iron (Fe)	<20 ppm	Total nitrogen (N)	<20 ppm
Lead (Pb)	<50 ppm	Total phosphorus (P)	<20 ppm
Magnesium (Mg)	<5 ppm	Total silicon (Si)	<20 ppm
Potassium (K)	<5 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<2 ppm
Arsenic (As)	<2 ppm	Manganese (Mn)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<2 ppm	Titanium (Ti)	<2 ppm
Chromium (Cr)	<2 ppm	Vanadium (V)	<2 ppm
Cobalt (Co)	<2 ppm		

Lot analysis on the label.

Copper(II) sulfate pentahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	C/8520/50
500 g	Plastic jar	C/8520/53
1 kg	Plastic jar	C/8520/60
3 kg	Plastic jar	C/8520/63
5 kg	Plastic jar	C/8520/65

$CuSO_4.5H_2O$
CAS: 7758-99-8
MW: 249.68
Melting point: 110°C
ADR/RID: 9, III
UN: 3077
GHS: Acute Tox. 4, Skin Irrit.
2, Eye Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1
H315, H410, H302, H319
P273, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<100 ppm	n-Butyl formate	<0.005%
Lead (Pb)	<200 ppm	Total phosphorus (P)	<100 ppm
Magnesium (Mg)	<50 ppm	Total silicon (Si)	<100 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<100 ppm

Copper(II) sulfate pentahydrate
Technical

packaging		Mfr. No
500 g	Plastic jar	C/8480/53
1 kg	Plastic jar	C/8480/60
3 kg	Plastic jar	C/8480/63
5 kg	Plastic jar	C/8480/65

$CuSO_4.5H_2O$
CAS: 7758-99-8
MW: 249.68
Melting point: 110°C
ADR/RID: 9, III
UN: 3077
GHS: Acute Tox. 4, Skin Irrit.
2, Eye Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1
H315, H410, H302, H319
P273, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Creatinine
pure

packaging		Mfr. No
25 g	Plastic jar	C/7240/46

$C_4H_7N_3O$
CAS: 60-27-5
MW: 113.12
Melting point: 255°C
Flash point: +290°C
EINECS: 200-466-7

Assay: >98%

o-Cresol
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/7320/PB08

C_7H_8O
CAS: 95-48-7
MW: 108.14
Density at 20°C: 1.04
Boiling point: 191°C
Melting point: 30 to 32°C
Flash point: 81°C
ADR/RID: 6.1, 8, II
EINECS: 202-423-8
UN: 3455
GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H301, H314, H311
P301+P310, P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P310

Guaranteed analysis
Others impurities ..... <2%

m-Cresol
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/7360/PB08
2.5 ℓ	Coated Glass bottle	C/7360/PB17
25 ℓ	Mild steel drum	C/7360/25

C_7H_8O
CAS: 108-39-4
MW: 108.14
Density at 20°C: 1.03
Boiling point: 203°C
Melting point: 8 to 10°C
Flash point: 86°C
ADR/RID: 6.1, 8, II
EINECS: 203-577-9
UN: 2076
GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H311, H314, H301
P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P310

Assay (CG): >98%

Guaranteed analysis
Other isomers ..... <2%

Cresol purple
pure, solution 0.04 %, pH indicator

packaging		Mfr. No
100 mℓ	Glass bottle	C/7450L/05

CAS: 2303-01-7
EINECS: 218-960-6

Cresol red
pure, solid, indicator grade

packaging		Mfr. No
5 g	Glass jar	C/7460/44

$C_{21}H_{18}O_5S$
CAS: 1733-12-6
MW: 382.42
Melting point: 290°C
EINECS: 217-064-2

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

Cresol red
pure, solution 0.02 % pH indicator

packaging		Mfr. No
500 mℓ	Glass bottle	C/7460L/08

Flash point: 32°C
ADR/RID: 3, III
UN: 1170
GHS: Flam. Liq. 3
H226
P210, P280, P303+P361+P353, P403+P235

Guaranteed analysis
pH colour change test ..... : Pass

o-Cresolphthaleindi-(methyliminodi-acetic acid)
pure, metal indicator

packaging		Mfr. No
5 g	Glass jar	C/7440/44

$C_{32}H_{32}N_2O_{12}$
CAS: 2411-89-4
MW: 636.61
Melting point: 181°C
EINECS: 219-318-8

Guaranteed analysis
Complies with standard IR spectrum: Pass

o-Cresolsulfonphthaleindi-(methyl-iminodiacetic acid) sodium salt
pure, Special reagent for metals (Xylenol orange)

packaging		Mfr. No
1 g	Glass jar	C/7480/43
5 g	Glass jar	C/7480/44

$C_{31}H_{31}N_2NaO_{13}S$
CAS: 1611-35-4
MW: 694.65
Melting point: 222°C
EINECS: 216-553-8

Guaranteed analysis
Complies with standard IR spectrum: Pass

18-Crown-6-ether (1.4,7.10.13.16-hexaoxacyclooctadecane) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Glass jar	C/7551/45

$C_{12}H_{24}O_6$
CAS: 17455-13-9
MW: 264.32
Melting point: 36 to 40°C
Flash point: >110°C
EINECS: 241-473-5
GHS: Acute Tox. 4, Eye Irrit. 2
H332, H319, H302
P301+P312, P304+P340, P280, P305+P351+P338

Assay (CG): > 98%

Guaranteed analysis
Complies with standard IR spectrum: Pass

Cupferron — Certified AR
for analysis

packaging		Mfr. No
100 g	Glass jar	C/7720/48

$C_6H_9N_3O_2$
CAS: 135-20-6
MW: 155.16
Melting point: 153 to 163°C
ADR/RID: 6.1, III
EINECS: 205-183-2
UN: 2811
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H350, H315
P201, P308+P313, P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Extinction at 281 nm (E 1%/1cm) : >515 Residue after ignition ..... <0.05%

Stabilized with ammonium carbonate. Suitable for precipitation of iron.

Curcumin
pure, crystalline

packaging		Mfr. No
1 g	Vial	C/8850/43

$C_{21}H_{20}O_6$
CAS: 458-37-7
MW: 368.39
Melting point: 183°C
EINECS: 207-280-5
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

2.5-Cyclohexadiene-1.4-dione
See p-Benzoquinone (dried) , page 56

Cyclohexane NEW PACK. — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	C/8936/15
2.5 ℓ	Glass bottle	C/8936/17
2.5 ℓ	Coated Glass bottle	C/8936/PB17
10 ℓ	Returnable Drum	C/8936/10RSS
25 ℓ	Returnable Drum	C/8936/25RSS
30 ℓ	Returnable Drum	C/8936/30RSS

C_6H_{12}
CAS: 110-82-7
MW: 84.16
Density at 20°C: 0.770
Boiling point: 81°C
Melting point: 6.5°C
Flash point: -18°C
ADR/RID: 3, II
EINECS: 203-806-2
UN: 1145
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H336, H304, H315, H410
P261, P301+P310, P273, P304+P340, P302+P352, P210

Assay (CG): >99.8%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0002 meq/g Residue after evaporation ..... <2 ppm
Water ..... <0.01%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.3 A.U.	230 nm	<0.02 A.U.
210 nm	<0.2 A.U.	240 nm	<0.005 A.U.
220 nm	<0.1 A.U.	250 nm	<0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Cyclohexane — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	C/8933/15
2.5 ℓ	Glass bottle	C/8933/17

C_6H_{12}
CAS: 110-82-7
MW: 84.16
Density at 20°C: 0.770
Boiling point: 81°C
Melting point: 6.5°C
Flash point: -18°C
ADR/RID: 3, II
EINECS: 203-806-2

UN: 1145
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H336, H304, H315, H410
P261, P301+P310, P273, P304+P340, P302+P352, P210

Guaranteed analysis

Water	<0.02%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachlo-réoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile: (1) 50°C, 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Cyclohexane NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/8920/PB08
2.5 ℓ	Glass bottle	C/8920/17
2.5 ℓ	Coated Glass bottle	C/8920/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	C/8920/21
5 ℓ	Fluorinated HDPE square Drum	C/8920/FP21
25 ℓ	Metal drum	C/8920/25

C_6H_{12}
CAS: 110-82-7
MW: 84.16
Density at 20°C: 0.770
Boiling point: 81°C
Melting point: 6.5°C
Flash point: -18°C
ADR/RID: 3, II
EINECS: 203-806-2

UN: 1145
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H336, H304, H315, H410
P261, P301+P310, P273, P304+P340, P302+P352, P210

Assay (CG): >99%

Guaranteed analysis

Colour	<20 APHA	Magnesium (Mg)	<1 ppm
Water	<0.05%	Potassium (K)	<2 ppm
Residue after evaporation	<50 ppm	Sodium (Na)	<5 ppm
Calcium (Ca)	<2 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<5 ppm		

Cyclohexane NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	C/8921/15
2.5 ℓ	Glass bottle	C/8921/17
2.5 ℓ	Coated Glass bottle	C/8921/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	C/8921/21
25 ℓ	Metal drum	C/8921/25
200 ℓ	Metal drum	C/8921/27

C_6H_{12}
CAS: 110-82-7
MW: 84.16
Density at 20°C: 0.770
Boiling point: 81°C
Melting point: 6.5°C
Flash point: -18°C
ADR/RID: 3, II
EINECS: 203-806-2

UN: 1145
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H336, H304, H315, H410
P261, P301+P310, P273, P304+P340, P302+P352, P210

Assay (CG): >99.8%

Guaranteed analysis

Colour	<10 APHA	Sodium (Na)	<1 ppm
Water	<0.01%	Total phosphorus (P)	<0.1 ppm
Residue after evaporation	<10 ppm	Total silicon (Si)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Zinc (Zn)	<0.2 ppm
Copper (Cu)	<0.02 ppm	Benzene	<0.005%
Iron (Fe)	<0.2 ppm	Cyclohexene	<0.005%
Lead (Pb)	<0.05 ppm	Substances darkened by H_2SO_4	<20 APHA
Magnesium (Mg)	<0.1 ppm		
Potassium (K)	<0.2 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

Cyclohexanol
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/9000/PB08
2.5 ℓ	Coated Glass bottle	C/9000/PB17

$C_6H_{12}O$
CAS: 108-93-0
MW: 100.16
Density at 20°C: 0.960
Boiling point: 161°C
Melting point: 23°C
Flash point: 67°C

EINECS: 203-630-6
GHS: Acute Tox. 4, Skin Irrit. 2, STOT SE 3
H315, H302, H335, H332
P310, P304+P340, P261, P301+P312, P302+P352

Assay (CG): >98%

Cyclohexanone — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/9050/PB08
2.5 ℓ	Coated Glass bottle	C/9050/PB17

$C_6H_{10}O$
CAS: 108-94-1
MW: 98.15
Density at 20°C: 0.947
Boiling point: 155°C
Melting point: -47°C
Flash point: 43°C

ADR/RID: 3, III
EINECS: 203-631-1
UN: 1915
GHS: Flam. Liq. 3, Acute Tox. 4
H226, H332
P280, P302+P350, P304+P340, P210

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.003 meq/g	Lead (Pb)	<0.1 ppm
Colour	<10 APHA	Total phosphorus (P)	<2 ppm
Water	<0.2%	Total sulphur (S)	<5 ppm
Copper (Cu)	<0.05 ppm	Cyclohexanol	<0.2%
Iron (Fe)	<0.5 ppm	Cyclohexane	<0.01%

Lot analysis on the label.

Cyclohexanone NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	C/9040/PB08
2.5 ℓ	Coated Glass bottle	C/9040/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	C/9040/21
25 ℓ	Metal drum	C/9040/25

$C_6H_{10}O$
CAS: 108-94-1
MW: 98.15
Density at 20°C: 0.947
Boiling point: 155°C
Melting point: -47°C
Flash point: 43°C

ADR/RID: 3, III
EINECS: 203-631-1
UN: 1915
GHS: Flam. Liq. 3, Acute Tox. 4
H226, H332
P280, P302+P350, P304+P340, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.03 meq/g	Potassium (K)	<2 ppm
Colour	<20 APHA	Sodium (Na)	<50 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<10 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<1 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<1 ppm
Magnesium (Mg)	<1 ppm		

Cyclohexene — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 mℓ	Glass bottle	C/9080/07
500 mℓ	Glass bottle	C/9080/08

C_6H_{10}
CAS: 110-83-8
MW: 82.15
Density at 20°C: 0.810
Boiling point: 83°C
Melting point: -104°C
Flash point: -20°C
ADR/RID: 3, II

EINECS: 203-807-8
UN: 2256
GHS: Flam. Liq. 2, Acute Tox. 4, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H312, H302, H411
P280, P302+P352, P301+P310, P331, P210, P240

Assay (CG): >99%

L-Cysteine
pure

packaging		Mfr. No
25 g	Plastic jar	C/9150/46

$C_3H_7NO_2S$
CAS: 52-90-4
MW: 121.16
Melting point: 220°C
EINECS: 200-158-2
GHS: Acute Tox. 4, Skin Irrit.

2, Eye Irrit. 2, STOT SE 3
H302, H319, H315, H335
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Specific rotation	6.5° to 8°	Iron (Fe)	<10 ppm
Residue after ignition	<0.1%	Lead (Pb)	<10 ppm

L-Cysteine hydrochloride monohydrate
pure

packaging		Mfr. No
100 g	Plastic jar	C/9152/48

$C_3H_7NO_2S.HCl.H_2O$
CAS: 7048-04-6
MW: 175.63
Melting point: 175 to 177.8°C
EINECS: 200-157-7

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P305+P351+P338

Assay: >98.5%

Guaranteed analysis

Specific rotation	5.5° to 7°	Iron (Fe)	<30 ppm
Residue after ignition	<0.1%	Lead (Pb)	<10 ppm
Ammonium (NH_4)	<0.03%	Sulfate (SO_4)	<0.02%
Arsenic (As)	<1 ppm		

L-Cystine
pure

packaging		Mfr. No
25 g	Plastic jar	C/9160/46

$C_6H_{12}N_2O_4S_2$
CAS: 56-89-3
MW: 240.29
Melting point: 260 to 261°C
EINECS: 200-296-3
GHS: Acute Tox. 4, Skin Irrit.

2, Eye Irrit. 2, STOT SE 3
H315, H319, H302, H335
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Specific rotation	<-210°	Iron (Fe)	<20 ppm
Residue after ignition	<0.5%	Lead (Pb)	<10 ppm

Dansyl chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
5 g	Plastic jar	D/0008/44

$C_{12}H_{12}ClNO_2S$
CAS: 605-65-2
MW: 269.75
Melting point: 71 to 74°C
ADR/RID: 8, II
EINECS: 210-092-6
UN: 3261

GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H302, H314, EUH029
P301+P330+P331, P280, P305+P351+P338, P310, P402+P404, P301+P312

Assay: >99%

Decahydronaphthalene
Technical

packaging		Mfr. No
2.5 ℓ	Glass bottle	D/0050/17

$C_{10}H_{18}$
CAS: 91-17-8
MW: 138.25
Density at 20°C: 0.890
Boiling point: 187°C
Melting point: -31°C
Flash point: 58°C
ADR/RID: 3, III
EINECS: 202-046-9

UN: 1147
GHS: Flam. Liq. 3, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H226, H319, H331, H335, H315
P304+P340, P261, P302+P352, P280, P305+P351+P338, P210

n-Decane
Technical

packaging		Mfr. No
100 mℓ	Glass bottle	D/0020/05
500 mℓ	Glass bottle	D/0020/08

$C_{10}H_{22}$
CAS: 124-18-5
MW: 142.29
Density at 20°C: 0.735
Boiling point: 174°C
Melting point: -30°C
Flash point: 46°C

ADR/RID: 3, III
EINECS: 204-686-4
UN: 2247
GHS: Flam. Liq. 3, Asp. Tox. 1
H226, H304, EUH066
P301+P310, P331, P210

Assay (CG): >98%

1-Decanesulfonic acid sodium salt — Certified
for Ion pair chromatography with electrochemical detection

packaging		Mfr. No
5 g	Glass jar	D/0035/44

$C_{10}H_{21}NaO_3S$
CAS: 13419-61-9
MW: 244.31

Melting point: >300°C
EINECS: 236-525-9

Assay: >98%

Guaranteed analysis
Electrochemical test ..... Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.005 M) .. : <0.05 A.U.

Lot analysis on the label.
EC Specification:
Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-Oxidative
Electrode graphite

1-Decanesulfonic acid sodium salt — Certified
for Ion pair chromatography

packaging		Mfr. No
25 g	Glass jar	D/0030/46

$C_{10}H_{21}NaO_3S$
CAS: 13419-61-9
MW: 244.31

Melting point: >300°C
EINECS: 236-525-9

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.005 M) .. : <0.05 A.U.

Lot analysis on the label.

Dekalin
pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	D/0052/17

$C_{10}H_{18}$
CAS: 91-17-8
MW: 138.25
Density at 20°C: 0.890
Boiling point: 187°C
Melting point: -31°C
Flash point: 58°C
ADR/RID: 3, III
EINECS: 202-046-9

UN: 1147
GHS: Flam. Liq. 3, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H226, H319, H331, H335, H315
P304+P340, P261, P302+P352, P280, P305+P351+P338, P210

Assay (CG): >98%

Devarda's alloy
pure, Silylation reagent

packaging		Mfr. No
250 g	Plastic jar	D/0100/50

CAS: 8049-11-4
Density at 20°C: 5.8
Melting point: 550°C
ADR/RID: 4.1, II

UN: 3089
GHS: Flam. Sol. 2
H228
P210, P240, P241, P280

Guaranteed analysis
Identity test ..... : Pass

Dextran 150
pure, M.W. 100.000-200.000

packaging		Mfr. No
100 g	Plastic jar	D/0122/48

CAS: 9004-54-0
EINECS: 232-677-5

Guaranteed analysis
Identity test ..... : Pass

Dextran 70
pure, M.W. 60.000-80.000

packaging		Mfr. No
100 g	Plastic jar	D/0124/48

CAS: 9004-54-0
EINECS: 232-677-5

Guaranteed analysis
Complies with standard IR spectrum: Pass

Dextrin
Technical

packaging		Mfr. No
100 g	Plastic jar	D/0130/48

$C_6H_{10}O_5$
CAS: 9004-53-9
MW: 162.07
EINECS: 232-675-4

Guaranteed analysis
Complies with standard IR spectrum: Pass

Conforming to the IR spectrum of reference.

Dextrose
See D(+)-Glucose anhydrous, page 135

Diacetone alcohol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/0150/08

$C_6H_{12}O_2$
CAS: 123-42-2
MW: 116.16
Density at 20°C: 0.939
Boiling point: 166°C
Melting point: -42.8°C
Flash point: 58°C

ADR/RID: 3, III
EINECS: 204-626-7
UN: 1148
GHS: Eye Irrit. 2
H319
P264, P280, P305+P351+P338, P337+P313

Guaranteed analysis
Water ..... <0.2% Residue after evaporation ..... <200 ppm
Refractive index at 20°C ..... : <1.425

Diacetyl — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	D/0250/05

$C_4H_6O_2$
CAS: 431-03-8
MW: 86.09
Density at 20°C: 0.985
Boiling point: 88°C
Melting point: -4 to-2°C
Flash point: 7°C
ADR/RID: 3, II

EINECS: 207-069-8
UN: 2346
GHS: Flam. Liq. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2
H225, H302, H315, H319, H331
P280, P302+P352, P261, P310, P305+P351+P338, P210

Assay (CG): >98%

1.2-Diaminoethane anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	D/0370/PB08
2.5 ℓ	Coated Glass bottle	D/0370/PB17
25 ℓ	Metal drum	D/0370/25

$C_2H_8N_2$
CAS: 107-15-3
MW: 60.10
Density at 20°C: 0.898
Boiling point: 117 to 118°C
Melting point: 11°C
Flash point: 38°C
ADR/RID: 8, 3, II
EINECS: 203-468-6
UN: 1604

GHS: Flam. Liq. 3, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1
H226, H314, H302, H311, H334, H317
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353, P210

Assay: >98%

1.2-Di(2-aminoethoxy)ethane-N,N,N,N-tetraacetic acid
pure

packaging		Mfr. No
25 g	Plastic jar	D/0755/46

$C_{14}H_{24}N_2O_{10}$
CAS: 67-42-5
MW: 380.35

Melting point: 240 to 245°C
Flash point: >200°C
EINECS: 200-651-2

Assay: >98%

1.6-Diaminohexane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Glass jar	D/0760/46

$C_6H_{16}N_2$
CAS: 124-09-4
MW: 116.21
Boiling point: 204 to 205°C
Melting point: 38 to 41°C
Flash point: 81°C
ADR/RID: 8, III
EINECS: 204-679-6

UN: 2280
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H312, H314, H335, H302
P280, P301+P330+P331, P305+P351+P338, P310, P302+P352, P261

Assay: 99 to 101%

1.6-Diaminohexane
pure, solution 5% in water

packaging		Mfr. No
250 mℓ	Coated Glass bottle	D/0765/PB07

ADR/RID: 8, III
UN: 3267
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P301+P330+P331, P280, P305+P351+P338, P310

L(+)-2.6-Diaminohexanoic acid hydrochloride
See L-Lysine monohydrochloride, page 186

3.7-Diamino-5-phenylphenazinium chloride
See Phenosafranine, page 241

Diastase
pure, from malt, mixed alpha and beta amylase

packaging		Mfr. No
100 g	Plastic jar	D/0800/48

CAS: 9000-92-4
EINECS: 232-567-7
GHS: Resp. Sens. 1

H334
P261, P304+P341, P342+P311

Guaranteed analysis
Activity ..... <4 EU/mg Reducing sugar ..... Pass

1.2-Dibromoethane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	D/1250/PB08

$C_2H_4Br_2$
CAS: 106-93-4
MW: 187.88
Density at 20°C: 2.173
Boiling point: 131 to 132°C
Melting point: 9 to 10°C
Flash point: >104°C
ADR/RID: 6.1, I
EINECS: 203-444-5

UN: 1605
GHS: Carc. 1B, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 2
H319, H315, H350, H411, H311, H331, H335, H301
P280, P302+P350, P308+P313, P304+P340, P261, P273, P305+P351+P338

Assay (CG): >98%

Guaranteed analysis
Residue after evaporation ..... <200 ppm

5',5''-Dibromophenolsulfonphthalein
See Bromophenol red, page 62

3',3''-Dibromothymolsulfonephthalein
See Bromothymol blue, page 62

Di-n-butylamine — Certified
for HPLC

packaging		Mfr. No
250 mℓ	Coated Glass bottle	D/1338/PB07

$C_8H_{19}N$
CAS: 111-92-2
MW: 129.25
Density at 20°C: 0.760
Boiling point: 159°C
Melting point: -62°C
Flash point: 39°C
ADR/RID: 8, 3, II
EINECS: 203-921-8

UN: 2248
GHS: Flam. Liq. 3, Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1
H226, H311, H314, H330, H301
P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P310, P304+P340, P210

Assay (CG): >99%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.02 M) ... : <0.01 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Di-n-butylamine
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	D/1340/PB08

$C_8H_{19}N$
CAS: 111-92-2
MW: 129.25
Density at 20°C: 0.760
Boiling point: 159°C
Melting point: -62°C
Flash point: 39°C
ADR/RID: 8, 3, II
EINECS: 203-921-8

UN: 2248
GHS: Flam. Liq. 3, Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1
H226, H311, H314, H330, H301
P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P310, P304+P340, P210

Assay (CG): >98%

Di-n-butylamine phosphate
for HPLC, solution 1.0 M — Certified

packaging		Mfr. No
100 mℓ	Glass bottle	D/1341/05

$(CH_3(CH_2)_3)_2NH.H_3PO_4$
Density at 20°C: 1.06

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm ..... <0.05 A.U.

Filtered to 0.2 µm.

2.6-Di-tert-butyl-p-cresol
pure

packaging		Mfr. No
500 g	Plastic jar	D/1345/53

$C_{15}H_{24}O$
CAS: 128-37-0
MW: 220.36
Boiling point: 265°C
Melting point: 69 to 71°C
Flash point: 127°C
ADR/RID: 9, III
EINECS: 204-881-4

UN: 3077
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H315, H335, H410, H319, H302
P261, P273, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Di-n-butyl ether
pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	D/1350/17
25 ℓ	Metal drum	D/1350/25
200 ℓ	Metal drum	D/1350/27

$C_8H_{18}O$
CAS: 142-96-1
MW: 130.23
Density at 20°C: 0.768
Boiling point: 141°C
Melting point: -95°C
Flash point: 25°C
ADR/RID: 3, III

EINECS: 205-575-3
UN: 1149
GHS: Flam. Liq. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 3
H226, H319, H412, H335, H315
P261, P273, P302+P352, P280, P305+P351+P338, P210

Assay (CG): >99%

UHPLC
Filtered to 0.1 µm, Fisher Chemical UHPLC gradient grade solvents (Acetonitrile, Methanol and Water) are perfect for those working at high pressure.
See page 309 for more information

Di-n-butyl phthalate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/1500/08
2.5 ℓ	Glass bottle	D/1500/17
200 ℓ	Metal drum	D/1500/27

$C_{16}H_{22}O_4$
CAS: 84-74-2
MW: 278.35
Density at 20°C: 1.043
Boiling point: 340°C
Melting point: -35°C
Flash point: 188°C

ADR/RID: 9, III
EINECS: 201-557-4
UN: 3082
GHS: Repr. 1B, Aquatic Acute 1
H360Df, H400
P201, P308+P313, P273, P304+P340

Assay (CG): >99%

Guaranteed analysis
Acidity ..... <0.003 meq/g Residue after ignition ..... <0.01%

Dichloroacetic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	D/1550/PB05
1 ℓ	Coated Glass bottle	D/1550/PB15

$C_2H_2Cl_2O_2$
CAS: 79-43-6
MW: 128.94
Density at 20°C: 1.56
Boiling point: 194°C
Freezing point: 11 to 13°C
Melting point: 9 to 11°C
Flash point: >112°C
ADR/RID: 8, II

EINECS: 201-207-0
UN: 1764
GHS: Skin Corr. 1A, Aquatic Acute 1
H314, H400
P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P273

Assay: >99%

Guaranteed analysis
Sulfate (SO_4) ..... <0.001%

Suitable for DNA synthesis.

1.2-Dichlorobenzene — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	D/1610/08

$C_6H_4Cl_2$
CAS: 95-50-1
MW: 147.01
Boiling point: 179 to 180°C
Melting point: -15°C
Flash point: 67°C
ADR/RID: 6.1, III
EINECS: 202-425-9
UN: 1591

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H319, H302, H335, H410, H315
P261, P273, P301+P312, P302+P352, P280, P305+P351+P338

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Potassium (K)	<0.2 ppm
Colour	<10 APHA	Sodium (Na)	<1 ppm
Water	<0.02%	Total phosphorus (P)	<0.2 ppm
Residue after evaporation	<20 ppm	Total silicon (Si)	<0.2 ppm
Calcium (Ca)	<1 ppm	Total sulphur (S)	<0.5 ppm
Copper (Cu)	<0.05 ppm	Zinc (Zn)	<0.5 ppm
Iron (Fe)	<0.5 ppm	1.4-Dichlorobenzene	<0.1%
Lead (Pb)	<0.05 ppm	1.3-Dichlorobenzene	<0.1%
Magnesium (Mg)	<0.2 ppm		

Lot analysis on the label.

pH Buffers
NIST Certified Standard Solution & Concentrate
A full range to discover on page 63

1.2-Dichlorobenzene — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	D/1600/15
2.5 ℓ	Glass bottle	D/1600/17
2.5 ℓ	Coated Glass bottle	D/1600/PB17

$C_6H_4Cl_2$
CAS: 95-50-1
MW: 147.01
Density at 20°C: 1.30
Boiling point: 180°C
Melting point: -15°C
Flash point: 67°C
ADR/RID: 6.1, III
EINECS: 202-425-9

UN: 1591
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H319, H302, H335, H410, H315
P261, P273, P301+P312, P302+P352, P280, P305+P351+P338

Assay (CG): >98%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Magnesium (Mg)	<1 ppm
Colour	<20 APHA	Potassium (K)	<1 ppm
Water	<0.1%	Sodium (Na)	<5 ppm
Residue after evaporation	<200 ppm	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<1 ppm	Other isomers	<2%

1.2-Dichloroethane — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	D/1756/15
2.5 ℓ	Glass bottle	D/1756/17

$C_2H_4Cl_2$
CAS: 107-06-2
MW: 98.96
Density at 20°C: 1.25
Boiling point: 81 to 85°C
Melting point: -35°C
Flash point: 13°C
ADR/RID: 3, 6.1, II
EINECS: 203-458-1

UN: 1184
GHS: Flam. Liq. 2, Carc. 1B, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H350, H319, H335, H315, H302
P308+P313, P261, P302+P352, P280, P305+P351+P338, P210

Assay (CG): >99.5%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0015 meq/g Residue after evaporation ..... <2 ppm
Water ..... <0.02%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
240 nm ..... <0.15 A.U. 260 nm ..... <0.005 A.U.
250 nm ..... <0.05 A.U. 270 nm ..... <0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

1.2-Dichloroethane — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	D/1751/15
2.5 ℓ	Glass bottle	D/1751/17
200 ℓ	Metal drum	D/1751/27

$C_2H_4Cl_2$
CAS: 107-06-2
MW: 98.96
Density at 20°C: 1.25
Boiling point: 81 to 85°C
Melting point: -35°C
Flash point: 13°C
ADR/RID: 3, 6.1, II
EINECS: 203-458-1

UN: 1184
GHS: Flam. Liq. 2, Carc. 1B, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H350, H319, H335, H315, H302
P308+P313, P261, P302+P352, P280, P305+P351+P338, P210

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Magnesium (Mg)	<0.1 ppm
Colour	<10 APHA	Potassium (K)	<0.2 ppm
Water	<0.03%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<20 ppm	Substances reducing $KMnO_4$	<0.001%
Calcium (Ca)	<0.5 ppm	Total phosphorus (P)	<0.2 ppm
Free Chlorine (Cl_2)	<1 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<0.5 ppm
Iron (Fe)	<1 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.02 ppm		

Typical analysis

Aluminium (Al)	<0.02 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.

1.2-Dichloroethane — NEW PACK — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/1750/08
2.5 ℓ	Glass bottle	D/1750/17
5 ℓ	Fluorinated HDPE Plastic bottle	D/1750/21
25 ℓ	Metal drum	D/1750/25

$C_2H_4Cl_2$
CAS: 107-06-2
MW: 98.96
Density at 20°C: 1.25
Boiling point: 81 to 85°C
Melting point: -35°C
Flash point: 13°C
ADR/RID: 3, 6.1, II
EINECS: 203-458-1

UN: 1184
GHS: Flam. Liq. 2, Carc. 1B, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H350, H319, H335, H315, H302
P308+P313, P261, P302+P352, P280, P305+P351+P338, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Iron (Fe)	<2 ppm
Colour	<20 APHA	Lead (Pb)	<1 ppm
Water	<0.1%	Magnesium (Mg)	<0.5 ppm
Residue after evaporation	<50 ppm	Potassium (K)	<1 ppm
Free Chlorine (Cl_2)	<10 ppm	Sodium (Na)	<2 ppm
Substances reducing $KMnO_4$	<0.01%	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<2 ppm	Total silicon (Si)	<0.2 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<2 ppm
		Zinc (Zn)	<1 ppm

Dichloro (R) fluorescein
Technical

packaging		Mfr. No
5 g	Glass jar	D/1820/44

$C_{20}H_{10}Cl_2O_5$
CAS: 76-54-0
MW: 401.20
Density at 20°C: 0.790
Melting point: 280°C
EINECS: 200-968-6

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Optima LC/MS
Fisher Chemical OPTIMA® LC/MS solvents, blends, additives and modifiers have set the standard of excellence for consistent, reproducible performance in the mobile phase of LC/MS.
Find out more on page 308

Dichloromethane unstabilised NEW PACK. Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	D/1857/15
2.5 ℓ	Glass bottle	D/1857/17
2.5 ℓ	Coated Glass bottle	D/1857/PB17
10 ℓ	Returnable Drum	D/1857/10RSS
25 ℓ	Returnable Drum	D/1857/25RSS
30 ℓ	Returnable Drum	D/1857/30RSS

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Residue after evaporation	<2 ppm
Water	<0.02%	Free Chlorine (Cl_2)	<5 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

240 nm	<0.2 A.U.	270 nm	<0.005 A.U.
250 nm	<0.02 A.U.	280 nm	<0.005 A.U.
260 nm	<0.005 A.U.	Wavelength at 1 A.U.	: >0 nM

Lot analysis on the label.
Filtered to 0.2 µm.

Dichloromethane stabilised with amylene NEW PACK. Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	D/1856/15
2.5 ℓ	Glass bottle	D/1856/17
2.5 ℓ	Coated Glass bottle	D/1856/PB17
5 ℓ	Aluminium can	D/1856/21
10 ℓ	Returnable Drum	D/1856/10RSS
25 ℓ	Returnable Drum	D/1856/25RSS
30 ℓ	Returnable Drum	D/1856/30RSS

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Residue after evaporation	<2 ppm
Water	<0.02%	Free Chlorine (Cl_2)	<5 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

233 nm	<1 A.U.	270 nm	<0.005 A.U.
240 nm	<0.2 A.U.	280 nm	<0.005 A.U.
250 nm	<0.02 A.U.	Wavelength at 1 A.U.	: <233 nM
260 nm	<0.005 A.U.		

Lot analysis on the label.
Filtered to 0.2 µm.

Dichloromethane stabilised with methanol Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	D/1859/15
2.5 ℓ	Glass bottle	D/1859/17

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Residue after evaporation	<2 ppm
Water	<0.02%	Free Chlorine (Cl_2)	<5 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

240 nm	<0.2 A.U.	270 nm	<0.005 A.U.
250 nm	<0.02 A.U.	280 nm	<0.005 A.U.
260 nm	<0.005 A.U.		

Lot analysis on the label.
Filtered to 0.2 µm.

Dichloromethane stabilised with amylene Certified
for Gel Permeation Chromatography (GPC)

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	D/1861/PB17

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Guaranteed analysis

Colour	<5 APHA	Residue after evaporation	<2 ppm
Water	<0.02%		

Dichloromethane stabilised with amylene Primar
for trace metal analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	D/1855/17

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Manganese (Mn)	<0.005 ppm
Colour	<5 APHA	Molybdenum (Mo)	<0.005 ppm
Water	<0.01%	Nickel (Ni)	<0.005 ppm
Residue after evaporation	<2 ppm	Potassium (K)	<0.05 ppm
Chloroform stabilized with amylene	< 0.002%	Propan--1-ol	<0.005 ppm
		Sodium (Na)	<0.2 ppm
Free Chlorine (Cl_2)	<100 ppm	Strontium (Sr)	<0.005 ppm
Aluminium (Al)	<0.02 ppm	Titanium (Ti)	<0.005 ppm
Barium (Ba)	<0.005 ppm	Total phosphorus (P)	<0.02 ppm
Cadmium (Cd)	<0.005 ppm	Total silicon (Si)	<0.02 ppm
Calcium (Ca)	<0.05 ppm	Total sulphur (S)	<0.1 ppm
Chromium (Cr)	<0.005 ppm	Vanadium (V)	<0.005 ppm
Cobalt (Co)	<0.005 ppm	Zinc (Zn)	<0.01 ppm
Copper (Cu)	<0.01 ppm	Substances darkened	
Iron (Fe)	<0.05 ppm	by H_2SO_4	<5 APHA
Lead (Pb)	<0.005 ppm	Carbon tetrachloride	<0.002%
Lithium (Li)	<0.005 ppm	1.1-Dichloroethane	<0.002%
Magnesium (Mg)	<0.02 ppm		

Dichloromethane stabilised with amylene Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	D/1853/15
2.5 ℓ	Glass bottle	D/1853/17

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Guaranteed analysis

Water	<0.02%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachlo-réoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile:
(1) 50°C for 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Dichloromethane stabilised with amylene
for nucleotide and peptide synthesis

packaging		Mfr. No
1 ℓ	Glass bottle	D/1858/15
2.5 ℓ	Glass bottle	D/1858/17
2.5 ℓ	Coated Glass bottle	D/1858/PB17

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Residue after evaporation	<2 ppm
Water	<0.01%	Free Chlorine (Cl_2)	<5 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

240 nm	<0.1 A.U.	260 nm	<0.005 A.U.
250 nm	<0.01 A.U.	270 nm	<0.005 A.U.

Dichloromethane stabilised with amylene
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	D/1854/PB15

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Guaranteed analysis

Water	<0.01%	Residue after evaporation	<2 ppm

Dichloromethane stabilised with amylene NEW PACK. Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	D/1852/15
1 ℓ	Coated Glass bottle	D/1852/PB15
2.5 ℓ	Glass bottle	D/1852/17
2.5 ℓ	Coated Glass bottle	D/1852/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	D/1852/21
10 ℓ	Metal can	D/1852/24
25 ℓ	Metal drum	D/1852/25
200 ℓ	Metal drum	D/1852/27

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0003 meq/g	Iron (Fe)	<0.1 ppm
Colour	<5 APHA	Lead (Pb)	<0.05 ppm
Water	<0.02%	Magnesium (Mg)	<0.05 ppm
Residue after evaporation	<10 ppm	Potassium (K)	<0.5 ppm
Substances darkened		Sodium (Na)	<0.5 ppm
by (H_2SO_4)	<5 APHA	Total phosphorus (P)	<0.2 ppm
Chloroform stabilized with amylene	<0.01 %	Total silicon (Si)	<0.05 ppm
		Total sulphur (S)	<0.5 ppm
Calcium (Ca)	<0.5 ppm	Zinc (Zn)	<0.1 ppm
Free Chlorine (Cl_2)	<0.3 ppm	Carbon tetrachloride	<0.01%
Copper (Cu)	<0.02 ppm	1.1-Dichloroethane	<0.005%

Typical analysis

Aluminium (Al)	<0.2 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.

Dichloromethane stabilised with amylene NEW PACK. SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/1850/08
1 ℓ	Glass bottle	D/1850/15
1 ℓ	Metal can	D/1850/MC15
2.5 ℓ	Glass bottle	D/1850/17
2.5 ℓ	Coated Glass bottle	D/1850/PB17
5 ℓ	HDPE Plastic bottle	D/1850/21
5 ℓ	HDPE Plastic bottle	D/1850/PC21
25 ℓ	Metal drum	D/1850/25
200 ℓ	Metal drum	D/1850/27

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
GHS: Carc. 2
H351
P281

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Lead (Pb)	<1 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.2 ppm
Water	<0.05%	Potassium (K)	<2 ppm
Residue after evaporation	<500 ppm	Sodium (Na)	<2 ppm
Substances darkened		Total phosphorus (P)	<1 ppm
by (H_2SO_4)	<25 APHA	Total silicon (Si)	<0.2 ppm
Calcium (Ca)	<2 ppm	Total sulphur (S)	<2 ppm
Copper (Cu)	<1 ppm	Zinc (Zn)	<0.5 ppm
Iron (Fe)	<2 ppm		

Dichloromethane stabilised with ethanol NEW SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
5 ℓ	Fluorinated HDPE Plastic bottle	D/1860/PC21

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
Density at 20°C: 1.325
Boiling point: 39 to 40°C
Melting point: -97°C

ADR/RID: 6.1, III
EINECS: 200-838-9
UN: 1593
H351
P281

Assay (CG): > 99%

Guaranteed analysis

Water	<0.05%	Residue after evaporation	<500 ppm

Diethanolamine SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/2050/08
2.5 ℓ	Glass bottle	D/2050/17

$C_4H_{11}NO_2$
CAS: 111-42-2
MW: 105.14
Density at 20°C: 1.096
Boiling point: 268°C
Melting point: 27 to 30°C
Flash point: 179°C
ADR/RID: 8, III

EINECS: 203-868-0
UN: 3259
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT RE 2
H318, H302, H373, H315
P280, P305+P351+P338, P310, P260, P301+P312, P302+P352

Assay (CG): >99%

Guaranteed analysis

Colour	<20 APHA	Potassium (K)	<20 ppm
Water	<0.5%	Sodium (Na)	<50 ppm
Calcium (Ca)	<20 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<20 ppm
Magnesium (Mg)	<5 ppm		

Diethylamine Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	D/2110/08
2.5 ℓ	Glass bottle	D/2110/17

$C_4H_{11}N$
CAS: 109-89-7
MW: 73.14
Density at 20°C: 0.710
Boiling point: 55 to 58°C
Melting point: -50°C
Flash point: -23°C
ADR/RID: 3, 8, II

EINECS: 203-716-3
UN: 1154
GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1
H225, H314, H332, H302, H311
P280, P305+P351+P338, P210, P260, P302+P352, P310

Assay (CG): >99.5%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.2 ppm
Residue after evaporation	<100 ppm	Sodium (Na)	<1 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<0.2 ppm
Copper (Cu)	<0.05 ppm	Total silicon (Si)	<0.05 ppm
Iron (Fe)	<0.5 ppm	Total sulphur (S)	<0.5 ppm
Lead (Pb)	<0.05 ppm	Zinc (Zn)	<0.5 ppm
Magnesium (Mg)	<0.5 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.05 ppm
Barium (Ba)	<0.05 ppm	Molybdenum (Mo)	<0.05 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.05 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.05 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.05 ppm

Lot analysis on the label.

Diethylamine SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/2100/08
2.5 ℓ	Glass bottle	D/2100/17

$C_4H_{11}N$
CAS: 109-89-7
MW: 73.14
Density at 20°C: 0.710
Boiling point: 55 to 58°C
Melting point: -50°C
Flash point: -23°C
ADR/RID: 3, 8, II

EINECS: 203-716-3
UN: 1154
GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1
H225, H314, H332, H302, H311
P280, P305+P351+P338, P210, P260, P302+P352, P310

Assay (CG): >99%

Guaranteed analysis

Colour	<20 APHA	Potassium (K)	<5 ppm
Residue after evaporation	<500 ppm	Sodium (Na)	<10 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<2 ppm		

Diethylammonium diethyldithiocarbamate
pure

packaging		Mfr. No
100 g	Plastic jar	D/2250/48

$C_5H_{11}NS_2.C_4H_{11}N$
CAS: 1518-58-7
MW: 222.42
Melting point: 8185°C
EINECS: 216-175-3

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P280, P302+P352, P305+P351+P338, P304+P341

Guaranteed analysis

Complies with standard IR spectrum: Pass

Diethylene glycol Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	D/2951/08
2.5 ℓ	Glass bottle	D/2951/17

$C_4H_{10}O_3$
CAS: 111-46-6
MW: 106.12
Density at 20°C: 1.11
Boiling point: 245°C
Melting point: -10°C

Flash point: 143°C
EINECS: 203-872-2
GHS: Acute Tox. 4, STOT RE 2
H302, H373
P280, P301+P310

Assay (CG): >99.5%

Guaranteed analysis

Colour	<10 APHA	Magnesium (Mg)	<1 ppm
Water	<0.2%	Potassium (K)	<1 ppm
Residue after ignition	<0.01%	Sodium (Na)	<5 ppm
Calcium (Ca)	<2 ppm	Total phosphorus (P)	<0.5 ppm
Copper (Cu)	<0.5 ppm	Total silicon (Si)	<0.1 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<1 ppm
Lead (Pb)	<0.5 ppm	Zinc (Zn)	<0.5 ppm

Lot analysis on the label.

Diethylene glycol SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/2950/08
2.5 ℓ	Glass bottle	D/2950/17
25 ℓ	HDPE Plastic container	D/2950/25

$C_4H_{10}O_3$
CAS: 111-46-6
MW: 106.12
Density at 20°C: 1.11
Boiling point: 245°C
Melting point: -10°C

Flash point: 143°C
EINECS: 203-872-2
GHS: Acute Tox. 4, STOT RE 2
H302, H373
P280, P301+P310

Assay (CG): >99%

Guaranteed analysis

Colour	<30 APHA	Potassium (K)	<5 ppm
Water	<0.5%	Sodium (Na)	<20 ppm
Calcium (Ca)	<10 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<1 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<5 ppm	Residue after ignition	<0.05%

Diethylene glycol monoethyl ether
pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	E/1300/17

$C_6H_{14}O_3$
CAS: 111-90-0
MW: 134.18
Density at 20°C: 0.990
Boiling point: 197°C
Melting point: -80°C

Flash point: 94°C
EINECS: 203-919-7
GHS: Acute Tox. 4, Eye Irrit. 2
H319, H302
P301+P312, P280, P305+P351+P338

Guaranteed analysis

Water	<0.05%

Diethylenetriaminepenta-acetic acid sodium salt
pure, solution about 40% w/w

packaging		Mfr. No
500 mℓ	Glass bottle	D/2350/08

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P302+P352, P304+P341, P305+P351+P338, P261

Diethyl ether stabilised with ethanol NEW PACK. Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	D/2506/15
2.5 ℓ	Glass bottle	D/2506/17
2.5 ℓ	Coated Glass bottle	D/2506/PB17

$C_4H_{10}O$
CAS: 60-29-7
MW: 74.12
Density at 20°C: 0.714
Boiling point: 34.6°C
Melting point: -116°C
Flash point: -45°C
ADR/RID: 3, I

EINECS: 200-467-2
UN: 1155
GHS: Flam. Liq. 1, Acute Tox. 4, STOT SE 3
H224, H336, H302, EUH019, EUH066
P261, P233, P301+P312, P210, P240, P243, P403+P235

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Residue after evaporation	<2 ppm
Water	<0.02%		

Absorbance specification

Max. Absorbance (1cm cell v HPLC water)

205 nm	<1 A.U.	250 nm	<0.05 A.U.
210 nm	<0.3 A.U.	260 nm	<0.025 A.U.
220 nm	<0.2 A.U.	270 nm	<0.01 A.U.
230 nm	<0.125 A.U.	280 nm	<0.005 A.U.
240 nm	<0.075 A.U.	Wavelength at 1 A.U.	: <205 nM

Lot analysis on the label.
Filtered to 0.2 µm.

Diethyl ether Primar
for trace metal analysis, stabilised with copper gauze

packaging		Mfr. No
2.5 ℓ	Glass bottle	D/2455/17

$C_4H_{10}O$
CAS: 60-29-7
MW: 74.12
Density at 20°C: 0.714
Boiling point: 34.6°C
Melting point: -116°C
Flash point: -45°C
ADR/RID: 3, I

EINECS: 200-467-2
UN: 1155
GHS: Flam. Liq. 1, Acute Tox. 4, STOT SE 3
H224, H336, H302, EUH019, EUH066
P261, P233, P301+P312, P210, P240, P243, P403+P235

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Molybdenum (Mo)	<0.005 ppm
Colour	<5 APHA	Nickel (Ni)	<0.005 ppm
Water	<0.01%	Potassium (K)	<0.05 ppm
Residue after evaporation	<2 ppm	Propan--1-ol	<0.005 ppm
Acetone	<0.002%	Sodium (Na)	<0.2 ppm
Aluminium (Al)	<0.02 ppm	Strontium (Sr)	<0.005 ppm
Barium (Ba)	<0.005 ppm	Titanium (Ti)	<0.005 ppm
Cadmium (Cd)	<0.005 ppm	Total phosphorus (P)	<0.02 ppm
Calcium (Ca)	<0.05 ppm	Total silicon (Si)	<0.02 ppm
Chromium (Cr)	<0.005 ppm	Total sulphur (S)	<0.1 ppm
Cobalt (Co)	<0.005 ppm	Vanadium (V)	<0.005 ppm
Copper (Cu)	<0.01 ppm	Zinc (Zn)	<0.01 ppm
Iron (Fe)	<0.05 ppm	Substances darkened	
Lead (Pb)	<0.005 ppm	by H_2SO_4	<5 APHA
Lithium (Li)	<0.005 ppm	Ethanol 90 % v/v	<0.002%
Magnesium (Mg)	<0.02 ppm	Ether peroxide	<1 ppm
Manganese (Mn)	<0.005 ppm	Methanol	<0.005%

Diethyl ether Distol
for residue and pesticide analysis, stabilised with copper gauze

packaging		Mfr. No
1 ℓ	Glass bottle	D/2503/15
2.5 ℓ	Glass bottle	D/2503/17

$C_4H_{10}O$
CAS: 60-29-7
MW: 74.12
Density at 20°C: 0.714
Boiling point: 34.6°C
Melting point: -116°C
Flash point: -45°C
ADR/RID: 3, I

EINECS: 200-467-2
UN: 1155
GHS: Flam. Liq. 1, Acute Tox. 4, STOT SE 3
H224, H336, H302, EUH019, EUH066
P261, P233, P301+P312, P210, P240, P243, P403+P235

Guaranteed analysis

Water	<0.02%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

Diethyl ether stabilised with ethanol NEW PACK.
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Glass bottle	D/2502/15
2.5 ℓ	Glass bottle	D/2502/17

$C_4H_{10}O$
CAS: 60-29-7
MW: 74.12
Density at 20°C: 0.714
Boiling point: 34.6°C
Melting point: -116°C
Flash point: -45°C
ADR/RID: 3, I

EINECS: 200-467-2
UN: 1155
GHS: Flam. Liq. 1, Acute Tox. 4, STOT SE 3
H224, H336, H302, EUH019, EUH066
P261, P233, P301+P312, P210, P240, P243, P403+P235

Guaranteed analysis

Water	<0.01%	Peroxide	<0.00005%
Residue after evaporation	<2 ppm		

Diethyl ether stabilised with BHT NEW PACK. Certified AR, Eur.Ph.
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	D/2450/PB08
1 ℓ	Glass bottle	D/2450/15
1 ℓ	Coated Glass bottle	D/2450/PB15
2.5 ℓ	Glass bottle	D/2450/17
2.5 ℓ	Coated Glass bottle	D/2450/PB17
5 ℓ	Mild steel drum	D/2450/MS21
25 ℓ	Metal drum	D/2450/25
200 ℓ	Metal drum	D/2450/27

$C_4H_{10}O$
CAS: 60-29-7
MW: 74.12
Density at 20°C: 0.714
Boiling point: 34.6°C
Melting point: -116°C
Flash point: -45°C
ADR/RID: 3, I

EINECS: 200-467-2
UN: 1155
GHS: Flam. Liq. 1, Acute Tox. 4, STOT SE 3
H224, H336, H302, EUH019, EUH066
P261, P233, P301+P312, P210, P240, P243, P403+P235

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Substances reducing $KMnO_4$	<0.001%
Colour	<5 APHA	Total phosphorus (P)	<0.1 ppm
Water	<0.03%	Total silicon (Si)	<0.05 ppm
Residue after evaporation	<10 ppm	Total sulphur (S)	<0.2 ppm
Carbonyl compounds	: <0.001%	Zinc (Zn)	<0.05 ppm
Calcium (Ca)	<0.2 ppm	Acetone	<0.002%
Copper (Cu)	<0.05 ppm	Ethanol 90 % v/v	<0.01%
Iron (Fe)	<0.1 ppm	Ether peroxide	<1 ppm
Lead (Pb)	<0.05 ppm	Methanol	<0.01%
Magnesium (Mg)	<0.05 ppm	Substances darkened by H_2SO_4	<10 APHA
Potassium (K)	<0.5 ppm		
Sodium (Na)	<0.5 ppm		

Typical analysis

Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.05 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.

Diethyl ether stabilised with BHT NEW PACK. SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	D/2400/PB08
2.5 ℓ	Glass bottle	D/2400/17
2.5 ℓ	Coated Glass bottle	D/2400/PB17
5 ℓ	Mild steel drum	D/2400/MS21
25 ℓ	Metal drum	D/2400/25
200 ℓ	Metal drum	D/2400/27

$C_4H_{10}O$
CAS: 60-29-7
MW: 74.12
Density at 20°C: 0.714
Boiling point: 34.6°C
Melting point: -116°C
Flash point: -45°C
ADR/RID: 3, I

EINECS: 200-467-2
UN: 1155
GHS: Flam. Liq. 1, Acute Tox. 4, STOT SE 3
H224, H336, H302, EUH019, EUH066
P261, P233, P301+P312, P210, P240, P243, P403+P235

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Lead (Pb)	<1 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.2%	Potassium (K)	<2 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<5 ppm
Substances reducing $KMnO_4$	<0.005%	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<1 ppm
		Ether peroxide	<10 ppm

Diethyl ether stabilised with pyrogallol
pure, for synthesis

packaging		Mfr. No
500 mℓ	Glass bottle	D/2500/08
1 ℓ	Glass bottle	D/2500/15
2.5 ℓ	Glass bottle	D/2500/17
2.5 ℓ	Coated Glass bottle	D/2500/PB17

$C_4H_{10}O$
CAS: 60-29-7
MW: 74.12
Density at 20°C: 0.714
Boiling point: 34.6°C
Melting point: -116°C
Flash point: -45°C
ADR/RID: 3, I

EINECS: 200-467-2
UN: 1155
GHS: Flam. Liq. 1, Acute Tox. 4, STOT SE 3
H224, H336, H302, EUH019, EUH066
P261, P233, P301+P312, P210, P240, P243, P403+P235

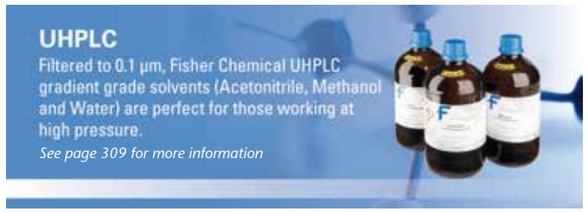
Guaranteed analysis

Water	<0.02%	Peroxide	<0.00005%
Residue after evaporation	<20 ppm		

1.2-Dihydroxyanthraquinone
See Alizarin, page 27

(3.4-Dihydroxy-2-anthraquinonyl)methylimino-diacetic acid dihydrate
See 3-Aminomethylalizarin-NN-diacetic acid, page 32

1.3-Dihydroxybenzene
See Resorcinol, page 269



1.2-Dihydroxybenzene-3.5-disulfonic acid, disodium salt
pure, Metal indicator (Tiron) for Iron and Titanium.

packaging		Mfr. No
25 g	Plastic jar	D/3000/46

$(OH)_2C_6H_2(SO_3Na)_2.H_2O$
CAS: 149-45-1
MW: 332.22
Melting point: >300°C
EINECS: 205-741-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

1.8-Dihydroxynaphthalene-3.6-disulfonic acid, disodium salt dihydrate
See Chromotropic acid sodium salt dihydrate formaldehyde determination, page 90

di-(2-Hydroxyphenylimino)ethane
pure, for calcium determination

packaging		Mfr. No
10 g	Plastic jar	D/3100/45

$C_{14}H_{12}N_2O_2$
CAS: 1149-16-2
MW: 240.26
Melting point: 201 to 205°C
EINECS: 214-560-0

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

L(+)-Dihydroxysuccinic acid
See (+)-Tartaric acid, page 341

Di-iodomethane SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 mℓ	Glass bottle	D/3200/04

CH_2I_2
CAS: 75-11-6
MW: 267.84
Density at 20°C: 3.32
Boiling point: 181°C
Melting point: 6°C
Flash point: >110°C
ADR/RID: 6.1, III
EINECS: 200-841-5

UN: 2810
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H302, H312, H319, H332, H315, H335
P302+P352, P280, P261, P301+P312, P304+P340, P305+P351+P338

Di-iso-propyl ether stabilised with BHT NEW PACK. Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	D/5002/15
2.5 ℓ	Glass bottle	D/5002/17
5 ℓ	Fluorinated HDPE Plastic bottle	D/5002/21
25 ℓ	Metal drum	D/5002/25

$C_6H_{14}O$
CAS: 108-20-3
MW: 102.18
Density at 20°C: 0.720
Boiling point: 68°C
Melting point: -85.5°C
Flash point: -29°C

ADR/RID: 3, II
EINECS: 203-560-6
UN: 1159
GHS: Flam. Liq. 2, STOT SE 3
H225, H336, EUH019, EUH066
P261, P233, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.002 meq/g	Magnesium (Mg)	<0.2 ppm
Colour	<10 APHA	Potassium (K)	<0.5 ppm
Water	<0.1%	Sodium (Na)	<1 ppm
Residue after evaporation	<20 ppm	Total phosphorus (P)	<0.05 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<0.2 ppm
Iron (Fe)	<0.1 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.02 ppm	Peroxide	<0.001%

Di-iso-propyl ether stabilised with BHT NEW PACK. SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	D/5000/15
2.5 ℓ	Glass bottle	D/5000/17
2.5 ℓ	Coated Glass bottle	D/5000/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	D/5000/21
5 ℓ	Fluorinated HDPE square Drum	D/5000/FP21

$C_6H_{14}O$
CAS: 108-20-3
MW: 102.18
Density at 20°C: 0.720
Boiling point: 68°C
Melting point: -85.5°C
Flash point: -29°C

ADR/RID: 3, II
EINECS: 203-560-6
UN: 1159
GHS: Flam. Liq. 2, STOT SE 3
H225, H336, EUH019, EUH066
P261, P233, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.002 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<5 ppm
Water	<0.2%	Sodium (Na)	<10 ppm
Residue after evaporation	<100 ppm	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<1 ppm		

Di-iso-propylnaphthalene SLR
extra pure, mixed isomers

packaging		Mfr. No
2.5 ℓ	Glass bottle	D/5010/17

$C_{16}H_{20}$
CAS: 38640-62-9
MW: 212.33

Boiling point: 290 to 299°C
Melting point: -47°C
EINECS: 254-052-6

Dimedone
pure

packaging		Mfr. No
25 g	Plastic jar	D/3220/46

$C_8H_{12}O_2$
CAS: 126-81-8
MW: 140.18

Melting point: 147 to 150°C
EINECS: 204-804-4

Guaranteed analysis
Identity test : Pass

1.2-Dimethoxyethane SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	D/3280/PB08

$C_4H_{10}O_2$
CAS: 110-71-4
MW: 90.12
Density at 20°C: 0.867
Boiling point: 84 to 86°C
Melting point: -69°C
Flash point: -6°C
ADR/RID: 3, II

EINECS: 203-794-9
UN: 2252
GHS: Flam. Liq. 2, Repr. 1B, Acute Tox. 4
H225, H332, H360, EUH019
P201, P308+P313, P233, P304+P340, P210

Assay (CG): >99%

Dimethoxymethane
pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/3400/08

$C_3H_8O_2$
CAS: 109-87-5
MW: 76.09
Density at 20°C: 0.859 to 0.862
Boiling point: 41 to 42°C
Melting point: -105°C
Flash point: -18°C
ADR/RID: 3, II

EINECS: 203-714-2
UN: 1234
GHS: Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H315, H335
P261, P302+P352, P280, P305+P351+P338, P210, P240

N,N-Dimethylacetamide — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	D/3411/08
2.5 ℓ	Glass bottle	D/3411/17
2.5 ℓ	Coated Glass bottle	D/3411/PB17

C_4H_9NO
CAS: 127-19-5
MW: 87.12
Density at 20°C: 0.937
Boiling point: 164 to 166°C
Melting point: -20°C
Flash point: 70°C

ADR/RID: 6.1/III
EINECS: 204-826-4
UN: 2810
GHS: Repr. 1B, Acute Tox. 4
H312, H332, H360D
P280, P201, P308+P313, P304+P340, P302+P352

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.02 meq/g	Magnesium (Mg)	<0.5 ppm
Colour	<10 APHA	Potassium (K)	<1 ppm
Water	<0.1%	Sodium (Na)	<5 ppm
Residue after evaporation	<100 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<2 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<0.5 ppm
Lead (Pb)	<1 ppm		

Lot analysis on the label.

N,N-Dimethylacetamide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/3410/08
2.5 ℓ	Glass bottle	D/3410/17

C_4H_9NO
CAS: 127-19-5
MW: 87.12
Density at 20°C: 0.937
Boiling point: 164 to 166°C
Melting point: -20°C
Flash point: 70°C

ADR/RID: 6.1/III
EINECS: 204-826-4
UN: 2810
GHS: Repr. 1B, Acute Tox. 4
H312, H332, H360D
P280, P201, P308+P313, P304+P340, P302+P352

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.05 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<5 ppm
Water	<0.5%	Sodium (Na)	<20 ppm
Residue after evaporation	<500 ppm	Total phosphorus (P)	<10 ppm
Calcium (Ca)	<10 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<20 ppm
Iron (Fe)	<10 ppm	Zinc (Zn)	<5 ppm
Lead (Pb)	<5 ppm		

Dimethylamine
pure, solution 40% w/v

packaging		Mfr. No
500 mℓ	Glass bottle	D/3450/08

C_2H_7N
CAS: 124-40-3
MW: 45.09
Density at 20°C: 0.890
Boiling point: 54°C
Melting point: -37°C
Flash point: -18°C
ADR/RID: 3, 8, II

EINECS: 204-697-4
UN: 1160
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Corr. 1B
H225, H332, H315
P210, P280, P305+P351+P338, P310

4-Dimethylaminobenzaldehyde — Certified AR
for analysis

packaging		Mfr. No
25 g	Plastic jar	D/3600/46
100 g	Plastic jar	D/3600/48

$C_9H_{11}NO$
CAS: 100-10-7
MW: 149.19
Boiling point: 176 to 177°C
Melting point: 70 to 75°C
Flash point: 164°C

EINECS: 202-819-0
GHS: Acute Tox. 4, Aquatic Chronic 3
H412, H302
P273, P301+P312

Assay: >99%

Guaranteed analysis

Insoluble in alcohol	: <0.01%	Total chloride (Cl)	<0.005%
Calcium (Ca)	<20 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<10 ppm	Insoluble Acids	<0.01%
Potassium (K)	<50 ppm	Bases of indole type	Pass
Sodium (Na)	<100 ppm		

Lot analysis on the label.

4-Dimethylaminobenzaldehyde — SLR
extra pure, Ehrlich's reagent

packaging		Mfr. No
25 g	Plastic jar	D/3550/46
100 g	Plastic jar	D/3550/48

$C_9H_{11}NO$
CAS: 100-10-7
MW: 149.19
Boiling point: 176 to 177°C
Melting point: 70 to 75°C
Flash point: 164°C

EINECS: 202-819-0
GHS: Acute Tox. 4, Aquatic Chronic 3
H412, H302
P273, P301+P312

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<50 ppm

4-Dimethylaminobenzylidenerhodanine
technical

packaging		Mfr. No
5 g	Glass jar	D/3650/44

$C_{12}H_{12}N_2OS_2$
CAS: 536-17-4
MW: 264.37

Melting point: 285 to 288°C
EINECS: 208-625-2

Guaranteed analysis
Complies with standard IR spectrum: Pass

4-[4-(Dimethylamino)phenylazo]benzene-sulfonic acid, sodium salt
See Methyl orange, page 206

2-[4-(Dimethylamino)phenylazo]benzoic acid
See Methyl red, page 207

N,N-Dimethylaniline — Certified AR
for analysis

packaging		Mfr. No
100 mℓ	Coated Glass bottle	D/3802/PB05
500 mℓ	Coated Glass bottle	D/3802/PB08

$C_8H_{11}N$
CAS: 121-69-7
MW: 121.18
Density at 20°C: 0.950
Boiling point: 193 to 194°C
Melting point: 1.5 to 2.5°C
Flash point: 63°C
ADR/RID: 6.1, II

EINECS: 204-493-5
UN: 2253
GHS: Carc. 2, Acute Tox. 3, Aquatic Chronic 2
H411, H311, H351, H331, H301
P280, P312, P302+P350, P304+P340, P301+P310, P273

Assay (CG): >99%

Guaranteed analysis

Insoluble in HCl	: <0.005%	Sodium (Na)	<5 ppm
Calcium (Ca)	<2 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<0.05 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<0.5 ppm
Magnesium (Mg)	<0.5 ppm	Aniline	<0.1%
Potassium (K)	<1 ppm		

1.4-Dimethylbenzene
See p-Xylene, page 371

1.3-Dimethylbenzene
See m-Xylene, page 371

1.2-Dimethylbenzene
See o-Xylene, page 371

5.5-Dimethyl-1.3-cyclohexanedione
See Dimedone, page 111

Dimethyldichlorosilane
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	D/3820/PB05
250 mℓ	Coated Glass bottle	D/3820/PB07

$C_2H_6Cl_2Si$
CAS: 75-78-5
MW: 129.06
Density at 20°C: 1.06
Boiling point: 70°C
Melting point: -76°C
Flash point: -9°C
ADR/RID: 3, 8, II

EINECS: 200-901-0
UN: 1162
GHS: Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H335, H315, H319
P304+P340, P261, P302+P352, P280, P305+P351+P338, P210, P240

Dimethyl digol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	D/3830/PB08

$C_6H_{14}O_3$
CAS: 111-96-6
MW: 134.18
Density at 20°C: 0.937
Boiling point: 162°C
Melting point: -64°C
Flash point: 51°C

ADR/RID: 3, III
EINECS: 203-924-4
UN: 3271
GHS: Flam. Liq. 3, Repr. 1B
H226, H360, EUH019
P201, P308+P313, P233, P210

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Refractive index ..... 1.407 to 1.4085

Dimethylformamide — NEW PACK. — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	D/3846/15
2.5 ℓ	Glass bottle	D/3846/17
2.5 ℓ	Coated Glass bottle	D/3846/PB17
10 ℓ	Returnable Drum	D/3846/10RSS
25 ℓ	Returnable Drum	D/3846/25RSS
30 ℓ	Returnable Drum	D/3846/30RSS

C_3H_7NO
CAS: 68-12-2
MW: 73.09
Density at 20°C: 0.945
Boiling point: 153°C
Melting point: -61°C
Flash point: 58°C
ADR/RID: 3, III
EINECS: 200-679-5

UN: 2265
GHS: Repr. 1B, Acute Tox. 4, Eye Irrit. 2
H319, H312, H332, H360D, H226
P301+P310, P302+P352, P304+P340, P280, P305+P351+P338, P210

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Residue after evaporation	<10 ppm
Water	<0.05%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

270 nm	<0.5 A.U.	320 nm	<0.02 A.U.
280 nm	<0.15 A.U.	340 nm	<0.015 A.U.
290 nm (sol. aqu. 1%)	: <0.05 A.U.	350 nm	<0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Dimethylformamide — Certified
for Gel Permeation Chromatography (GPC)

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	D/3847/PB17

C_3H_7NO
CAS: 68-12-2
MW: 73.09
Density at 20°C: 0.945
Boiling point: 153°C
Melting point: -61°C
Flash point: 58°C
ADR/RID: 3, III
EINECS: 200-679-5

UN: 2265
GHS: Repr. 1B, Acute Tox. 4, Eye Irrit. 2
H319, H312, H332, H360D, H226
P301+P310, P302+P352, P304+P340, P280, P305+P351+P338, P210

Guaranteed analysis

Colour	<10 APHA	Residue after evaporation	<10 ppm
Water	<0.05%		

Dimethylformamide
for peptide synthesis

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	D/3848/PB17

C_3H_7NO
CAS: 68-12-2
MW: 73.09
Density at 20°C: 0.945
Boiling point: 153°C
Melting point: -61°C
Flash point: 58°C
ADR/RID: 3, III
EINECS: 200-679-5

UN: 2265
GHS: Repr. 1B, Acute Tox. 4, Eye Irrit. 2
H319, H312, H332, H360D, H226
P301+P310, P302+P352, P304+P340, P280, P305+P351+P338, P210

Assay (CG): >99.8%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0003 meq/g
Dimethylamine ..... : <10 ppm
Water ..... <0.03%

packed under nitrogen

Dimethylformamide
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Glass bottle	D/3842/15
2.5 ℓ	Glass bottle	D/3842/17
2.5 ℓ	Coated Glass bottle	D/3842/PB17

C_3H_7NO
CAS: 68-12-2
MW: 73.09
Density at 20°C: 0.945
Boiling point: 153°C
Melting point: -61°C
Flash point: 58°C
ADR/RID: 3, III
EINECS: 200-679-5

UN: 2265
GHS: Repr. 1B, Acute Tox. 4, Eye Irrit. 2
H319, H312, H332, H360D, H226
P301+P310, P302+P352, P304+P340, P280, P305+P351+P338, P210

Guaranteed analysis
Water ..... <0.02%
Residue after evaporation ..... <20 ppm

Dimethylformamide — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	D/3841/08
1 ℓ	Glass bottle	D/3841/15
2.5 ℓ	Glass bottle	D/3841/17
2.5 ℓ	Coated Glass bottle	D/3841/PB17
5 ℓ	HDPE Plastic bottle	D/3841/21
10 ℓ	HDPE Plastic container	D/3841/24
25 ℓ	HDPE Plastic container	D/3841/25
200 ℓ	HDPE Plastic container	D/3841/27

C_3H_7NO
CAS: 68-12-2
MW: 73.09
Density at 20°C: 0.945
Boiling point: 153°C
Melting point: -61°C
Flash point: 58°C
ADR/RID: 3, III
EINECS: 200-679-5

UN: 2265
GHS: Repr. 1B, Acute Tox. 4, Eye Irrit. 2
H319, H312, H332, H360D, H226
P301+P310, P302+P352, P304+P340, P280, P305+P351+P338, P210

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Magnesium (Mg)	<0.5 ppm
Colour	<10 APHA	Potassium (K)	<0.5 ppm
Water	<0.05%	Sodium (Na)	<2 ppm
Residue after evaporation	<20 ppm	Total phosphorus (P)	<0.5 ppm
Calcium (Ca)	<1 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.5 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<1 ppm	Zinc (Zn)	<0.5 ppm
Lead (Pb)	<0.5 ppm		

Typical analysis

Aluminium (Al)	<0.2 ppm	Manganese (Mn)	<0.05 ppm
Barium (Ba)	<0.1 ppm	Molybdenum (Mo)	<0.05 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.05 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.05 ppm
Lithium (Li)	<0.05 ppm	Vanadium (V)	<0.05 ppm

Lot analysis on the label.

Dimethylformamide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/3840/08
1 ℓ	Glass bottle	D/3840/15
2.5 ℓ	Glass bottle	D/3840/17
2.5 ℓ	HDPE Plastic bottle	D/3840/PB17
5 ℓ	HDPE Plastic bottle	D/3840/21
25 ℓ	HDPE Plastic container	D/3840/25
200 ℓ	HDPE Plastic container	D/3840/27

C_3H_7NO
CAS: 68-12-2
MW: 73.09
Density at 20°C: 0.945
Boiling point: 153°C
Melting point: -61°C
Flash point: 58°C
ADR/RID: 3, III
EINECS: 200-679-5

UN: 2265
GHS: Repr. 1B, Acute Tox. 4, Eye Irrit. 2
H319, H312, H332, H360D, H226
P301+P310, P302+P352, P304+P340, P280, P305+P351+P338, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<5 ppm
Water	<0.2%	Sodium (Na)	<50 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm		

Dimethylglyoxime — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	D/3900/48

$C_4H_8N_2O_2$
CAS: 95-45-4
MW: 116.12
Melting point: 239 to 241°C
ADR/RID: 4.1, III
EINECS: 202-420-1

UN: 1325
GHS: Flam. Sol. 2, Acute Tox. 4
H228, H332, H302, H312
P280, P302+P352, P301+P312, P304+P340, P233, P210

Assay: >98%

Guaranteed analysis

Insoluble in alcohol	: <0.01%	Potassium (K)	<20 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm

Lot analysis on the label.

Dimethylglyoxime
pure

packaging		Mfr. No
25 g	Plastic jar	D/3898/46
100 g	Plastic jar	D/3898/48

$C_4H_8N_2O_2$
CAS: 95-45-4
MW: 116.12
Melting point: 239 to 241°C
ADR/RID: 4.1, III
EINECS: 202-420-1

UN: 1325
GHS: Flam. Sol. 2, Acute Tox. 4
H228, H332, H302, H312
P280, P302+P352, P301+P312, P304+P340, P233, P210

Guaranteed analysis
Complies with standard IR spectrum: Pass

Dimethylglyoxime sodium salt
pure

packaging		Mfr. No
250 g	Plastic jar	D/3950/50

$C_4H_6N_2Na_2O_2.8H_2O$
CAS: 75006-64-3
MW: 304.22
EINECS: 262-523-2

GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Dimethyl phthalate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/4050/08
2.5 ℓ	Glass bottle	D/4050/17

$C_{10}H_{10}O_4$
CAS: 131-11-3
MW: 194.19
Density at 20°C: 1.19

Boiling point: 282°C
Melting point: 2°C
Flash point: 150°C
EINECS: 205-011-6

Guaranteed analysis
Acidity ..... <0.001 meq/g
Residue after ignition ..... <0.02%
Water ..... <0.15%

Dimethyl sulfoxide — NEW PACK. — Certified
for HPLC

packaging		Mfr. No
250 mℓ	Coated Glass bottle	D/4125/PB07
500 mℓ	Coated Glass bottle	D/4125/PB08
2.5 ℓ	Coated Glass bottle	D/4125/PB17
10 ℓ	Returnable Drum	D/4125/10RSS
25 ℓ	Returnable Drum	D/4125/25RSS
30 ℓ	Returnable Drum	D/4125/30RSS

$(CH_3)_2SO$
CAS: 67-68-5
MW: 78.13
Density at 20°C: 1.1

Boiling point: 189°C
Melting point: 18.4°C
Flash point: 87°C
EINECS: 200-664-3

Assay (CG): >99%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0008 meq/g
Residue after evaporation ..... <10 ppm
Water ..... <0.05%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

270 nm	<0.5 A.U.	290 nm (sol. aqu. 1%)	: <0.1 A.U.
280 nm	<0.3 A.U.	320 nm	<0.05 A.U.
290 nm	<0.2 A.U.	360 nm	<0.01 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Dimethyl sulfoxide
for Gel Permeation Chromatography (GPC)

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	D/4127/PB17

$(CH_3)_2SO$
CAS: 67-68-5
MW: 78.13
Density at 20°C: 1.1

Boiling point: 189°C
Melting point: 18.4°C
Flash point: 87°C
EINECS: 200-664-3

Guaranteed analysis
Colour ..... <10 APHA
Residue after evaporation ..... <10 ppm
Water ..... <0.05%

Dimethyl sulfoxide
for amino acid analysis

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	D/4128/PB17

$(CH_3)_2SO$
CAS: 67-68-5
MW: 78.13
Density at 20°C: 1.1

Boiling point: 189°C
Melting point: 18.4°C
Flash point: 87°C
EINECS: 200-664-3

Assay (CG): >99.5%

Guaranteed analysis
Colour ..... <5 APHA
Transmission to 550 nm ..... : >98%
Transmission to 400 nm ..... : >98%

Dimethyl sulfoxide — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	D/4121/PB08
1 ℓ	HDPE Plastic bottle	D/4121/PB15
2.5 ℓ	HDPE Plastic bottle	D/4121/PB17
5 ℓ	HDPE Plastic bottle	D/4121/21
10 ℓ	HDPE Plastic container	D/4121/24
25 ℓ	HDPE Plastic container	D/4121/25

$(CH_3)_2SO$
CAS: 67-68-5
MW: 78.13
Density at 20°C: 1.1

Boiling point: 189°C
Melting point: 18.4°C
Flash point: 87°C
EINECS: 200-664-3

Assay (CG): >99.9%

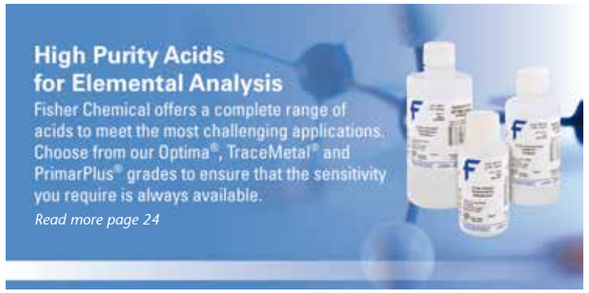
Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Lead (Pb)	<0.02 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.05 ppm
Water	<0.05%	Potassium (K)	<0.5 ppm
Residue after evaporation	<50 ppm	Sodium (Na)	<2 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<0.1 ppm
Copper (Cu)	<0.05 ppm	Total silicon (Si)	<0.02 ppm
Iron (Fe)	<0.5 ppm	Zinc (Zn)	<0.2 ppm

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.1 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.



Dimethyl sulfoxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	D/4120/PB08
2.5 ℓ	HDPE Plastic bottle	D/4120/PB17
5 ℓ	HDPE Plastic bottle	D/4120/21
25 ℓ	HDPE Plastic container	D/4120/25

$(CH_3)_2SO$
CAS: 67-68-5
MW: 78.13
Density at 20°C: 1.1
Boiling point: 189°C
Melting point: 18.4°C
Flash point: 87°C
EINECS: 200-664-3

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<1 ppm
Colour	<20 APHA	Magnesium (Mg)	<1 ppm
Water	<0.2%	Potassium (K)	<2 ppm
Residue after evaporation	<200 ppm	Sodium (Na)	<10 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<1 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<1 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<1 ppm

Dimidium bromide-disulfine — SLR
extra pure, indicator stock solution

packaging		Mfr. No
100 mℓ	Glass bottle	D/4140/05

Density at 20°C: 1.0
Boiling point: 100°C
Melting point: 0°C

Herring DE, Lab.Practice 1962.11.113

Dioctyl sulfosuccinate sodium salt, Aerosol® OT-100
pure

packaging		Mfr. No
500 g	Plastic jar	A/1040/53

$C_{20}H_{37}O_7SNa$
CAS: 577-11-7
MW: 444.55
Melting point: 153 to 157°C
EINECS: 209-406-4
GHS: Skin Irrit. 2, Eye Dam. 1
H315, H318
P261, P301+P312,
P302+P352, P280,
P305+P351+P338

1.4-Dioxane stabilised with BHT — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Coated Glass bottle	D/4556/PB15
2.5 ℓ	Coated Glass bottle	D/4556/PB17

$C_4H_8O_2$
CAS: 123-91-1
MW: 88.11
Density at 20°C: 1.034
Boiling point: 101°C
Melting point: 12°C
Flash point: 12°C
ADR/RID: 3, II
EINECS: 204-661-8
UN: 1165
GHS: Flam. Liq. 2, Carc. 2,
Eye Irrit. 2, STOT SE 3
H225, H319, H351, H335,
EUH019, EUH066
P281, P261, P233, P280,
P305+P351+P338, P210

Assay (CG): >99.5%

Guaranteed analysis

Water	<0.025%	Residue after evaporation	<2 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

218 nm	<1 A.U.	250 nm	<0.075 A.U.
220 nm	<0.4 A.U.	260 nm	<0.05 A.U.
230 nm	<0.22 A.U.	270 nm	<0.03 A.U.
240 nm	<0.125 A.U.	Wavelength at 1 A.U.	: <218 nM

Lot analysis on the label.
Filtered to 0.2 µm.

1.4-Dioxane stabilised with BHT
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	D/4551/PB15
2.5 ℓ	Coated Glass bottle	D/4551/PB17

$C_4H_8O_2$
CAS: 123-91-1
MW: 88.11
Density at 20°C: 1.034
Boiling point: 101°C
Melting point: 12°C
Flash point: 12°C
ADR/RID: 3, II
EINECS: 204-661-8
UN: 1165
GHS: Flam. Liq. 2, Carc. 2,
Eye Irrit. 2, STOT SE 3
H225, H319, H351, H335,
EUH019, EUH066
P281, P261, P233, P280,
P305+P351+P338, P210

Guaranteed analysis

Water	<0.01%	Residue after evaporation	<2 ppm

1.4-Dioxane stabilised with BHT — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	D/4550/08
1 ℓ	Glass bottle	D/4550/15
1 ℓ	Coated Glass bottle	D/4550/PB15
2.5 ℓ	Coated Glass bottle	D/4550/PB17
25 ℓ	Metal drum	D/4550/25

$C_4H_8O_2$
CAS: 123-91-1
MW: 88.11
Density at 20°C: 1.034
Boiling point: 101°C
Melting point: 12°C
Flash point: 12°C
ADR/RID: 3, II
EINECS: 204-661-8
UN: 1165
GHS: Flam. Liq. 2, Carc. 2,
Eye Irrit. 2, STOT SE 3
H225, H319, H351, H335,
EUH019, EUH066
P281, P261, P233, P280,
P305+P351+P338, P210

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.002 meq/g	Magnesium (Mg)	<0.05 ppm
Colour	<10 APHA	Potassium (K)	<0.1 ppm
Water	<0.05%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<20 ppm	Total phosphorus (P)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.02 ppm	Total sulphur (S)	<0.2 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.05 ppm	Acetal	<0.005%

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Selenium (Se)	<0.1 ppm
Cobalt (Co)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Tin (Sn)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Slow moving peroxide content depending on the length of storage
Lot analysis on the label.

1.4-Dioxane stabilised with BHT — NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	D/4500/08
2.5 ℓ	Coated Glass bottle	D/4500/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	D/4500/21
25 ℓ	Metal drum	D/4500/25
200 ℓ	Metal drum	D/4500/27

$C_4H_8O_2$
CAS: 123-91-1
MW: 88.11
Density at 20°C: 1.034
Boiling point: 101°C
Melting point: 12°C
Flash point: 12°C
ADR/RID: 3, II
EINECS: 204-661-8
UN: 1165
GHS: Flam. Liq. 2, Carc. 2,
Eye Irrit. 2, STOT SE 3
H225, H319, H351, H335,
EUH019, EUH066
P281, P261, P233, P280,
P305+P351+P338, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Magnesium (Mg)	<1 ppm
Colour	<20 APHA	Potassium (K)	<1 ppm
Water	<0.2%	Sodium (Na)	<5 ppm
Residue after evaporation	<200 ppm	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<2 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<1 ppm		

Diphenylamine — Certified AR
for analysis

packaging		Mfr. No
100 g	Glass jar	D/4700/48
250 g	Glass jar	D/4700/50

$C_{12}H_{11}N$
CAS: 122-39-4
MW: 169.23
Boiling point: 302°C
Melting point: 52 to 54°C
Flash point: 152°C
ADR/RID: 6.1, III
EINECS: 204-539-4
UN: 2811
GHS: Acute Tox. 3, STOT RE
2, Aquatic Acute 1, Aquatic
Chronic 1
H331, H311, H373, H410, H301
P280, P302+P350,
P304+P340, P301+P312,
P260, P273

Assay (CG): >99%

Guaranteed analysis

Minimum sensitivity to nitrates test	: Pass	Potassium (K)	<20 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<10 ppm
Nitrate (NO_3)	Pass	Aniline	<0.01%

Diphenylamine
pure, redox indicator

packaging		Mfr. No
100 g	Glass jar	D/4600/48

$C_{12}H_{11}N$
CAS: 122-39-4
MW: 169.23
Boiling point: 302°C
Melting point: 52 to 54°C
Flash point: 152°C
ADR/RID: 6.1, III
EINECS: 204-539-4
UN: 2811
GHS: Acute Tox. 3, STOT RE
2, Aquatic Acute 1, Aquatic
Chronic 1
H331, H311, H373, H410, H301
P280, P302+P350,
P304+P340, P301+P312,
P260, P273

1.5-Diphenylcarbazide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	D/4750/46

$C_{13}H_{14}N_4O$
CAS: 140-22-7
MW: 242.28
Melting point: 173 to 176°C
EINECS: 205-403-7
GHS: Acute Tox. 4, Skin Irrit.
2, Eye Irrit. 2, STOT SE 3
H335, H315, H319, H302
P261, P301+P312,
P302+P352, P280,
P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Suitable for the determination of Chromium.

1.5-Diphenylcarbazone — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Glass jar	D/4850/45

$C_{13}H_{12}N_4O$
CAS: 538-62-5
MW: 240.27
Melting point: 153 to 157°C
ADR/RID: 4.1, III
EINECS: 208-698-0
UN: 1325
GHS: Flam. Sol. 2, Acute
Tox. 4, Skin Irrit. 2, Eye Irrit.
2, STOT SE 3
H228, H319, H335, H315, H302
P261, P301+P312,
P302+P352, P280,
P305+P351+P338, P233

Guaranteed analysis
Complies with standard IR spectrum: Pass

Conforming to the IR spectrum of reference.
Reagent for the analysis of mercury.

2.5-Diphenyloxazole
pure, Scintillation counting

packaging		Mfr. No
100 g	Plastic jar	D/4865/48
5 kg	Plastic keg	D/4865/65
25 kg	Plastic keg	D/4865/70

$C_{15}H_{11}NO$
CAS: 92-71-7
MW: 221.26
Density at 20°C: 1.06
Boiling point: 360°C
Melting point: 70 to 72°C
EINECS: 202-181-3
P262

2.2'-Dipyridyl — Certified AR
for analysis

packaging		Mfr. No
5 g	Plastic jar	D/5051/44

$C_{10}H_8N_2$
CAS: 366-18-7
MW: 156.19
Boiling point: 272 to 273°C
Melting point: 69 to 72°C
Flash point: 121°C
ADR/RID: 6.1, II
EINECS: 206-674-4
UN: 2811
GHS: Acute Tox. 3, Skin Irrit.
2, Eye Irrit. 2, STOT SE 3
H335, H312, H319, H315,
H332, H301
P301+P310, P280,
P302+P352, P261,
P304+P340, P305+P351+P338

Assay: >99.5%

Lot analysis on the label.

Dithio-oxamide
pure

packaging		Mfr. No
25 g	Plastic jar	D/5150/46

$(CS.NH_2)_2$
CAS: 79-40-3
MW: 120.20
Melting point: 170°C
EINECS: 201-203-9
GHS: Acute Tox. 4, Skin Irrit.
2, Eye Irrit. 2, STOT SE 3
H302, H315, H335, H319
P261, P301+P312,
P302+P352, P280,
P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Dithiothreitol
for peptide sequencing. Cleland's reagent.

packaging		Mfr. No
1 g	Vial	D/P351/43
5 g	Plastic jar	D/P351/44

$C_4H_{10}O_2S_2$
CAS: 3483-12-3
MW: 154.24
Boiling point: 125 to 130°C
Melting point: 38 to 43°C
Flash point: >110°C
EINECS: 222-468-7

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H302, H335, H319, H315
P261, P301+P312, P302+P352, P280, P305+P351+P338

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
283 nm (sol. aqu. 0.02 M) ... : <0.04 A.U.

Use to disrupt disulfide bridge in order to maximise protein denaturation and facilitate deterging binding.

DMF
See Dimethylformamide, page 113

DMSO
See Dimethyl sulfoxide, page 116

n-Dodecane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	D/5290/05
2.5 ℓ	Glass bottle	D/5290/17

$C_{12}H_{26}$
CAS: 112-40-3
MW: 170.34
Density at 20°C: 0.753
Boiling point: 215 to 217°C
Melting point: -12°C
Flash point: 71°C

ADR/RID: 6.1, III
EINECS: 203-967-9
UN: 2810
GHS: Acute Tox. 4, Asp. Tox. 1
H304, H332, EUH066
P310, P304+P340, P301+P310, P331

Assay (CG): >95%

1-Dodecanesulfonic acid sodium salt — Certified
for Ion pair chromatography for electrochemical detection.

packaging		Mfr. No
5 g	Plastic jar	D/5297/44

$C_{12}H_{25}NaO_3S$
CAS: 2386-53-0
MW: 272.38

Melting point: >300°C
EINECS: 219-200-6

Assay: >98%

Guaranteed analysis
Electrochemical test ..... Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.005 M) : <0.05 A.U.

Lot analysis on the label.
EC Specification:
tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-Oxidative
Electrode graphite

1-Dodecanesulfonic acid sodium salt — Certified
for Ion pair chromatography

packaging		Mfr. No
5 g	Plastic jar	D/5296/44

$C_{12}H_{25}NaO_3S$
CAS: 2386-53-0
MW: 272.38

Melting point: >300°C
EINECS: 219-200-6

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.005 M) : <0.05 A.U.

Lot analysis on the label.

Dodecanoic acid
See Lauric acid, page 177

Dodecanoyl peroxide
See di-Lauroyl peroxide, page 177

Dodecyl Sodium Sulfate
See Sodium dodecyl sulfate, page 290

Dodecyl trimethyl ammonium bromide — Certified
for Ion pair chromatography

packaging		Mfr. No
25 g	Plastic jar	D/5311/46

$C_{15}H_{34}BrN$
CAS: 1119-94-4
MW: 308.35
Melting point: 246°C
EINECS: 214-290-3
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H302, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm ..... <0.05 A.U.

Lot analysis on the label.

DPX mounting medium
For microscopy

packaging		Mfr. No
100 mℓ	Glass bottle	D/5319/05

Flash point: 24°C
ADR/RID: 3, III
UN: 1307
GHS: Flam. Liq. 3, Repr. 1B, Acute Tox. 4, Skin Irrit. 2, Aquatic Acute 1
H226, H312, H332, H315, H400, H360Df
P280, P302+P350, P304+P340, P210, P201, P273

Guaranteed analysis
Identity test ..... : Pass

Dysprosium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLDY22Y
500 mℓ	Plastic bottle	SPPLDY22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

EDTA
See Ethylenediaminetetraacetic acid, page 126

EDTA, disodium salt
See Ethylenediaminetetraacetic acid disodium salt solution, page 127

EDTA, Tris-Borate
See Tris-Borate-EDTA buffer, page 361

EDTA, trisodium salt
See Ethylenediaminetetraacetic acid disodium salt solution, page 127

EGTA
See 1, page 103

Ehrlich's Reagent
See 4-Dimethylaminobenzaldehyde, page 112

1.2-Epoxypropane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	E/0050/PB08
2.5 ℓ	Coated Glass bottle	E/0050/PB17

C_3H_6O
CAS: 75-56-9
MW: 58.08
Density at 20°C: 0.830
Boiling point: 34°C
Melting point: -112°C
Flash point: -37°C
ADR/RID: 3, I
EINECS: 200-879-2
UN: 1280

GHS: Flam. Liq. 1, Carc. 1B, Muta. 1B, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H224, H302, H319, H312, H332, H340, H350, H315, H335
P280, P201, P308+P313, P302+P352, P261, P301+P312, P304+P340, P305+P351+P338, P210, P240, P243, P403+P235

Assay (CG): >99%

Erbium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLER22Y
500 mℓ	Plastic bottle	SPPLER22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Erbium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLER23Y
500 mℓ	Plastic bottle	SPPLER23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Eriochrome black T C.I. 14645
pure, Metal indicator

packaging		Mfr. No
25 g	Glass jar	E/0100/46
100 g	Glass jar	E/0100/48

$C_{20}H_{12}N_3NaO_7S$
CAS: 1787-61-7
MW: 461.38
EINECS: 217-250-3

GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Eriochrome blue-black R C.I. 15705
pure, Metal indicator

packaging		Mfr. No
25 g	Glass jar	E/0200/46

CAS: 2538-85-4
EINECS: 219-810-2
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3

H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Eriochrome cyanine R C.I. 43820
pure, Metal indicator

packaging		Mfr. No
25 g	Glass jar	E/0250/46

$C_{23}H_{15}Na_3O_9S$
CAS: 3564-18-9
MW: 536.39
EINECS: 222-641-7

Guaranteed analysis
Complies with standard IR spectrum: Pass

Eschka's mixture — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	E/0300/53

Guaranteed analysis

Insoluble in HCl	: <0.005%	Potassium (K)	<50 ppm
Calcium (Ca)	<500 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<10 ppm	Total silicon (Si)	<50 ppm
Iron (Fe)	<100 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<50 ppm

Typical analysis

Magnesium oxide	65-67%	Sodium carbonate	33-35%

Guaranteed analysis

Assay (GC)	: >99.8%	Water	<0.3%
Acidity / Alkalinity	<0.0002 meq/g	Residue after evaporation	<10 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<0.6 A.U.	250 nm	<0.05 A.U.
220 nm	<0.3 A.U.	270 nm	<0.025 A.U.
230 nm	<0.125 A.U.	290 nm	<0.015 A.U.

The trade of absolute ethanol is subject to local regulation and additional excise duties apply (only applicable in the UK market) to the following code: E/0665/15, E/0665/17.
Lot analysis on the label.
Filtered to 0.2µm.
Trade in alcohol is regulated, for more information see Sales conditions page.

Ethanal *See Acetaldehyde, page 13*

Ethanediol — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	E/0352/08
2.5 ℓ	Glass bottle	E/0352/17
2.5 ℓ	Coated Glass bottle	E/0352/PB17
25 ℓ	HDPE Plastic container	E/0352/25
200 ℓ	Metal drum	E/0352/27

$C_2H_6O_2$
CAS: 107-21-1
MW: 62.07
Density at 20°C: 1.113
Boiling point: 196 to 198°C
Melting point: -13°C
Flash point: 116°C
EINECS: 203-473-3
GHS: Acute Tox. 4
H302
P280, P301+P310

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Lead (Pb)	<1 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.5 ppm
Water	<0.1%	Potassium (K)	<0.5 ppm
Residue after ignition	<0.003%	Sodium (Na)	<2 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<1 ppm
Free Chlorine (Cl_2)	<0.2 ppm	Total silicon (Si)	<0.2 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<10 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<0.5 ppm

Typical analysis

Aluminium (Al)	<0.2 ppm	Manganese (Mn)	<0.05 ppm
Barium (Ba)	<0.1 ppm	Molybdenum (Mo)	<0.05 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.05 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.05 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.05 ppm

For the glycerol determination.
Lot analysis on the label.

Ethanedionic acid *See Oxalic acid dihydrated, page 222*

Ethanol absolute NEW PACK. — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	E/0665/15
1 ℓ	Glass bottle	E/0665DF/15
2.5 ℓ	Glass bottle	E/0665/17
2.5 ℓ	Glass bottle	E/0665DF/17
10 ℓ	Returnable Drum	E/0665DF/10RS
25 ℓ	Returnable Drum	E/0665DF/25RS
30 ℓ	Returnable Drum	E/0665DF/30RS

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Ethanol absolute — Primar
Trace metal analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	E/0655/17
2.5 ℓ	Glass bottle	E/0655DF/17

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Molybdenum (Mo)	<0.01 ppm
Colour	<10 APHA	Nickel (Ni)	<0.01 ppm
Residue after evaporation	<10 ppm	Potassium (K)	<0.5 ppm
Other organics	: <0.02%	Sodium (Na)	<2 ppm
Substances reducing $KMnO_4$	<0.0005%	Strontium (Sr)	<0.01 ppm
Aluminium (Al)	<0.1 ppm	Titanium (Ti)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Total phosphorus (P)	<0.5 ppm
Cadmium (Cd)	<0.01 ppm	Total silicon (Si)	<0.05 ppm
Calcium (Ca)	<0.5 ppm	Total sulphur (S)	<1 ppm
Chromium (Cr)	<0.01 ppm	Vanadium (V)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Zinc (Zn)	<0.2 ppm
Copper (Cu)	<0.05 ppm	Acetone	<0.001%
Iron (Fe)	<0.2 ppm	Furfuraldehyde	<0.001%
Lead (Pb)	<0.05 ppm	Substances darkened by H_2SO_4	<10 APHA
Lithium (Li)	<0.01 ppm	Propan--2-ol	<0.003%
Magnesium (Mg)	<0.05 ppm	Methanol	<0.002%
Manganese (Mn)	<0.01 ppm		

The trade of absolute ethanol is subject to European excise legislation and the distributor will need a European registered excise authorisation number to purchase the following codes: E/0655DF/17.
The following codes are duty-paid items that are available in the UK market only: E/0655/17.

Lot analysis on the label.

Ethanol absolute
for the determination of 17-ketosteroids

packaging		Mfr. No
500 mℓ	Glass bottle	E/0660/08

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

This is a duty-paid item that is available in the UK market only

Ethanol absolute NEW PACK. — Certified AR, Eur.Ph., BP, USP
for analysis

packaging		Mfr. No
100 mℓ	Glass bottle	E/0650/05
500 mℓ	Glass bottle	E/0650/08
500 mℓ	Glass bottle	E/0650DF/08
1 ℓ	Glass bottle	E/0650/15
1 ℓ	Glass bottle	E/0650DF/15
2.5 ℓ	Glass bottle	E/0650/17
2.5 ℓ	HDPE Plastic bottle	E/0650/PC17
2.5 ℓ	Glass bottle	E/0650DF/17
2.5 ℓ	HDPE Plastic bottle	E/0650DF/C17
2.5 ℓ	Coated Glass bottle	E/0650DF/P17
5 ℓ	Fluorinated HDPE Plastic bottle	E/0650DF/21
10 ℓ	HDPE Plastic container	E/0650DF/24
25 ℓ	Metal drum	E/0650/25
25 ℓ	Metal drum	E/0650DF/25

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis

Assay (GC)	: >99.8%	Iron (Fe)	<0.2 ppm
Acidity (acetic acid)	<0.002%	Lead (Pb)	<0.05 ppm
Acidity / Alkalinity	<0.0001 meq/g	Magnesium (Mg)	<0.05 ppm
Colour	<10 APHA	Potassium (K)	<0.5 ppm
Water	<0.2%	Sodium (Na)	<2 ppm
Residue after evaporation	<10 ppm	Total phosphorus (P)	<0.5 ppm
Substances darkened by (H_2SO_4)	<10 APHA	Total silicon (Si)	<0.05 ppm
Substances reducing $KMnO_4$	<0.0005%	Total sulphur (S)	<1 ppm
Acetone	<0.001%	Zinc (Zn)	<0.2 ppm
Other organics	: <0.02%	Aldehydes	<0.002%
Calcium (Ca)	<0.5 ppm	Furfuraldehyde	<0.001%
Copper (Cu)	<0.05 ppm	Methanol	<0.002%
		Propan--2-ol	<0.003%

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Trade in alcohol is regulated, for more information see Sales conditions page.
The trade of absolute ethanol is subjected to the European excise legislation and the distributor will need an European registered excise authorisation number to the following codes: E/0650DF/08, E/0650DF/15, E/0650DF/17, E/0650DF/C17, E/0650DF/P17, E/0650DF/21, E/0650DF/24, E/0650DF/25.

The trade of absolute ethanol is subject to local regulation and additional excise duties apply (only applicable in the UK market) to the following codes: E/0650/05, E/0650/08, E/0650/15, E/0650/17, E/0650/PC17, E/0650/25.

Lot analysis on the label.

Ethanol absolute NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	E/0600DF/15
2.5 ℓ	Glass bottle	E/0600/17
2.5 ℓ	HDPE Plastic bottle	E/0600/PC17
2.5 ℓ	Glass bottle	E/0600DF/17
2.5 ℓ	HDPE Plastic bottle	E/0600DF/C17
5 ℓ	Fluorinated HDPE Plastic bottle	E/0600DF/21
5 ℓ	Fluorinated HDPE square Drum	E/0600DF/F21
25 ℓ	Metal drum	E/0600DF/25
25 ℓ	HDPE Plastic container	E/0600DF/P25

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis

Assay (GC)	: >99%	reducing $KMnO_4$	<0.001%
Acidity / Alkalinity	<0.005 meq/g	Zinc (Zn)	<2 ppm
Colour	<20 APHA	Copper (Cu)	<1 ppm
Water	<0.5%	Iron (Fe)	<2 ppm
Residue after evaporation	<50 ppm	Lead (Pb)	<1 ppm
Substances reducing $KMnO_4$	<0.001%	Magnesium (Mg)	<2 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<2 ppm
Potassium (K)	<2 ppm	Total silicon (Si)	<1 ppm
Sodium (Na)	<10 ppm	Total sulphur (S)	<5 ppm
Substances		Substances darkened by H_2SO_4	<20 APHA

The trade of absolute ethanol is subjected to the European excise legislation and the distributor will need an European registered excise authorisation number to the following codes: E/0600DF/15, E/0600DF/17, E/0600DF/C17, E/0600DF/21, E/0600DF/F21, E/0600DF/P25.
The trade of absolute ethanol is subject to local regulation and additional excise duties apply (only applicable in the UK market) to the following codes: E/0600/05, E/0600/08, E/0600/17, E/0600/PC17.

Ethanol 95% v/v NEW PACK. — Certified AR, USP
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	E/0550/08
1 ℓ	Glass bottle	E/0550DF/15
2.5 ℓ	Glass bottle	E/0550/17
2.5 ℓ	HDPE Plastic bottle	E/0550/PC17
2.5 ℓ	Glass bottle	E/0550DF/17
5 ℓ	Fluorinated HDPE Plastic bottle	E/0550DF/21
25 ℓ	Metal drum	E/0550DF/25

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Sodium (Na)	<2 ppm
Colour	<10 APHA	Substances reducing $KMnO_4$	<0.0005%
Density at 15.5°C	: 0.812 to 0.816	Total phosphorus (P)	<0.2 ppm
Water insoluble substances test	: Pass	Total silicon (Si)	<0.5 ppm
Residue after evaporation	<10 ppm	Total sulphur (S)	<2 ppm
Acetone	<0.002%	Zinc (Zn)	<0.2 ppm
Amyl alcohol and non volatile carbonisable substances test	: Pass	Furfuraldehyde	<0.001%
Calcium (Ca)	<1 ppm	Methanol	<0.02%
Copper (Cu)	<0.05 ppm	Others impurities	<0.2%
Iron (Fe)	<0.2 ppm	Propan--2-ol	<0.02%
Lead (Pb)	<0.05 ppm	Substances darkened by H_2SO_4	<10 APHA
Magnesium (Mg)	<0.2 ppm		
Potassium (K)	<0.1 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

The trade of absolute ethanol is subjected to the European excise legislation and the distributor will need an European registered excise authorisation number to the following codes: E/0550DF/15, E/0550DF/17, E/0550DF/21, E/0550DF/25 .
The trade of absolute ethanol is subject to local regulation and additional excise duties apply (only applicable in the UK market) to the following codes: E/0550/08, E/0550/17, E/0550/PC17 .
Lot analysis on the label

Ethanol 96% v/v NEW PACK. — Certified AR, Eur.Ph., BP, USP
for analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	E/0555/17
2.5 ℓ	HDPE Plastic bottle	E/0555/PC17
2.5 ℓ	Glass bottle	E/0555DF/17
5 ℓ	Fluorinated HDPE Plastic bottle	E/0555DF/21
25 ℓ	Metal drum	E/0555/25
25 ℓ	Metal drum	E/0555DF/25

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C

ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Potassium (K)	<0.1 ppm
Colour	<10 APHA	Sodium (Na)	<2 ppm
Water insoluble substances test	: Pass	Substances reducing $KMnO_4$	<0.0005%
Residue after evaporation	<10 ppm	Total phosphorus (P)	<0.2 ppm
Substances darkened by (H_2SO_4)	<10 APHA	Total silicon (Si)	<0.05 ppm
Acetone	<0.002%	Zinc (Zn)	<0.2 ppm
Amyl alcohol and non volatile carbonisable substances test	: Pass	Furfuraldehyde	<0.001%
Calcium (Ca)	<1 ppm	Methanol	<0.02%
Copper (Cu)	<0.05 ppm	Others impurities	<0.02%
Iron (Fe)	<0.2 ppm	Propan--2-ol	<0.02%
Lead (Pb)	<0.05 ppm	Substances darkened by H_2SO_4	<10 APHA
Magnesium (Mg)	<0.2 ppm	Total sulphur (S)	<2 ppm

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

The trade of absolute ethanol is subject to local regulation and additional excise duties apply (only applicable in the UK market) to the following codes: E/0555/17, E/0555/PC17, E/0555/25.
Trade in alcohol is regulated, for more information see Sales conditions page. The trade of absolute ethanol is subjected to the European excise legislation and the distributor will need an European registered excise authorisation number to the following codes: E/0555DF/17, E/0555DF/21, E/0555DF/25.
Lot analysis on the label

Ethanol 96 % v/v — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	E/0551/17
2.5 ℓ	HDPE Plastic bottle	E/0551/PC17
2.5 ℓ	Glass bottle	E/0551DF/17
2.5 ℓ	HDPE Plastic bottle	E/0551DF/C17

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C

ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Lead (Pb)	<1 ppm
Colour	<20 APHA	Magnesium (Mg)	<2 ppm
Residue after evaporation	<100 ppm	Potassium (K)	<2 ppm
Substances reducing $KMnO_4$	<0.001%	Sodium (Na)	<10 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<1 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<5 ppm
		Zinc (Zn)	<2 ppm

The trade of absolute ethanol is subject to European excise legislation and the distributor will need an European registered excise authorisation number to purchase the following codes: E/0551DF/17, E/0551DF/C17 .
The following codes are duty-paid items that are available in the UK market only: E/0551/17, E/0551/PC17 .

Ethanol 95% v/v — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	E/0500/08
500 mℓ	Glass bottle	E/0500DF/08
1 ℓ	Glass bottle	E/0500DF/15
2.5 ℓ	Glass bottle	E/0500/17
2.5 ℓ	HDPE Plastic bottle	E/0500/PC17
2.5 ℓ	Glass bottle	E/0500DF/17
2.5 ℓ	HDPE Plastic bottle	E/0500DF/C17
2.5 ℓ	Coated Glass bottle	E/0500DF/P17
5 ℓ	HDPE Plastic bottle	E/0500DF/P21
10 ℓ	HDPE Plastic container	E/0500DF/P24
25 ℓ	Plastic container	E/0500DF/P25

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C

ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Zinc (Zn)	<2 ppm
Colour	<20 APHA	Copper (Cu)	<1 ppm
Residue after evaporation	<100 ppm	Iron (Fe)	<2 ppm
Substances reducing $KMnO_4$	<0.001%	Lead (Pb)	<1 ppm
Calcium (Ca)	<5 ppm	Magnesium (Mg)	<2 ppm
Potassium (K)	<2 ppm	Total phosphorus (P)	<2 ppm
Sodium (Na)	<10 ppm	Total silicon (Si)	<1 ppm
		Total sulphur (S)	<5 ppm

The trade of absolute ethanol is subjected to the European excise legislation and the distributor will need an European registered excise authorisation number to the following codes:E/0500DF/08, E/0500DF/15, E/0500DF/C17, E/0500DF/P17, E/0500DF/P21, E/0500DF/P24, E/0500DF/P25 .
The trade of absolute ethanol is subject to local regulation and additional excise duties apply (only applicable in the UK market) to the following codes: E/0500/08,E/0500/17, E/0500/PC17 .

Ethanol 90 % v/v — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	E/0400/08
2.5 ℓ	Glass bottle	E/0400/17

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114.1°C
Flash point: 16.66°C

ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis

Residue after evaporation	<100 ppm	Methanol	<0.1%

These are duty-paid items that are available in the UK market only

Ethanol, denatured with 2% MEK NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
5 ℓ	Fluorinated HDPE square Drum	E/0580/FP21

C_2H_5OH
CAS: 64-17-5
MW: 46.06
Density at 20°C: 0.790
Boiling point: 78°C
Melting point: -114°C
Flash point: 13 to 17°C

ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2
H225
P210, P240

Assay (CG): >95%

Guaranteed analysis

Density at 20°C	: 0.788 to 0.791	Refractive index at 20°C	: 1.360 to 1.363
Water	<0.3%		

Ethanolamine — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	E/0701/08
2.5 ℓ	Glass bottle	E/0701/17

C_2H_7NO
CAS: 141-43-5
MW: 61.08
Density at 20°C: 1.012
Boiling point: 170°C
Melting point: 10.3°C
Flash point: 85°C
ADR/RID: 8, III

EINECS: 205-483-3
UN: 2491
GHS: Acute Tox. 4, Skin Corr. 1B, STOT SE 3
H335, H314, H302, H332, H312
P280, P305+P351+P338, P261, P308+P313

Assay (CG): >99.5%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.5 ppm
Residue after ignition	<0.005%	Sodium (Na)	<5 ppm
Calcium (Ca)	<2 ppm	Total phosphorus (P)	<0.5 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<0.2 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<1 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<1 ppm
Magnesium (Mg)	<0.5 ppm		

Lot analysis on the label.

Ethanolamine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	E/0700/08
2.5 ℓ	Glass bottle	E/0700/17
2.5 ℓ	Coated Glass bottle	E/0700/PB17
25 ℓ	Metal drum	E/0700/25

C_2H_7NO
CAS: 141-43-5
MW: 61.08
Density at 20°C: 1.012
Boiling point: 170°C
Melting point: 10.3°C
Flash point: 85°C
ADR/RID: 8, III

EINECS: 205-483-3
UN: 2491
GHS: Acute Tox. 4, Skin Corr. 1B, STOT SE 3
H335, H314, H302, H332, H312
P280, P305+P351+P338, P261, P308+P313

Assay (CG): >99%

Guaranteed analysis

Colour	<20 APHA	Sodium (Na)	<20 ppm
Calcium (Ca)	<10 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<1 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<2 ppm	Residue after ignition	<0.02%
Potassium (K)	<2 ppm		

Ethenylbenzene See Styrene, page 333

Ethidium® bromide
for electrophoresis

packaging		Mfr. No
5 g	Glass jar	E/P700/44

$C_{21}H_{20}BrN_3$
CAS: 1239-45-8
MW: 394.30
Melting point: 260 to 262°C
Flash point: >100°C
ADR/RID: 6.1, I

EINECS: 214-984-6
UN: 2811
GHS: Muta. 2, Acute Tox. 2
H341, H330, H302
P310, P281, P304+P340

Assay: > 95%

Fluorescent dye for DNA/RNA in density gradients and electrophoresis gels.

Ethidium® bromide solution
for electrophoresis

packaging		Mfr. No
10 mℓ	Glass bottle	E/P800/03
50 mℓ	Glass bottle	E/P800/10

$C_{21}H_{20}BrN_3$
CAS: 1239-45-8
MW: 394.30
ADR/RID: 6.1, III
EINECS: 214-984-6

UN: 2810
GHS: Muta. 2, Acute Tox. 3
H331, H341
P310, P281, P304+P340

2-Ethoxyethanol — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	E/0751/08

$C_4H_{10}O_3$
CAS: 110-80-5
MW: 90.12
Density at 20°C: 0.930
Boiling point: 135°C
Melting point: -100°C
Flash point: 44°C
ADR/RID: 3, III

EINECS: 203-804-1
UN: 1171
GHS: Flam. Liq. 3, Repr. 1B, Acute Tox. 4
H226, H360FD, H332, H312, H302
P280, P201, P308+P313, P302+P352, P304+P340, P210

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Magnesium (Mg)	<0.2 ppm
Colour	<10 APHA	Potassium (K)	<0.5 ppm
Water	<0.1%	Sodium (Na)	<2 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<0.5 ppm
Calcium (Ca)	<1 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<0.5 ppm	Zinc (Zn)	<1 ppm
Lead (Pb)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label

2-Ethoxyethanol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	E/0750/15
2.5 ℓ	Glass bottle	E/0750/17
25 ℓ	Metal drum	E/0750/25

$C_4H_{10}O_2$
CAS: 110-80-5
MW: 90.12
Density at 20°C: 0.930
Boiling point: 135°C
Melting point: -100°C
Flash point: 44°C
ADR/RID: 3, III

EINECS: 203-804-1
UN: 1171
GHS: Flam. Liq. 3, Repr. 1B, Acute Tox. 4
H226, H360FD, H332, H312, H302
P280, P201, P308+P313, P302+P352, P304+P340, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<2 ppm
Water	<0.2%	Sodium (Na)	<10 ppm
Residue after evaporation	<100 ppm	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm		

2-Ethoxyethyl acetate
pure

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	E/0800/PB17

$C_6H_{12}O_3$
CAS: 111-15-9
MW: 132.16
Density at 20°C: 0.970
Boiling point: 156°C
Melting point: -61°C
Flash point: 51°C
ADR/RID: 3, III
EINECS: 203-839-2

UN: 1172
GHS: Flam. Liq. 3, Repr. 1B, Acute Tox. 4
H226, H312, H360FD, H302, H332
P280, P308+P313, P304+P340, P302+P352, P301+P312, P210

Assay (CG): >98%

Ethyl acetate NEW PACK.
for HPLC — Certified

packaging		Mfr. No
1 ℓ	Glass bottle	E/0906/15
2.5 ℓ	Glass bottle	E/0906/17
2.5 ℓ	Coated Glass bottle	E/0906/PB17
10 ℓ	Returnable Drum	E/0906/10RSS
25 ℓ	Returnable Drum	E/0906/25RSS
30 ℓ	Returnable Drum	E/0906/30RSS

$C_4H_8O_2$
CAS: 141-78-6
MW: 88.11
Density at 20°C: 0.902
Boiling point: 75 to 78°C
Melting point: -83.5°C
Flash point: -4°C
ADR/RID: 3, II

EINECS: 205-500-4
UN: 1173
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0015 meq/g	Residue after evaporation	<2 ppm
Water	<0.03%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

255 nm	: <1 A.U.	280 nm	<0.005 A.U.
260 nm	<0.12 A.U.	Wavelength at 1 A.U.	: <255 nm
270 nm	<0.025 A.U.		

Lot analysis on the label.
Filtered to 0.2 µm.

Ethyl acetate
for HPLC, dried with water content <100pm — Certified

packaging		Mfr. No
2.5 ℓ	Glass bottle	E/0907/17

$C_4H_8O_2$
CAS: 141-78-6
MW: 88.11
Density at 20°C: 0.902
Boiling point: 75 to 78°C
Melting point: -83.5°C
Flash point: -4°C
ADR/RID: 3, II

EINECS: 205-500-4
UN: 1173
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0015 meq/g	Residue after evaporation	<2 ppm
Water	<0.01%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

255 nm	: <1 A.U.	280 nm	<0.005 A.U.
260 nm	<0.12 A.U.	Wavelength at 1 A.U.	: <255 nm
270 nm	<0.025 A.U.		

Lot analysis on the label.
Filtered to 0.2µm.

Ethyl acetate
for residue and pesticide analysis — Distol

packaging		Mfr. No
1 ℓ	Glass bottle	E/0903/15
2.5 ℓ	Glass bottle	E/0903/17

$C_4H_8O_2$
CAS: 141-78-6
MW: 88.11
Density at 20°C: 0.902
Boiling point: 75 to 78°C
Melting point: -83.5°C
Flash point: -4°C
ADR/RID: 3, II

EINECS: 205-500-4
UN: 1173
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Guaranteed analysis

Water	<0.05%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachloréoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile: (1) 50°C, 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Ethyl acetate
for peptide sequencing

packaging		Mfr. No
2.5 ℓ	Glass bottle	E/0908/17

$C_4H_8O_2$
CAS: 141-78-6
MW: 88.11
Density at 20°C: 0.902
Boiling point: 75 to 78°C
Melting point: -83.5°C
Flash point: -4°C
ADR/RID: 3, II

EINECS: 205-500-4
UN: 1173
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Water	<0.03%	Acidity	<0.0015 meq/g
Residue after evaporation	<2 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

256 nm	: <1 A.U.	325 nm	: <0.005 A.U.
275 nm	: <0.025 A.U.		

Ethyl acetate NEW PACK.
for analysis — Certified AR

packaging		Mfr. No
1 ℓ	Glass bottle	E/0900/15
2.5 ℓ	Glass bottle	E/0900/17
2.5 ℓ	Coated Glass bottle	E/0900/PB17
2.5 ℓ	HDPE Plastic bottle	E/0900/PC17
5 ℓ	Fluorinated HDPE Plastic bottle	E/0900/21
5 ℓ	Fluorinated HDPE square Drum	E/0900/FP21
25 ℓ	Metal drum	E/0900/25
200 ℓ	Metal drum	E/0900/27

$C_4H_8O_2$
CAS: 141-78-6
MW: 88.11
Density at 20°C: 0.902
Boiling point: 75 to 78°C
Melting point: -83.5°C
Flash point: -4°C
ADR/RID: 3, II

EINECS: 205-500-4
UN: 1173
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Substances reducing $KMnO_4$	<0.0005%
Colour	<5 APHA	Total phosphorus (P)	<0.1 ppm
Water	<0.03%	Total silicon (Si)	<0.05 ppm
Residue after evaporation	<10 ppm	Total sulphur (S)	<0.2 ppm
iso-Propyl acetate	: <0.05%	Zinc (Zn)	<0.1 ppm
n-Propyle acetate	: <0.05%	Ethanol 90 % v/v	<0.1%
Copper (Cu)	<0.02 ppm	Ethyl propanoate	<0.1%
Iron (Fe)	<0.1 ppm	Methanol	<0.02%
Lead (Pb)	<0.02 ppm	Methyl acetate	<0.02%
Magnesium (Mg)	<0.05 ppm	Substances darkened by H_2SO_4	<10 APHA
Potassium (K)	<0.5 ppm		
Sodium (Na)	<0.5 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Calcium (Ca)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Vanadium (V)	<0.01 ppm
Lithium (Li)	<0.01 ppm		

Lot analysis on the label.

Ethyl acetate NEW PACK.
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 mℓ	Glass bottle	E/0850/08
1 ℓ	Glass bottle	E/0850/15
1 ℓ	Metal can	E/0850/MC15
2.5 ℓ	Glass bottle	E/0850/17
2.5 ℓ	Coated Glass bottle	E/0850/PB17
2.5 ℓ	HDPE Plastic bottle	E/0850/PC17
5 ℓ	Fluorinated HDPE Plastic bottle	E/0850/21
5 ℓ	Fluorinated HDPE square Drum	E/0850/FP21
10 ℓ	Metal can	E/0850/24
25 ℓ	Metal drum	E/0850/25
200 ℓ	Metal drum	E/0850/27

$C_4H_8O_2$
CAS: 141-78-6
MW: 88.11
Density at 20°C: 0.902
Boiling point: 75 to 78°C
Melting point: -83.5°C
Flash point: -4°C
ADR/RID: 3, II

EINECS: 205-500-4
UN: 1173
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Magnesium (Mg)	<1 ppm
Colour	<10 APHA	Potassium (K)	<1 ppm
Water	<0.05%	Sodium (Na)	<2 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<1 ppm
Substances reducing $KMnO_4$	<0.001%	Total silicon (Si)	<1 ppm
Calcium (Ca)	<2 ppm	Total sulphur (S)	<1 ppm
Copper (Cu)	<1 ppm	Zinc (Zn)	<1 ppm
Iron (Fe)	<2 ppm	Substances darkened by H_2SO_4	<20 APHA
Lead (Pb)	<1 ppm		

Ethyl acetoacetate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 mℓ	Glass bottle	E/0950/08
2.5 ℓ	Glass bottle	E/0950/17

$C_6H_{10}O_3$
CAS: 141-97-9
MW: 130.15
Density at 20°C: 1.03

Boiling point: 180°C
Melting point: -45°C
Flash point: 70°C
EINECS: 205-516-1

Assay (CG): >99%

Ethylamine
pure, solution 70% w/w in water

packaging		Mfr. No
500 mℓ	Glass bottle	E/1000/08

C_2H_7N
CAS: 75-04-7
MW: 45.90
Density at 20°C: 0.800
Boiling point: 39°C
Melting point: -81.1°C
Flash point: -17°C
ADR/RID: 3, 8, II
EINECS: 200-834-7
UN: 2270

GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1, STOT SE 3
H225, H314, H332, H335, H302, H311
P301+P330+P331, P280, P305+P351+P338, P310, P261, P301+P312, P304+P340, P210, P240

Ethyl benzoate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 mℓ	Glass bottle	E/1100/08

$C_9H_{10}O_2$
CAS: 93-89-0
MW: 150.18
Density at 20°C: 1.045
Boiling point: 212°C
Melting point: -34°C

Flash point: 84°C
EINECS: 202-284-3
GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280, P305+P351+P338

Assay (CG): >99%

Ethyl bromide
See Bromoethane, page 61

Ethyl cinnamate
technical

packaging		Mfr. No
25 mℓ	Glass bottle	E/1250/04

$C_{11}H_{12}O_2$
CAS: 103-36-6
MW: 176.22

Density at 20°C: 1.045
EINECS: 203-104-6

Ethyl digol
See Diethylene glycol monoethyl ether, page 109

Ethylenecarboxamide
See Acrylamide, page 26

Ethylenediaminetetraacetic acid — Certified AR
for analysis, EDTA

packaging		Mfr. No
100 g	Plastic jar	D/0452/48
250 g	Plastic jar	D/0452/50

$C_{10}H_{16}N_2O_8$
CAS: 60-00-4
MW: 292.25
Density at 20°C: 0.86
Melting point: 220°C
Flash point: >100°C

EINECS: 200-449-4
GHS: Acute Tox. 4, Eye Irrit. 2
H319, H332
P264, P280,
P305+P351+P338, P337+P313

Assay: >99%

Guaranteed analysis

Loss on drying	<0.1%	Sodium (Na)	<200 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.02%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<50 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Ethylenediaminetetraacetic acid — SLR
extra pure, EDTA

packaging		Mfr. No
250 g	Plastic jar	D/0450/50
500 g	Plastic jar	D/0450/53
10 kg	Plastic keg	D/0450/68

$C_{10}H_{16}N_2O_8$
CAS: 60-00-4
MW: 292.25
Density at 20°C: 0.86
Melting point: 220°C
Flash point: >100°C

EINECS: 200-449-4
GHS: Acute Tox. 4, Eye Irrit. 2
H319, H332
P264, P280,
P305+P351+P338, P337+P313

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.1%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<100 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<100 ppm

Ethylenediaminetetraacetic acid diammonium salt — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	D/0500/48
25 kg	Plastic keg	D/0500/70

$(CH_2.N(CH_2.COOH).CH_2.COONH_4)_2$+aq.
CAS: 20824-56-0

MW: 326.18
Melting point: 215 to 217°C
EINECS: 244-063-4

Guaranteed analysis
Complies with standard IR spectrum: Pass

Ethylenediaminetetraacetic acid disodium salt dihydrate
for electrophoresis

packaging		Mfr. No
100 g	Plastic jar	E/P140/48
500 g	Plastic jar	E/P140/53
5 kg	Plastic keg	E/P140/65

$C_{10}H_{14}N_2Na_2O_8.2H_2O$
CAS: 6381-92-6
MW: 372.23
Melting point: 252°C

GHS: Acute Tox. 4
H332
P304+P312

Assay: > 99.5%

Ethylenediaminetetraacetic acid disodium salt dihydrate
Certified AR, Eur.Ph., BP
for analysis

packaging		Mfr. No
100 g	Plastic jar	D/0700/48
250 g	Plastic jar	D/0700/50
500 g	Plastic jar	D/0700/53
1 kg	Plastic jar	D/0700/60
5 kg	Plastic keg	D/0700/65
10 kg	Plastic keg	D/0700/68
25 kg	Fibre Keg	D/0700/70

$C_{10}H_{14}N_2Na_2O_8.2H_2O$
CAS: 6381-92-6
MW: 372.23
Melting point: 252°C

EINECS: 205-358-3
GHS: Acute Tox. 4
H332
P304+P312

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	4 to 5	Potassium (K)	<10 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.005%
Copper (Cu)	<2 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Silver (Ag)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Ethylenediaminetetraacetic acid disodium salt dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	D/0650/48
250 g	Plastic jar	D/0650/50
500 g	Plastic jar	D/0650/53
1 kg	Plastic jar	D/0650/60
5 kg	Plastic keg	D/0650/65
10 kg	Plastic keg	D/0650/68
25 kg	Fibre Keg	D/0650/70

$C_{10}H_{14}N_2Na_2O_8.2H_2O$
CAS: 6381-92-6
MW: 372.23
Melting point: 252°C

EINECS: 205-358-3
GHS: Acute Tox. 4
H332
P304+P312

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<50 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<1000 ppm

Ethylenediaminetetraacetic acid disodium salt solution 0.2N — Certified
HPLC for electrochemical detection

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/3710/17

$C_{10}H_{14}N_2Na_2O_8$
CAS: 139-33-3
MW: 336.21

Melting point: 237 to 245°C
EINECS: 205-358-3

Guaranteed analysis
Electrochemical test ..... Pass

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

Ethylenediaminetetraacetic acid disodium salt solution 0.01M (0.02N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/3720/PB15
2.5 ℓ	HDPE Plastic bottle	J/3720/17
10 ℓ	Bag in box	J/3720/24

$C_{10}H_{14}N_2Na_2O_8$
CAS: 139-33-3
MW: 336.21

Melting point: 237 to 245°C
EINECS: 205-358-3

Manufactured to a tolerance of ± 0.3%.
See the full range of Standard Volumetric solution page 323.

Ethylenediaminetetraacetic acid disodium salt solution 0.01M (0.02N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/3720C/05
6	Ampoule	J/3720C/90

$C_{10}H_{14}N_2Na_2O_8$
CAS: 139-33-3
MW: 336.21

Melting point: 237 to 245°C
EINECS: 205-358-3

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Ethylenediaminetetraacetic acid disodium salt solution 0.1M (0.2N)
Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/3700/15
2.5 ℓ	HDPE Plastic bottle	J/3700/17
10 ℓ	Bag in box	J/3700/24

$C_{10}H_{14}N_2Na_2O_8$
CAS: 139-33-3
MW: 336.21

Melting point: 237 to 245°C
EINECS: 205-358-3

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Ethylenediaminetetraacetic acid trisodium salt solution 0.1M (0.2N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/3700C/05
6	Ampoule	J/3700C/90

$C_{10}H_{14}N_2Na_3O_8$
CAS: 150-38-9
MW: 358.19

Density at 20°C: 1.0
Melting point: 237 to 245°C
EINECS: 205-758-8

Each ampoule makes 500 mℓ of solution.
See the full range of Standard Volumetric solution page 323.

Ethylenediaminetetraacetic acid dipotassium salt dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	D/0600/53
25 kg	Fibre Keg	D/0600/70

$C_{10}H_{14}K_2N_2O_8.2H_2O$
CAS: 25102-12-9
MW: 404.47
Melting point: 272°C
EINECS: 217-895-0

GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H319, H315, H335
P261, P302+P352, P280,
P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<1000 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<100 ppm
Sodium (Na)	<2000 ppm		

Ethylenediaminetetraacetic acid tetrasodium salt — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	D/0750/50

$C_{10}H_{12}N_2O_8.4Na$
CAS: 13235-36-4
MW: 452.24
Melting point: >300°C
Flash point: >100°C
EINECS: 200-573-9

GHS: Acute Tox. 4, Eye Dam. 1
H302, H318, H332
P301+P330+P331, P280,
P305+P351+P338, P310,
P301+P312

Assay: >98%

Guaranteed analysis

pH (aqueous solution 5%)	10 to 11.5	Lead (Pb)	<20 ppm
Iron (Fe)	<20 ppm	n-Butyl formate	<0.1%

Ethylene dibromide
See 1, page 103

Ethylene dichloride
See 1, page 105

(Ethylenedinitrilo)tetraacetic acid, disodium salt
See Ethylenediaminetetraacetic acid disodium salt solution, page 127

Ethanediol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	E/0350/PB08
1 ℓ	Glass bottle	E/0350/15
2.5 ℓ	Glass bottle	E/0350/17
2.5 ℓ	HDPE Plastic bottle	E/0350/PB17
25 ℓ	HDPE Plastic container	E/0350/25

$C_2H_6O_2$
CAS: 107-21-1
MW: 62.07
Density at 20°C: 1.113
Boiling point: 196 to 198°C
Melting point: -13°C

Flash point: 116°C
EINECS: 203-473-3
GHS: Acute Tox. 4
H302
P280, P301+P310

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<2 ppm
Water	<0.5%	Sodium (Na)	<10 ppm
Residue after ignition	<0.01%	Total phosphorus (P)	<5 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<10 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<5 ppm		

Ethylene glycol ethyl ether
See 2-Ethoxyethanol, page 123

Ethylene glycol monobutyl ether
See 2-n-Butoxyethanol, page 69

Ethylene glycol monoethyl ether acetate
See 2-Ethoxyethyl acetate, page 124

Ethylene glycol monomethyl ether
See 2-Methoxyethanol, page 203

Ethyl iodide
See Iodoethane, page 161

Ethyl lactate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	E/1400/17

$CH_3CH(OH).COO.C_2H_5$
CAS: 97-64-3
MW: 118.14
Density at 25°C: 1.03
Boiling point: 154°C
Melting point: -23°C
Flash point: 46°C
ADR/RID: 3, III
EINECS: 202-598-0

UN: 1192
GHS: Flam. Liq. 3, Eye Dam. 1, STOT SE 3
H226, H318, H335
P261, P280, P303+P361+P353, P305+P351+P338, P304+P340, P210

Assay (CG): >98%

Guaranteed analysis
Residue after evaporation ..... <100 ppm

Ethyl methyl ketone — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	E/1455/15
1 ℓ	Coated Glass bottle	E/1455/PB15
2.5 ℓ	Glass bottle	E/1455/17
2.5 ℓ	Coated Glass bottle	E/1455/PB17
25 ℓ	Metal drum	E/1455/25
200 ℓ	Metal drum	E/1455/27

C_4H_8O
CAS: 78-93-3
MW: 72.11
Density at 20°C: 0.806
Boiling point: 80°C
Melting point: -87°C
Flash point: -7°C
ADR/RID: 3, II

EINECS: 201-159-0
UN: 1193
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Sodium (Na)	<0.5 ppm
Colour	<20 APHA	Total phosphorus (P)	<0.1 ppm
Water	<0.1%	Total silicon (Si)	<0.02 ppm
Residue after evaporation	<10 ppm	Total sulphur (S)	<0.2 ppm
Butanedione	: <1000 ppm	Zinc (Zn)	<0.1 ppm
2-Methylpropan-2-ol	: <0.1%	Acetone	<0.2%
Calcium (Ca)	<0.2 ppm	Butan -2-ol	<0.02%
Copper (Cu)	<0.02 ppm	Butyl acetate	<0.05%
Iron (Fe)	<0.1 ppm	Di-n-butyl ether	<0.05%
Lead (Pb)	<0.02 ppm	Ethyl acetate	<0.05%
Magnesium (Mg)	<0.05 ppm	Methanol	<0.05%
Potassium (K)	<0.5 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.

Ethyl methyl ketone NEW PACK — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	E/1450/08
1 ℓ	Glass bottle	E/1450/15
2.5 ℓ	Glass bottle	E/1450/17
2.5 ℓ	Coated Glass bottle	E/1450/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	E/1450/21
25 ℓ	Metal drum	E/1450/25
200 ℓ	Metal drum	E/1450/27

C_4H_8O
CAS: 78-93-3
MW: 72.11
Density at 20°C: 0.806
Boiling point: 80°C
Melting point: -87°C
Flash point: -7°C
ADR/RID: 3, II

EINECS: 201-159-0
UN: 1193
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Magnesium (Mg)	<1 ppm
Colour	<20 APHA	Potassium (K)	<1 ppm
Water	<0.2%	Sodium (Na)	<2 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<2 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<1 ppm
Lead (Pb)	<2 ppm		

Ethyl oleate
pure, for saponification

packaging		Mfr. No
500 mℓ	Glass bottle	E/1460/08

$C_{20}H_{38}O_2$
CAS: 111-62-6
MW: 310.52

Boiling point: 190 to 210°C
Flash point: 160°C
EINECS: 203-889-5

Assay: 98 to 103%

Guaranteed analysis
Iodine value ..... 75 to 84

Europium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLEU22Y
500 mℓ	Plastic bottle	SPPLEU22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Fast Green FCF C.I. 42053
pure, indicator grade

packaging		Mfr. No
25 g	Glass jar	F/P025/46

$C_{37}H_{34}N_2Na_2O_{10}S_3$
CAS: 2353-45-9
MW: 808.85
Melting point: 290°C

EINECS: 219-091-5
GHS: Muta. 2
H341
P281

Guaranteed analysis
Complies with standard IR spectrum: Pass

Fehling's solution No. 1
pure, to B.P. 1988

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/3800/15
2.5 ℓ	HDPE Plastic bottle	J/3800/17

ADR/RID: 9, III
UN: 3082
GHS: Aquatic Chronic 2

H411
P273

Assay: 6.85 to 7.05%

Fehling's solution 1 and 2 are to be mixed in equal volumes before use.
1 mℓ is equivalent to 5 mg glucose.

Fehling's solution No. 2
pure, to B.P. 1988

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/3900/15
2.5 ℓ	HDPE Plastic bottle	J/3900/17

Density at 20°C: 1.24
ADR/RID: 8, II
UN: 1719
GHS: Skin Corr. 1A, Eye Dam. 1

H314
P301+P330+P331, P280, P305+P351+P338, P310

Fehling's solution 1 and 2 are to be mixed in equal volumes before use.
1 mℓ is equivalent to 5 mg glucose.

Fehling's solution No. 1
pure, to Lane and Eynon modification

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/3910/PB15
2.5 ℓ	Glass bottle	J/3910/17

ADR/RID: 9, III
UN: 3082
GHS: Aquatic Chronic 2

H411
P273

Assay: 6.85 to 7.1%

Fehling's solution 1 and 2 are to be mixed in equal volumes before use.

Fehling's solution No. 2
pure, to Lane and Eynon modification

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/3920/PB15
2.5 ℓ	HDPE Plastic bottle	J/3920/17

Density at 20°C: 1.24
ADR/RID: 8, II
UN: 1719
GHS: Skin Corr. 1A, Eye Dam. 1

H314
P301+P330+P331, P280, P305+P351+P338, P310

Fehling's solution 1 and 2 are to be mixed in equal volumes before use.

Ficodox® mixed COD reagent
pure

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	J/4000/PB17

Boiling point: 280°C
ADR/RID: 8, II
UN: 1830
GHS: Carc. 1B, Muta. 1B, Skin Corr. 1A

H314, H340, H350
P280, P301+P330+P331, P305+P351+P338, P302+P350, P201, P308+P313

Guaranteed analysis
Dichromate demand (mℓ $FeSO_4$) ... <2 mℓ

COD Test Reagents
Ficodox meets the DOE/NWC Standing Committee ot Analyst publication "Method for the Examination of Waters and Associated Materials"- Chemical Oxygen Demand (Dichromate value) of Polluted and Waste Waters- HMSO 1977.

Ficodox® Plus mixed COD reagent
pure

packaging		Mfr. No
1 ℓ	Glass bottle	J/4010/15
2.5 ℓ	Coated Glass bottle	J/4010/PB17

ADR/RID: 8, II
UN: 1830
GHS: Carc. 1B, Muta. 1B, Skin Corr. 1A

H314, H340, H350
P280, P301+P330+P331, P305+P351+P338, P302+P350, P201, P308+P313

Guaranteed analysis
Dichromate demand (mℓ $FeSO_4$) ... <2 mℓ

COD Test reagents. Avoids the use of Mercury salt.
"Ficodox Plus "meets the DOE/NWC Standing Committee ot Analyst publication "Method for the Examination of Waters and Associated Materials"- Chemical Oxygen Demand (Dichromate value) of Polluted and Waste Waters 1986(Second Edition) available from HMSO for the estimation of COD without the use of mercury salts.

Florisil®
For chromatography, about 100-200 U.S. Mesh

packaging		Mfr. No
250 g	Plastic jar	F/1173/50

MgO_3Si
CAS: 1343-88-0
MW: 100.39
EINECS: 215-681-1

Guaranteed analysis
Identity test ..... : Pass

Florisil® is a registered trade name of Floridin company.

Florisil®
For chromatography, about 60-100 U.S. Mesh

packaging		Mfr. No
250 g	Plastic jar	F/1170/50

MgO_3Si
CAS: 1343-88-0
MW: 100.39
EINECS: 215-681-1

Guaranteed analysis
Identity test ..... : Pass

Florisil® is a registered trade name of Floridin company.

Fluorescein C.I. 45350
pure

packaging		Mfr. No
25 g	Glass jar	F/1200/46
100 g	Glass jar	F/1200/48

$C_{20}H_{12}O_5$
CAS: 2321-07-5
MW: 332.31
Melting point: 314 to 316°C

EINECS: 219-031-8
GHS: Eye Irrit. 2, Skin Sens. 1
H317, H319
P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Fluorescein sodium
pure

packaging		Mfr. No
100 g	Glass jar	F/1300/48
500 g	Glass jar	F/1300/53

$C_{20}H_{10}Na_2O_5$
CAS: 518-47-8
MW: 376.28
Melting point: 320°C

EINECS: 208-253-0
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Fluorescein di-(methylimino diacetic acid) sodium salt
pure, Metal indicator (Calcein)

packaging		Mfr. No
5 g	Glass jar	F/1250/44

$C_{30}H_{26}N_2O_{13}$
CAS: 1461-15-0
MW: 622.54
Melting point: 200°C
EINECS: 215-957-1
GHS: Acute Tox. 4, Skin Irrit.

2, Eye Irrit. 2, STOT SE 3
H312, H332, H335, H315, H302, H319
P280, P261, P302+P352, P301+P312, P304+P340, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Fluoride standard 10 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASF91AY
500 mℓ	Plastic bottle	SPASF91AX

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Fluoride standard 100 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASF91Y
500 mℓ	Plastic bottle	SPASF91X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Fluoride standard solution 1000 ppm (1 mg/ml)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4548/05
500 mℓ	HDPE Plastic bottle	J/4548/08

Density at 20°C: 1.0

Manufactured to a tolerance of ± 1%.

Fluoride standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASF92Y
500 mℓ	Plastic bottle	SPASF92X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Fluoroboric acid 50% solution in HBF4
Technical

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	F/1350/08

HBF_4
CAS: 16872-11-0
MW: 87.81
Density at 20°C: 1.41
Boiling point: 130°C
Melting point: -90°C
ADR/RID: 8, II

EINECS: 240-898-3
UN: 1775
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Fluorosilicic acid
Technical

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	F/1400/08

H_2F_6Si
CAS: 16961-83-4
MW: 144.09
Density at 20°C: 1.27
ADR/RID: 8, II
EINECS: 241-034-8

UN: 1778
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P260, P264, P301+P330+P331, P305+P351+P338, P310

Folin & Ciocalteu's phenol reagent
pure

packaging		Mfr. No
500 mℓ	Glass bottle	J/4100/08

ADR/RID: 8, II
UN: 1760
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338

Contains 10% v / v HCl and 5% V / V H 3 PO 4.

Formaldehyde solution 37-41%
specified reagents for general laboratory work- extra pure

SLR

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	F/1501/PB08
1 ℓ	HDPE Plastic bottle	F/1501/PB15
2.5 ℓ	HDPE Plastic bottle	F/1501/PB17
25 ℓ	HDPE Plastic container	F/1501/25

CH_2O
CAS: 50-00-0
MW: 30.03
Density at 20°C: 1.083
Boiling point: 97°C
Melting point: -15°C
Flash point: 50°C
ADR/RID: 3, 8, III
EINECS: 200-001-8
UN: 1198

GHS: Flam. Liq. 3, Carc. 2, Acute Tox. 3, Skin Corr. 1B, Skin Sens. 1, STOT SE 1
H226, H314, H317, H370, H311, H331, H301, H351
P280, P301+P330+P331, P305+P351+P338, P304+P340, P302+P352, P301+P312, P210

Assay: 37 to 41%

Guaranteed analysis

Acidity / Alkalinity	<0.05 meq/g	Potassium (K)	<5 ppm
Colour	<20 APHA	n-Butyl formate	<0.005%
Calcium (Ca)	<50 ppm	Total silicon (Si)	<10 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<100 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<10 ppm
Lead (Pb)	<2 ppm	Methanol	9 to 14%
Magnesium (Mg)	<20 ppm		

Formaldehyde solution (stabilised in methanol)
Technical

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	F/1451/PB17
25 ℓ	HDPE Plastic container	F/1451/25

H.CHO
CAS: 50-00-0
MW: 30.03
Boiling point: 97°C
ADR/RID: 3, 8, III
EINECS: 200-001-8
UN: 1198
GHS: Flam. Liq. 3, Carc. 2,

Acute Tox. 3, Skin Corr. 1B, Skin Sens. 1, STOT SE 1
H226, H314, H317, H370, H311, H331, H301, H351
P280, P301+P330+P331, P305+P351+P338, P304+P340, P302+P352, P301+P312, P210

Assay: >37 to 41 %%

Guaranteed analysis
Acidity / Alkalinity ..... <0.05 meq/g

Formaldehyde dimethyl acetal
See Dimethoxymethane, page 112

Formaldehyde solution
pure, 10% phosphate buffered

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	F/1520/21

GHS: Carc. 2, Skin Sens. 1
H351, H317
P201, P261, P281, P308+P313, P302+P352

Guaranteed analysis
pH at 20°C ..... : 7.2 to 7.4

Formaldehyde solution saline
pure, phosphate buffered pH 7.3

packaging		Mfr. No
25 ℓ	HDPE Plastic container	F/1515/25

GHS: Carc. 2, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3
H317, H351, H315, H319, H335
P280, P305+P351+P338, P260

Formaldehyde solution
pure, 10% w/v in 0.9% sodium chloride solution

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	F/1510/21

GHS: Carc. 2, Skin Sens. 1
H317, H351
P280, P201, P302+P352, P262, P260, P308+P313

Formamide
for electrophoresis

packaging		Mfr. No
100 mℓ	Coated Glass bottle	F/P565/PB05
500 mℓ	Coated Glass bottle	F/P565/PB08

CH_3NO
CAS: 75-12-7
MW: 45.04
Density at 20°C: 1.133
Boiling point: 210°C
Melting point: 2 to 3°C

Flash point: 175°C
EINECS: 200-842-0
GHS: Repr. 1B
H360D
P201, P308+P313

Assay (CG): >99.5%

Guaranteed analysis

Copper (Cu)	<0.1 ppm	Lead (Pb)	<0.5 ppm
Iron (Fe)	<1 ppm	Zinc (Zn)	<0.5 ppm

Suitable for denaturing nucleic acids for sequencing and hybridisation.

Formamide
for analysis

Certified AR

packaging		Mfr. No
500 mℓ	Coated Glass bottle	F/1551/PB08
2.5 ℓ	Coated Glass bottle	F/1551/PB17
25 ℓ	HDPE Plastic container	F/1551/25
200 ℓ	HDPE Plastic container	F/1551/27

CH_3NO
CAS: 75-12-7
MW: 45.04
Density at 20°C: 1.133
Boiling point: 210°C
Melting point: 2 to 3°C

Flash point: 175°C
EINECS: 200-842-0
GHS: Repr. 1B
H360D
P201, P308+P313

Assay (CG): >99.5%

Guaranteed analysis

Colour	<10 APHA	Magnesium (Mg)	<5 ppm
Water	<0.1%	Potassium (K)	<5 ppm
Ammonium formate (H.COO.NH_4)..:	<0.1 %	Sodium (Na)	<2 ppm
		Total phosphorus (P)	<0.5 ppm
Formic acid (H. COOH)	: <0.02%	Total silicon (Si)	<0.5 ppm
Calcium (Ca)	<10 ppm	Total sulphur (S)	<1 ppm
Copper (Cu)	<1 ppm	Zinc (Zn)	<2 ppm
Iron (Fe)	<2 ppm	Residue after ignition	<0.5%
Lead (Pb)	<0.5 ppm		

Typical analysis

Formic acid (H. COOH)	<0.02 %	Manganese (Mn)	<0.1 ppm
Aluminium (Al)	<0.2 ppm	Molybdenum (Mo)	<0.1 ppm
Barium (Ba)	<0.2 ppm	Nickel (Ni)	<0.1 ppm
Cadmium (Cd)	<0.1 ppm	Strontium (Sr)	<0.1 ppm
Chromium (Cr)	<0.2 ppm	Titanium (Ti)	<0.1 ppm
Cobalt (Co)	<0.1 ppm	Vanadium (V)	<0.1 ppm
Lithium (Li)	<0.1 ppm		

Lot analysis on the label.

Formamide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	F/1550/PB08
2.5 ℓ	Coated Glass bottle	F/1550/PB17

CH_3NO
CAS: 75-12-7
MW: 45.04
Density at 20°C: 1.133
Boiling point: 210°C
Melting point: 2 to 3°C

Flash point: 175°C
EINECS: 200-842-0
GHS: Repr. 1B
H360D
P201, P308+P313

Assay (CG): >99%

Guaranteed analysis

Colour	<20 APHA	Potassium (K)	<20 ppm
Water	<0.5%	Sodium (Na)	<50 ppm
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<20 ppm	Residue after ignition	<1000%

Assay: >98%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.5 ppm
Calcium (Ca)	<2 ppm	Sodium (Na)	<1 ppm
Chromium (Cr)	<0.05 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<0.05 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<0.5 ppm	Total phosphorus (P)	<5 ppm
Lead (Pb)	<0.05 ppm	Total silicon (Si)	<2 ppm
Magnesium (Mg)	<0.1 ppm	Total sulphur (S)	<10 ppm
Nickel (Ni)	<0.05 ppm	Zinc (Zn)	<0.1 ppm

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Silver (Ag)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.05 ppm	Strontium (Sr)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Lithium (Li)	<0.02 ppm		

Lot analysis on the label.

Formic acid — NEW — Optima
for LC/MS analysis

packaging		Mfr. No
0.5 mℓ	Ampoule	A117-05AMP
1 mℓ	Ampoule	A117-1AMP
2 mℓ	Ampoule	A117-2AMP
10x1 mℓ	Ampoule	A117-10X1AMP
50 mℓ	HDPE Plastic bottle	A117-50

CH_2O_2
CAS: 64-18-6
MW: 46.02
Density at 20°C: 1.22
Boiling point: 101°C
Melting point: 8°C
Flash point: 50°C
ADR/RID: 8, 3, II
EINECS: 200-579-1

UN: 1779
GHS: Flam. Liq. 3, Skin Corr. 1A, Eye Dam. 1
H226, H314
P280, P260, P301+P330+P331, P305+P351+P338, P302+P352, P210

Assay: <99.5%

Guaranteed analysis

Colour	<10 APHA	Lead (Pb)	<10 ppb
Reside after evaporation (at 0.1% aqueous)	: <1 ppm	Magnesium (Mg)	<10 ppb
Sulfite (SO_3)	: <20 ppm	Manganese (Mn)	<10 ppb
Aluminium (Al)	<20 ppb	Nickel (Ni)	<10 ppb
Calcium (Ca)	<50 ppb	Potassium (K)	<20 ppb
Chloride (Cl)	<5 ppm	Propan--1-ol	<10 ppb
Copper (Cu)	<10 ppb	Sodium (Na)	<50 ppb
Iron (Fe)	<10 ppb	Sulfate (SO_4)	<50 ppm
		Zinc (Zn)	<20 ppb

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<1.25 A.U.	254 nm	<0.01 A.U.
220 nm	<0.85 A.U.	LC/MS Gradient Suitability (at 0.1% aqueous)	: Pass test
230 nm	<0.55 A.U.		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.

Formic acid 90% — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	F/1820/PB08
2.5 ℓ	HDPE Plastic bottle	F/1820/PB17

CH_2O_2
CAS: 64-18-6
MW: 46.03
Density at 20°C: 1.22
Boiling point: 101°C
Melting point: 8°C
Flash point: 50°C
ADR/RID: 8, 3, II
EINECS: 200-579-1

UN: 1779
GHS: Flam. Liq. 3, Skin Corr. 1A, Eye Dam. 1
H226, H314
P280, P260, P301+P330+P331, P305+P351+P338, P302+P352, P210

Assay: 89 to 91%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.5 ppm
Calcium (Ca)	<2 ppm	Sodium (Na)	<2 ppm
Chromium (Cr)	<0.05 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<0.1 ppm	Total nitrogen (N)	<200 ppm
Iron (Fe)	<0.5 ppm	Total phosphorus (P)	<5 ppm
Lead (Pb)	<0.05 ppm	Total silicon (Si)	<2 ppm
Magnesium (Mg)	<0.1 ppm	Total sulphur (S)	<10 ppm
Nickel (Ni)	<0.05 ppm	Zinc (Zn)	<0.1 ppm

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Silver (Ag)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.05 ppm	Strontium (Sr)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.05 ppm	Vanadium (V)	<0.02 ppm
Lithium (Li)	<0.02 ppm		

Lot analysis on the label.

Formic acid — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	F/1900/PB08
1 ℓ	Coated Glass bottle	F/1900/PB15
2.5 ℓ	Coated Glass bottle	F/1900/PB17
25 ℓ	HDPE Plastic container	F/1900/25

CH_2O_2
CAS: 64-18-6
MW: 46.02
Density at 20°C: 1.22
Boiling point: 101°C
Melting point: 8°C
Flash point: 50°C
ADR/RID: 8, 3, II
EINECS: 200-579-1

UN: 1779
GHS: Flam. Liq. 3, Skin Corr. 1A, Eye Dam. 1
H226, H314
P280, P260, P301+P330+P331, P305+P351+P338, P302+P352, P210

Formic acid — SLR
extra pure, min.98%

packaging		Mfr. No
500 mℓ	Coated Glass bottle	F/1850/PB08
2.5 ℓ	Coated Glass bottle	F/1850/PB17
200 ℓ	HDPE Plastic container	F/1850/27

CH_2O_2
CAS: 64-18-6
MW: 46.02
Density at 20°C: 1.22
Boiling point: 101°C
Melting point: 8°C
Flash point: 50°C
ADR/RID: 8, 3, II
EINECS: 200-579-1

UN: 1779
GHS: Flam. Liq. 3, Skin Corr. 1A, Eye Dam. 1
H226, H314
P280, P260, P301+P330+P331, P305+P351+P338, P302+P352, P210

Assay: >98%

Guaranteed analysis

Colour	<20 APHA	Potassium (K)	<2 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<10 ppm
Chromium (Cr)	<0.5 ppm	n-Butyl formate	<0.002%
Copper (Cu)	<2 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<1 ppm	Zinc (Zn)	<0.5 ppm
Nickel (Ni)	<0.5 ppm		

Formic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	F/1800/PB08
2.5 ℓ	HDPE Plastic bottle	F/1800/PB17
200 ℓ	HDPE Plastic container	F/1800/27

CH_2O_2
CAS: 64-18-6
MW: 46.02
Density at 20°C: 1.22
Boiling point: 101°C
Melting point: 8°C
Flash point: 50°C
ADR/RID: 8, 3, II
EINECS: 200-579-1

UN: 1779
GHS: Flam. Liq. 3, Skin Corr. 1A, Eye Dam. 1
H226, H314
P280, P260, P301+P330+P331, P305+P351+P338, P302+P352, P210

Assay: 89 to 91%

Guaranteed analysis

Colour	<20 APHA	Potassium (K)	<2 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<10 ppm
Chromium (Cr)	<0.5 ppm	n-Butyl formate	<0.002%
Copper (Cu)	<2 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<1 ppm	Zinc (Zn)	<0.5 ppm
Nickel (Ni)	<0.5 ppm		

Formic acid
pure,about 85%

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	F/1750/PB15
2.5 ℓ	HDPE Plastic bottle	F/1750/PB17
25 ℓ	HDPE Plastic container	F/1750/25

CH_2O_2
CAS: 64-18-6
MW: 46.02
Density at 20°C: 1.22
Boiling point: 101°C
Melting point: 8°C
Flash point: 50°C
ADR/RID: 8, 3, II
EINECS: 200-579-1

UN: 1779
GHS: Flam. Liq. 3, Skin Corr. 1B, Eye Dam. 1
H226, H314
P280, P260, P305+P351+P338, P301+P330+P331, P302+P352, P210

Assay: 84 to 86%

Formic acid solution 0.25M — Certified
for HPLC

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/4200/PB08

EINECS: 200-579-1

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Drift in gradient baseline ..... <40 mA.U.

Absorbance of the largest eluted peak: <1.5 mA.U.
Molarity between 0.24 and 0.25 mol / ℓ

Formol
See Formaldehyde solution 37-41%, page 130

D(-)-Fructose — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	F/1952/48
500 g	Plastic jar	F/1952/53
1 kg	Plastic jar	F/1952/60

$C_6H_{12}O_6$
CAS: 57-48-7
MW: 180.16

Melting point: 103 to 105°C
EINECS: 200-333-3

Guaranteed analysis

Loss on drying	<0.5%	Potassium (K)	<10 ppm
Specific rotation	-93.5° to -91°	Sodium (Na)	<50 ppm
Heavy metals	<5 ppm	Total chloride (Cl)	<0.001%
Limit of Hydroxymethylfurfural test	: Pass	Total phosphorus (P)	<20 ppm
Acidity	Pass	Total silicon (Si)	<5 ppm
Calcium (Ca)	<10 ppm	Total sulphur (S)	<50 ppm
Copper (Cu)	<1 ppm	Zinc (Zn)	<2 ppm
Iron (Fe)	<1 ppm	Sulfate (SO_4)	<0.025%
Lead (Pb)	<1 ppm	Residue after ignition	<0.5%
Magnesium (Mg)	<5 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Arsenic (As)	<1 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Chromium (Cr)	<1 ppm	Vanadium (V)	<1 ppm
Cobalt (Co)	<1 ppm		

Lot analysis on the label.

D(-)-Fructose
pure

packaging		Mfr. No
100 g	Plastic jar	F/1950/48
250 g	Plastic jar	F/1950/50

$C_6H_{12}O_6$
CAS: 57-48-7
MW: 180.16

Melting point: 103 to 105°C
EINECS: 200-333-3

Guaranteed analysis
Complies with standard IR spectrum: Pass

Fuchsin basic
technical

packaging		Mfr. No
25 g	Glass jar	F/P770/46

$C_{20}H_{19}N_3.HCl$
CAS: 632-99-5
MW: 337.84
Melting point: 250°C
Flash point: 200°C
ADR/RID: 6.1, III

EINECS: 211-189-6
UN: 3143
GHS: Carc. 2, Acute Tox. 4
H351, H302
P281, P301+P312

Pararosaniline

Fumaric acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	F/2070/53

$C_4H_4O_4$
CAS: 110-17-8
MW: 116.07
Density at 20°C: 1.62
Melting point: 295 to 300°C

Flash point: 230°C
EINECS: 203-743-0
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99%

Furfuraldehyde
technical

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	F/2080/PB17

$C_5H_4O_2$
CAS: 98-01-1
MW: 96.09
Density at 20°C: 1.16
Boiling point: 159 to 161°C
Melting point: -36°C
Flash point: 60°C
ADR/RID: 6.1, 3, II
EINECS: 202-627-7

UN: 1199
GHS: Carc. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H331, H312, H315, H335, H351, H301
P260, P280, P301+P310, P304+P340, P302+P352, P305+P351+P338

2.5-Furandione
See Maleic anhydride, page 190

Furfural
See Furfuraldehyde , page 134

Fusion mixture
for analysis — Certified AR

packaging		Mfr. No
500 g	Plastic jar	F/2250/53
1 kg	Plastic jar	F/2250/60

$K_2CO_3.Na_2CO_3$
MW: 122.10
EINECS: 207-838-8
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H315, H319, H335
P261, P280, P301+P312, P302+P352, P305+P351+P338

Guaranteed analysis

Loss on drying 300°C	: <1%	Total chloride (Cl)	<0.002%
Calcium (Ca)	<100 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<10 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm

Gadolinium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLGD22Y
500 mℓ	Plastic bottle	SPPLGD22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Gadolinium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLGD23Y
500 mℓ	Plastic bottle	SPPLGD23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

D(+)Galactose anhydrous
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	G/0050/48

$C_6H_{12}O_6$
CAS: 59-23-4
MW: 180.16
Melting point: 165 to 170°C
EINECS: 200-416-4

Guaranteed analysis
Loss on drying ..... <0.5%

Gallium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLGA22Y
500 mℓ	Plastic bottle	SPPLGA22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Gelatine
specified reagents for general laboratory work - extra pure, granular powder — SLR, Eur. Ph.

packaging		Mfr. No
250 g	Plastic jar	G/0150/50
500 g	Plastic jar	G/0150/53

CAS: 9000-70-8
Density at 20°C: 0.68
EINECS: 232-554-6

Gentian Violet
See Methyl violet, page 208

Germanium standard metal solution 1000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLGE92Y
500 mℓ	Plastic bottle	SPPLGE92X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Germanium standard metal solution 10 ppm
for ICP-MS solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLGE91AY

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Gibberellic acid
pure

packaging		Mfr. No
1 g	Vial	G/0200/43

$C_{19}H_{22}O_6$
CAS: 77-06-5
MW: 346.38
Melting point: 227°C
EINECS: 201-001-0

GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Guaranteed analysis
Complies with standard IR spectrum: Pass

Giemsa stain
pure

packaging		Mfr. No
25 g	Glass jar	G/0275/46

CAS: 51811-82-6
Melting point: 300°C
EINECS: 257-438-2

Guaranteed analysis
Complies with standard IR spectrum: Pass

Glass balls
pure, 3.7-4.1 mm undrilled

packaging		Mfr. No
250 g	Plastic jar	G/0300/50
500 g	Plastic jar	G/0300/53

Guaranteed analysis
Identity test ..... : Pass

D(+)-Glucose anhydrous
for analysis — Certified AR, Eur.Ph.,BP,USP

packaging		Mfr. No
500 g	Plastic jar	G/0500/53
1 kg	Plastic jar	G/0500/60
2 kg	Plastic jar	G/0500/61
5 kg	Plastic keg	G/0500/65
25 kg	Fibre Keg	G/0500/70

$C_6H_{12}O_6$
CAS: 50-99-7
MW: 180.16
Density at 20°C: 15.4
Melting point: 146°C
EINECS: 200-075-1

Guaranteed analysis

pH (aqueous solution 5%)	>6	Magnesium (Mg)	<5 ppm
Loss on drying	<0.1%	Potassium (K)	<20 ppm
Specific rotation	52.5° to 53.5°	Sodium (Na)	<50 ppm
Insoluble in alcohol	: <0.005%	Total chloride (Cl)	<0.005%
Calcium (Ca)	<10 ppm	Total phosphorus (P)	<10 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<5 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<0.5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<0.2 ppm
Arsenic (As)	<1 ppm	Manganese (Mn)	<0.2 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<0.5 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<0.5 ppm
Chromium (Cr)	<0.5 ppm	Vanadium (V)	<0.5 ppm
Cobalt (Co)	<0.5 ppm		

Lot analysis on the label.

D(+)-Glucose anhydrous
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	G/0450/53
1 kg	Plastic jar	G/0450/60
2 kg	Plastic jar	G/0450/61
5 kg	Plastic keg	G/0450/65

$C_6H_{12}O_6$
CAS: 50-99-7
MW: 180.16
Density at 20°C: 15.4
Melting point: 146°C
EINECS: 200-075-1

Guaranteed analysis

Loss on drying	<1%	Potassium (K)	<100 ppm
Specific rotation	52° to 54°	Sodium (Na)	<200 ppm
Calcium (Ca)	<50 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm

D(+)-Glucose monohydrate
specified reagents for general laboratory work- extra pure — SLR, Eur.Ph.,BP

packaging		Mfr. No
1 kg	Plastic jar	G/0400/60
5 kg	Plastic keg	G/0400/65

$C_6H_{12}O_6.H_2O$
CAS: 5996-10-1
MW: 198.18
Density at 20°C: 1.54
EINECS: 200-075-1

Guaranteed analysis

Acidity / Alkalinity	Pass	Barium (Ba)	<1 ppm
Loss on drying	7 to 9.5%	Calcium (Ca)	<200 ppm
Specific rotation	52° to 53°	Chloride (Cl)	<125 ppm
Foreign sugars/Starch/Dextrins (test)	: Pass	Lead (Pb)	<0.5 ppm
Sulfite (SO_3)	: <15 ppm	Sulfate (SO_4)	<200 ppm
Arsenic (As)	<1 ppm	Residue after ignition	<0.1%

Glucose-1-phosphoric acid dipotassium salt dihydrate
technical

packaging		Mfr. No
2 g	Vial	G/0505/55

$C_6H_{11}K_2O_9P.2H_2O$
CAS: 5996-14-5
MW: 372.35
Melting point: 209°C

Guaranteed analysis
Complies with standard IR spectrum: Pass

L-Glutamic acid
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	G/0515/48

$C_5H_9NO_5$
CAS: 56-86-0
MW: 147.13
Melting point: 205°C

Assay: >98.5%

Guaranteed analysis

Water	<0.5%	Lead (Pb)	<10 ppm
Specific rotation	30° to 33°	Residue after ignition	<0.5%
Iron (Fe)	<20 ppm		

L(+)-Glutamic acid-5-amide
See L-Glutamine, page 136

L-Glutamic acid monosodium salt monohydrate
pure

packaging		Mfr. No
250 g	Plastic jar	G/0513/50

$C_5H_8NO_4Na.H_2O$
CAS: 142-47-2
MW: 187.14
EINECS: 205-538-1

Assay: >98%

L-Glutamine
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	G/0514/50

$C_5H_{10}N_2O_3$
CAS: 56-85-9
MW: 146.15
Melting point: 185°C
EINECS: 200-292-1

Assay: >99%

Glutaraldehyde 50% solution
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	G/0518/PB08

$C_5H_8O_2$
CAS: 111-30-8
MW: 100.12
Density at 20°C: 1.13
Boiling point: >100°C
Melting point: -15°C
ADR/RID: 6.1, 8, II
EINECS: 203-856-5
UN: 2927

GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, Aquatic Acute 1
H317, H335, H314, H334, H301, H331, H400
P280, P305+P351+P338, P270, P260, P273, P308+P313

Assay: 47 to 53%

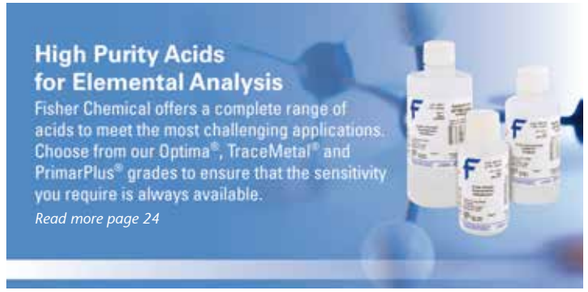
Glycerine
See Glycerol, page 136

Glycerol
for electrophoresis

packaging		Mfr. No
100 mℓ	Glass bottle	G/P450/05
500 mℓ	Glass bottle	G/P450/08

$HOCH_2CH(OH)CH2OH$
CAS: 56-81-5
MW: 92.09
Density at 20°C: 1.261
Boiling point: 290°C
Melting point: 18°C
Flash point: 160°C
EINECS: 200-289-5

For use in electrophoresis buffers and for stabilising enzyme preparations before freezing.



Glycerol
NEW PACK.
Certified AR
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	G/0650/08
1 ℓ	HDPE Plastic bottle	G/0650/15
2.5 ℓ	HDPE Plastic bottle	G/0650/17
5 ℓ	Fluorinated HDPE Plastic bottle	G/0650/21
25 ℓ	HDPE Plastic container	G/0650/25
200 ℓ	HDPE Plastic container	G/0650/27

$HOCH_2CH(OH)CH2OH$
CAS: 56-81-5
MW: 92.09
Density at 20°C: 1.261
Boiling point: 290°C
Melting point: 18°C
Flash point: 160°C
EINECS: 200-289-5

Assay: >99%

Guaranteed analysis

Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.5%	Potassium (K)	<5 ppm
pH (10% aq. soln.)	: 6 to 8	Sodium (Na)	<20 ppm
Residue after ignition	<0.005%	Total phosphorus (P)	<2 ppm
Identity IR test	: Pass	Total silicon (Si)	<2 ppm
Calcium (Ca)	<5 ppm	Total sulphur (S)	<5 ppm
Chloride (Cl)	<0.0005%	Zinc (Zn)	<2 ppm
Copper (Cu)	<0.5 ppm	Reducing substance	Pass
Iron (Fe)	<1 ppm	Esters of fatty acids	<0.08%
Lead (Pb)	<0.5 ppm	Fatty acids	Pass

Typical analysis

Aluminium (Al)	<0.5 ppm	Lithium (Li)	<0.5 ppm
Arsenic (As)	<0.5 ppm	Manganese (Mn)	<0.5 ppm
Barium (Ba)	<0.5 ppm	Nickel (Ni)	<0.5 ppm
Cadmium (Cd)	<0.5 ppm	Titanium (Ti)	<0.5 ppm
Chromium (Cr)	<0.5 ppm	Vanadium (V)	<0.5 ppm
Cobalt (Co)	<0.5 ppm		

Glycerol
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	G/0600/08
2.5 ℓ	HDPE Plastic bottle	G/0600/17
25 ℓ	HDPE Plastic container	G/0600/25

$HOCH_2CH(OH)CH_2OH$
CAS: 56-81-5
MW: 92.09
Density at 20°C: 1.261
Boiling point: 290°C
Melting point: 18°C
Flash point: 160°C
EINECS: 200-289-5

Assay (CG): >98%

Guaranteed analysis

pH (10% aq. soln.)	: 6 to 8	Magnesium (Mg)	<10 ppm
Residue after ignition	<0.01%	Potassium (K)	<20 ppm
Calcium (Ca)	<20 ppm	Sodium (Na)	<100 ppm
Chloride (Cl)	<0.001%	Total phosphorus (P)	<10 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<10 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<10 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<10 ppm

Glycine, Buffer component
for electrophoresis and blotting

packaging		Mfr. No
500 g	Plastic jar	G/P460/53

NH_2CH_2COOH
CAS: 56-40-6
MW: 75.07
Density at 20°C: 1.595
Melting point: 182 to 236°C
EINECS: 200-272-2

Assay: > 99.5%

Glycine
Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	G/0800/48
250 g	Plastic jar	G/0800/50
1 kg	Plastic jar	G/0800/60

NH_2CH_2COOH
CAS: 56-40-6
MW: 75.07
Density at 20°C: 1.595
Boiling point: 233°C
Melting point: 182 to 236°C
EINECS: 200-272-2

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	5.5 to 6.5	Potassium (K)	<20 ppm
Ammonium (NH_4)	<0.02%	Sodium (Na)	<50 ppm
Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<2 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<5 ppm
Lead (Pb)	<1 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<2 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Barium (Ba)	<2 ppm	Manganese (Mn)	<1 ppm
Cadmium (Cd)	<1 ppm	Nickel (Ni)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Glycolic acid
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	G/0803/48

$C_2H_4O_3$
CAS: 79-14-1
MW: 76.05
Density at 260°C: 1.36
Boiling point: 100°C
Melting point: 72 to 80°C
Flash point: >300°C
ADR/RID: 8, II
EINECS: 201-180-5
UN: 3261
GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H302, H314, H331
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P301+P312

Assay: >99%

Guaranteed analysis

Water ..... <1%

Gold standard metal solution 1000 ppm
for AAS, solution HCl 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8028/08

GHS: Skin Irrit. 2
H315
P302+P352

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Gold standard metal solution 1000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLAU32Y
500 mℓ	Plastic bottle	SPPLAU32X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Gold standard metal solution 1000 ppm
for ICP-MS solution in HCl 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLAU11Y

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Gold metal
technical

packaging		Mfr. No
25	Plastic jar	G/0850/90

Au
CAS: 7440-57-5
MW: 196.97
Boiling point: 2700°C
Melting point: 1064.8°C
EINECS: 231-165-9

Guaranteed analysis

Identity test ..... : Pass

Gram's iodine
pure

packaging		Mfr. No
250 mℓ	Glass bottle	G/0910/07

CAS: 7553-56-2
EINECS: 231-442-4

Guaranteed analysis

Identity test ..... : Pass

Graphite powder
pure

packaging		Mfr. No
1 kg	Plastic jar	G/0900/60

CAS: 7782-42-5
EINECS: 231-955-3
GHS: Eye Irrit. 2, STOT SE 3
H319, H335
P261, P280, P305+P351+P338

Guaranteed analysis

Identity test ..... : Pass

Guaiacol
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass bottle	G/0950/48

$C_7H_8O_2$
CAS: 90-05-1
MW: 124.14
Density at 20°C: 1.12
Boiling point: 205°C
Melting point: 27 to 29°C
Flash point: 82°C
EINECS: 201-964-7
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H302, H315, H319
P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Complies with standard IR spectrum: Pass

Conforming to the IR spectrum of reference.

Guanidine thiocyanate
technical, strong protein denaturant

packaging		Mfr. No
100 g	Plastic jar	G/P771/48

$CH_5N_3.CHNS$
CAS: 593-84-0
MW: 118.16
Melting point: 118 to 122°C
ADR/RID: 8, III
EINECS: 209-812-1
UN: 3261
GHS: Acute Tox. 4, Skin
Corr. 1C, Eye Dam. 1, Aquatic Chronic 3
H312, H332, H302, H412, H314, EUH032
P280, P301+P330+P331, P305+P351+P338, P310, P302+P352, P273, P233

Assay: >97%

Gum acacia
pure, powder

packaging		Mfr. No
500 g	Plastic jar	G/1050/53

Density at 20°C: 1.35
EINECS: 232-519-5
GHS: Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H335, H315, H317, H319, H334
P304+P341, P342+P311, P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Gum tragacanth
pure, powder

packaging		Mfr. No
100 g	Plastic jar	G/1100/48

Guaranteed analysis
Identity test ..... : Pass

Hafnium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLHF12Y
500 mℓ	Plastic bottle	SPPLHF12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Heat sensitive liquid
technical, contains methylated spirit

packaging		Mfr. No
1 ℓ	Coated Glass bottle	H/0050/PB15

Density at 20°C: 0.8
Boiling point: 63.9°C
Melting point: -97.8°C
Flash point: 11.1°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2, Carc. 1B, Muta. 2, Repr. 1B, Acute
Tox. 4, Resp. Sens. 1, Skin Sens. 1, STOT SE 2, Aquatic Chronic 2
H225, H302, H371, H411, H341, H350, H334, H317, H332, H350i, H360F
P261, P280, P308+P313, P301+P312, P210, P273

Guaranteed analysis
Identity test ..... : Pass

Haematoxylin
pure

packaging		Mfr. No
25 g	Glass jar	H/0010/46

$C_{16}H_{14}O_6.xH_2O$
CAS: 517-28-2
MW: 302.27
Melting point: 100 to 120°C
EINECS: 208-237-3

Guaranteed analysis
Complies with standard IR spectrum: Pass

N-Heptafluorobutyryl-imidazole
pure

packaging		Mfr. No
5 g	Glass bottle	H/0095/45

$C_7H_3F_7N_2O$
CAS: 32477-35-3
MW: 264.10
EINECS: 251-063-8
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H319, H335, H315
P280, P261, P302+P352, P304+P340, P305+P351+P338, P312

Assay (CG): >98%

Heptane (approx. 99% n-Heptane) NEW PACK. Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	H/0106/15
2.5 ℓ	Glass bottle	H/0106/17
2.5 ℓ	Coated Glass bottle	H/0106/PB17
10 ℓ	Returnable Drum	H/0106/10RSS
25 ℓ	Returnable Drum	H/0106/25RSS
30 ℓ	Returnable Drum	H/0106/30RSS

C_7H_{16}
CAS: 142-82-5
MW: 100.21
Density at 20°C: 0.683
Boiling point: 98°C
Melting point: -91°C
Flash point: -4°C
ADR/RID: 3, II
EINECS: 205-563-8
UN: 1206
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H315, H336, H304, H400, H410
P261, P301+P310, P331, P273, P302+P352, P210

Guaranteed analysis
Acidity / Alkalinity ..... <0.00015 meq/g
Water ..... <0.01%
Residue after evaporation ..... <5 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.25 A.U.	230 nm	<0.02 A.U.
210 nm	<0.1 A.U.	240 nm	<0.01 A.U.
220 nm	<0.05 A.U.	250 nm	<0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Heptane (approx. 99% n-Heptane) Certified
HPLC for fluorescence detection

packaging		Mfr. No
1 ℓ	Glass bottle	H/0107/15
2.5 ℓ	Glass bottle	H/0107/17

C_7H_{16}
CAS: 142-82-5
MW: 100.21
Density at 20°C: 0.683
Boiling point: 98°C
Melting point: -91°C
Flash point: -4°C
ADR/RID: 3, II
EINECS: 205-563-8
UN: 1206
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H315, H336, H304, H400, H410
P261, P301+P310, P331, P273, P302+P352, P210

Assay (CG): >99%

Guaranteed analysis
Water ..... <0.01%
Residue after evaporation ..... <5 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.25 A.U.	240 nm	<0.01 A.U.
210 nm	<0.1 A.U.	250 nm	<0.005 A.U.
220 nm	<0.05 A.U.	Fluorescence	Pass
230 nm	<0.02 A.U.		

Fluorescence
Excitation in the range 250-270nm produces no fluorescence emission greater than the solvents natural Raman signal at 350nm excitation.
Thi sis equivalent to the emission maximum of approximately 1 ppb quinine sulfate.
Lot analysis on the label (Excluding fluorescence scan).
Filtered to 0.2 µm.

Heptane
For peptide sequencing, (approx 99% n-Heptane)

packaging		Mfr. No
2.5 ℓ	Glass bottle	H/0110/17

C_7H_{16}
CAS: 142-82-5
MW: 100.21
Density at 20°C: 0.683
Boiling point: 98°C
Melting point: -91°C
Flash point: -4°C
ADR/RID: 3, II
EINECS: 205-563-8
UN: 1206
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H315, H336, H304, H400, H410
P261, P301+P310, P331, P273, P302+P352, P210

Guaranteed analysis
Acidity / Alkalinity ..... <0.0002 meq/g
Water ..... <0.02%
Residue after evaporation ..... <2 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<1 A.U.	250 nm	<0.005 A.U.
220 nm	<0.05 A.U.		

n-Heptane NEW PACK. Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	H/0160/08
1 ℓ	Glass bottle	H/0160/15
2.5 ℓ	Glass bottle	H/0160/17
5 ℓ	Fluorinated HDPE Plastic bottle	H/0160/21
5 ℓ	Fluorinated HDPE square Drum	H/0160/FP21
200 ℓ	Metal drum	H/0160/27

C_7H_{16}
CAS: 142-82-5
MW: 100.21
Density at 20°C: 0.683
Boiling point: 98°C
Melting point: -91°C
Flash point: -4°C
ADR/RID: 3, II
EINECS: 205-563-8
UN: 1206
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H315, H336, H304, H400, H410
P261, P301+P310, P331, P273, P302+P352, P210

Assay (CG): >99.5%

Guaranteed analysis

Acidity	<0.0001 meq/g	Magnesium (Mg)	<0.05 ppm
Colour	<10 APHA	Potassium (K)	<0.1 ppm
Water	<0.02%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<10 ppm	Total phosphorus (P)	<0.1 ppm
Bromine number	<0.5	Total silicon (Si)	<0.05 ppm
Calcium (Ca)	<0.5 ppm	Total sulphur (S)	<10 ppm
Copper (Cu)	<0.02 ppm	Zinc (Zn)	<0.2 ppm
Iron (Fe)	<0.1 ppm	Substances darkened	
Lead (Pb)	<0.02 ppm	by H_2SO_4	<10 APHA

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

n-Heptane NEW PACK. SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	H/0155/08
1 ℓ	Glass bottle	H/0155/15
2.5 ℓ	Glass bottle	H/0155/17
2.5 ℓ	Coated Glass bottle	H/0155/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	H/0155/21
5 ℓ	Fluorinated HDPE square Drum	H/0155/FP21
25 ℓ	Metal drum	H/0155/25
200 ℓ	Metal drum	H/0155/27

C_7H_{16}
CAS: 142-82-5
MW: 100.21
Density at 20°C: 0.683
Boiling point: 98°C
Melting point: -91°C
Flash point: -4°C
ADR/RID: 3, II
EINECS: 205-563-8
UN: 1206
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H315, H336, H304, H400, H410
P261, P301+P310, P331, P273, P302+P352, P210

Assay (CG): >99%

Guaranteed analysis

Acidity	<0.003 meq/g	Magnesium (Mg)	<1 ppm
Colour	<10 APHA	Potassium (K)	<1 ppm
Water	<0.05%	Sodium (Na)	<2 ppm
Residue after evaporation	<20 ppm	Total phosphorus (P)	<1 ppm
Acidity	<0.003 meq/g	Total silicon (Si)	<1 ppm
Calcium (Ca)	<2 ppm	Total sulphur (S)	<50 ppm
Copper (Cu)	<1 ppm	Zinc (Zn)	<2 ppm
Iron (Fe)	<5 ppm	Substances darkened	
Lead (Pb)	<1 ppm	by H_2SO_4	<20 APHA

Heptane fraction — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	H/0100/08
1 ℓ	Glass bottle	H/0100/15
2.5 ℓ	Glass bottle	H/0100/17
200 ℓ	Metal drum	H/0100/27

C_7H_{16}
CAS: 142-82-5
MW: 100.21
Density at 20°C: 0.683
Boiling point: 98°C
Melting point: -91°C
Flash point: -4°C
ADR/RID: 3, II
EINECS: 205-563-8

UN: 1206
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H315, H336, H304, H400, H410
P261, P301+P310, P331, P273, P302+P352, P210

1-Heptane sulfonic acid sodium salt — Certified
for Ion pair chromatography for electrochemical detection

packaging		Mfr. No
25 g	Plastic jar	H/0169/46

$C_7H_{15}NaO_3S$
CAS: 22767-50-6
MW: 202.27
Melting point: >300°C
EINECS: 245-210-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis
Electrochemical test ..... Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.25 M)	: <0.1 A.U.	240 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
210 nm (sol. aqu. 0.25 M)	: <0.05 A.U.	250 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
220 nm (sol. aqu. 0.25 M)	: <0.03 A.U.	260 nm (sol. aqu. 0.25 M)	: <0.02 A.U.

Tested by HPLC-EC to show low electrochemical response.
Detector - ESA Coulochem II.
Mode-oxidative.
Electrode graphite.
Lot analysis on the label.

1-Heptane sulfonic acid sodium salt — Certified
for Ion pair chromatography

packaging		Mfr. No
25 g	Plastic jar	H/0168/46
100 g	Plastic jar	H/0168/48
5 kg	Plastic keg	H/0168/65

$C_7H_{15}NaO_3S$
CAS: 22767-50-6
MW: 202.25
Melting point: >300°C
EINECS: 245-210-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.25 M)	: <0.1 A.U.	240 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
210 nm (sol. aqu. 0.25 M)	: <0.05 A.U.	250 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
220 nm (sol. aqu. 0.25 M)	: <0.03 A.U.	260 nm (sol. aqu. 0.25 M)	: <0.02 A.U.

Lot analysis on the label.

1-Heptane sulfonic acid sodium salt solution 0.1M — Certified
for Ion pair chromatography

packaging		Mfr. No
250 mℓ	Glass bottle	H/0166/07

EINECS: 245-210-5

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.005 M) : <0.02 A.U.

Lot analysis on the label.

Heptan-1-ol
pure

packaging		Mfr. No
100 mℓ	Glass bottle	H/0250/05

$C_7H_{16}O$
CAS: 111-70-6
MW: 116.21
Density at 20°C: 0.822
Boiling point: 176°C
Melting point: -35°C
Flash point: 73°C
ADR/RID: 6.1/III

EINECS: 203-897-9
UN: 2810
GHS: Acute Tox. 4, Eye Irrit. 2
H312, H319, H332
P302+P352, P301+P312, P304+P340, P280, P305+P351+P338

Assay (CG): >98%

Hexachloroplatinic(IV) acid hydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 g	Vial	H/0262/43
5 g	Vial	H/0262/44

$H_2Cl_6Pt.6H_2O$
CAS: 26023-84-7
MW: 517.92
Melting point: 60°C
ADR/RID: 8, III
EINECS: 241-010-7
UN: 2507
GHS: Acute Tox. 3, Skin

Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1
H314, H301, H334, H317
P301+P310, P301+P330+P331, P305+P351+P338, P310, P261, P304+P341, P342+P311, P280

Assay: 39 to 41%

The price charged for this item is subject to alteration and will be that ruling at time of despatch.

Hexadecane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	H/0270/05

$C_{16}H_{34}$
CAS: 544-76-3
MW: 226.45
Density at 20°C: 0.773
Boiling point: 287°C
Melting point: 18°C

Flash point: 135°C
EINECS: 208-878-9
GHS: Asp. Tox. 1
H304, EUH066
P301+P310, P331, P280

Assay (CG): >98%

1.1,1.3,3.3-Hexafluoropropan-2-ol
for gas chromatography

packaging		Mfr. No
25 mℓ	Glass bottle	H/0285/04

$C_3H_2F_6O$
CAS: 920-66-1
MW: 168.04
Density at 20°C: 1.596
Boiling point: 59°C
Melting point: -4°C
Flash point: >100°C
ADR/RID: 8, II

EINECS: 213-059-4
UN: 3265
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H302, H314, H332
P280, P260, P264, P301+P330+P331, P305+P351+P338, P310

Assay (CG): >99%

Hexafluorosilicic acid
See Fluorosilicic acid 35%, page 130

Hexamethylenediamine
See 1, page 103

Hexamine — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	H/0320/53
1 kg	Plastic jar	H/0320/60
5 kg	Plastic keg	H/0320/65

$C_6H_{12}N_4$
CAS: 100-97-0
MW: 140.19
Density at 20°C: 1.33
Melting point: 280°C
Flash point: 250°C

ADR/RID: 4.1, III
EINECS: 202-905-8
UN: 1328
GHS: Flam. Sol. 2, Skin Sens. 1
H228, H317
P280, P210, P233

Assay: >99.5%

Guaranteed analysis

pH (10% aq. soln.)	: 8.5 to 9.5	Sodium (Na)	<20 ppm
Ammonium (NH_4)	<0.005%	Total chloride (Cl)	<0.002%
Calcium (Ca)	<10 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<10 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<5 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Arsenic (As)	<1 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Chromium (Cr)	<1 ppm	Vanadium (V)	<1 ppm
Cobalt (Co)	<1 ppm		

Lot analysis on the label.

Hexamine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	H/0300/53
1 kg	Plastic jar	H/0300/60
5 kg	Plastic keg	H/0300/65
25 kg	Fibre Keg	H/0300/70

$C_6H_{12}N_4$
CAS: 100-97-0
MW: 140.19
Density at 20°C: 1.33
Melting point: 280°C
Flash point: 250°C

ADR/RID: 4.1, III
EINECS: 202-905-8
UN: 1328
GHS: Flam. Sol. 2, Skin Sens. 1
H228, H317
P280, P210, P233

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Sodium (Na)	<100 ppm		

n-Hexane — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	H/0421/PB08
2.5 ℓ	Coated Glass bottle	H/0421/PB17
25 ℓ	Metal drum	H/0421/25
200 ℓ	Metal drum	H/0421/27

C_6H_{14}
CAS: 110-54-3
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 203-777-6

UN: 1208
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H336, H315, H373, H411, H361f
P281, P260, P301+P310, P331, P273, P302+P352, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.00008 meq/g	Lead (Pb)	<0.02 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.05 ppm
Water	<0.02%	Potassium (K)	<0.1 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<0.1 ppm
Substances darkened by (H_2SO_4)	Pass	Total phosphorus (P)	<0.1 ppm
		Total silicon (Si)	<0.05 ppm
Bromine number	<0.5	Total sulphur (S)	<10 ppm
Calcium (Ca)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Copper (Cu)	<0.02 ppm	Aromatic Hydrocarbons	<0.01%
Iron (Fe)	<0.1 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

n-Hexane NEW PACK. SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	H/0420/PB08
2.5 ℓ	Coated Glass bottle	H/0420/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	H/0420/21
25 ℓ	Metal drum	H/0420/25

C_6H_{14}
CAS: 110-54-3
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 203-777-6

UN: 1208
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H336, H315, H373, H411, H361f
P281, P260, P301+P310, P331, P273, P302+P352, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Lead (Pb)	<1 ppm
Colour	<20 APHA	Magnesium (Mg)	<1 ppm
Water	<0.05%	Potassium (K)	<1 ppm
Residue after evaporation	<50 ppm	Sodium (Na)	<2 ppm
Bromine number	<0.5	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<2 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Hexanes (95% n-Hexane approx.) NEW PACK. Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	H/0406/15
2.5 ℓ	Glass bottle	H/0406/17
2.5 ℓ	Coated Glass bottle	H/0406/PB17
5 ℓ	Aluminium can	H/0406/21
10 ℓ	Returnable Drum	H/0406/10RSS
25 ℓ	Returnable Drum	H/0406/25RSS
30 ℓ	Returnable Drum	H/0406/30RSS

C_6H_{14}
CAS: 110-54-3
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 295-570-2
UN: 1208

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H411, H315, H373, H336, H361f
P280, P281, P302+P352, P261, P260, P301+P310, P331, P273, P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.00015 meq/g	Residue after evaporation	<2 ppm
Water	<0.01%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.2 A.U.	230 nm	<0.01 A.U.
210 nm	<0.05 A.U.	240 nm	<0.005 A.U.
220 nm	<0.02 A.U.	250 nm	<0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Hexanes (95% n-Hexane approx.) Certified
HPLC for fluorescence detection

packaging		Mfr. No
1 ℓ	Coated Glass bottle	H/0409/PB15
2.5 ℓ	Coated Glass bottle	H/0409/PB17

C_6H_{14}
CAS: 92112-69-1
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 295-570-2
UN: 1208

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H411, H315, H373, H336, H361f
P280, P281, P302+P352, P261, P260, P301+P310, P331, P273, P210, P240

Assay (CG): >95%

Guaranteed analysis

Acidity / Alkalinity	<0.00015 meq/g	Residue after evaporation	<2 ppm
Water	<0.01%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.3 A.U.	240 nm	<0.005 A.U.
210 nm	<0.1 A.U.	250 nm	<0.005 A.U.
220 nm	<0.025 A.U.	Fluorescence	Pass
230 nm	<0.01 A.U.		

Fluorescence
Excitation in the range 250-750nm produces no fluorescence emission greater than the solvents natural Raman signal at 350nm excittation.This is equivalent to the emission maximum of approximately 1ppb quinine sulfate.
Lot analysis on the label (excluding fluorescence scan).
Filtered to 0.2 µm.

Hexanes (95% n-Hexane approx.) Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	H/0403/15
2.5 ℓ	Glass bottle	H/0403/17

C_6H_{14}
CAS: 92112-69-1
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 295-570-2
UN: 1208

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H411, H315, H373, H336, H361f
P280, P281, P302+P352, P261, P260, P301+P310, P331, P273, P210, P240

Guaranteed analysis

Water	<0.01%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachloréoxyde (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile: (1) 50°C, 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Hexanes (95% n-Hexane approx.)
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	H/0402/PB15
2.5 ℓ	Coated Glass bottle	H/0402/PB17

C_6H_{14}
CAS: 92112-69-1
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 295-570-2
UN: 1208

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H411, H315, H373, H336, H361f
P280, P281, P302+P352, P261, P260, P301+P310, P331, P273, P210, P240

Guaranteed analysis
Water ..... <0.005% Residue after evaporation ..... <2 ppm

Hexanes (95% n-Hexane approx) NEW PACK. Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	H/0355/15
2.5 ℓ	Glass bottle	H/0355/17
5 ℓ	Fluorinated HDPE Plastic bottle	H/0355/21
25 ℓ	Metal drum	H/0355/25
200 ℓ	Metal drum	H/0355/27

C_6H_{14}
CAS: 92112-69-1
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 295-570-2
UN: 1208

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H411, H315, H373, H336, H361f
P280, P281, P302+P352, P261, P260, P301+P310, P331, P273, P210, P240

Assay (CG): >95%

Guaranteed analysis

Acidity / Alkalinity	<0.00008 meq/g	Iron (Fe)	<0.1 ppm
Colour	<10 APHA	Lead (Pb)	<0.02 ppm
Water	<0.02%	Magnesium (Mg)	<0.05 ppm
Residue after evaporation	<20 ppm	Potassium (K)	<0.1 ppm
Substances darkened by (H_2SO_4)	Pass	Sodium (Na)	<0.1 ppm
Bromine number	<0.5	Total phosphorus (P)	<0.1 ppm
Hexane Fractions	: >98.5%	Total silicon (Si)	<0.05 ppm
Thiophene test	: Pass	Total sulphur (S)	<10 ppm
Calcium (Ca)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Copper (Cu)	<0.02 ppm	Aromatic Hydrocarbons	<0.1%

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

Hexanes fraction NEW PACK. SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	H/0350/08
1 ℓ	Glass bottle	H/0350/15
2.5 ℓ	Glass bottle	H/0350/17
2.5 ℓ	Coated Glass bottle	H/0350/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	H/0350/21
5 ℓ	Fluorinated HDPE square Drum	H/0350/FP21
25 ℓ	Metal drum	H/0350/25
200 ℓ	Metal drum	H/0350/27

C_6H_{14}
CAS: 92112-69-1
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 295-570-2
UN: 1208

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H411, H315, H373, H336, H361f
P280, P281, P302+P352, P261, P260, P301+P310, P331, P273, P210, P240

Guaranteed analysis
Residue after evaporation ..... <20 ppm

Hexanes fraction SLR
extra pure, low in aromatic hydrocarbons

packaging		Mfr. No
500 mℓ	Glass bottle	H/0400/08
2.5 ℓ	Glass bottle	H/0400/17

C_6H_{14}
CAS: 92112-69-1
MW: 86.18
Density at 20°C: 0.659
Boiling point: 69°C
Melting point: -95°C
Flash point: -22°C
ADR/RID: 3, II
EINECS: 295-570-2
UN: 1208

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H411, H315, H373, H336, H361f
P280, P281, P302+P352, P261, P260, P301+P310, P331, P273, P210, P240

Guaranteed analysis
Residue after evaporation ..... <20 ppm Aromatic Hydrocarbons ..... <0.1%

Hexanedioic acid See Adipic acid, page 26

1-Hexane sulfonic acid sodium salt — Certified
for Ion pair chromatography for electrochemical detection

packaging		Mfr. No
25 g	Plastic jar	H/0439/46

$C_6H_{13}NaO_3S.xH_2O$
CAS: 2832-45-3
MW: 188.22
Melting point: >300°C
EINECS: 220-601-3

GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H335, H315, H319
P261, P302+P352, P280,
P305+P351+P338

Assay: >98%

Guaranteed analysis
Electrochemical test ..... Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.25 M)	: <0.1 A.U.	240 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
210 nm (sol. aqu. 0.25 M)	: <0.05 A.U.	250 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
220 nm (sol. aqu. 0.25 M)	: <0.03 A.U.	260 nm (sol. aqu. 0.25 M)	: <0.02 A.U.

Tested by HPLC-EC to show low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.

1-Hexane sulfonic acid sodium salt — Certified
for Ion pair chromatography

packaging		Mfr. No
25 g	Plastic jar	H/0438/46
100 g	Plastic jar	H/0438/48

$C_6H_{13}NaO_3S.xH_2O$
CAS: 2832-45-3
MW: 188.22
Melting point: >300°C
EINECS: 220-601-3

GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H335, H315, H319
P261, P302+P352, P280,
P305+P351+P338

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.25 M)	: <0.1 A.U.	240 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
210 nm (sol. aqu. 0.25 M)	: <0.05 A.U.	250 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
220 nm (sol. aqu. 0.25 M)	: <0.03 A.U.	260 nm (sol. aqu. 0.25 M)	: <0.02 A.U.

Lot analysis on the label.

n-Hexanoic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 mℓ	Glass bottle	H/0440/07

$C_6H_{12}O_2$
CAS: 142-62-1
MW: 116.16
Density at 20°C: 0.920
Boiling point: 202 to 203°C
Melting point: -3°C
Flash point: 104°C
ADR/RID: 8, III
EINECS: 205-550-7

UN: 2829
GHS: Acute Tox. 4, Skin
Corr. 1B, Eye Dam. 1
H314, H332, H302, H312
P280, P301+P330+P331,
P305+P351+P338, P310,
P302+P352, P301+P312,
P304+P340

Guaranteed analysis
Complies with standard IR spectrum: Pass

Hexan-1-ol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	H/0450/PB08
2.5 ℓ	Coated Glass bottle	H/0450/PB17
25 ℓ	Metal drum	H/0450/25
200 ℓ	Metal drum	H/0450/27

$C_6H_{14}O$
CAS: 111-27-3
MW: 102.18
Density at 20°C: 0.814
Boiling point: 156 to 157°C
Melting point: -52°C
Flash point: 59°C

ADR/RID: 3, III
EINECS: 203-852-3
UN: 2282
GHS: Acute Tox. 4
H302
P280, P301+P312, P210

Assay (CG): >99%

Hex-1-ene — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	H/0460/05

C_6H_{12}
CAS: 592-41-6
MW: 84.16
Density at 20°C: 0.678
Boiling point: 62 to 65°C
Melting point: -140°C
Flash point: -26°C
ADR/RID: 3, II

EINECS: 209-753-1
UN: 2370
GHS: Flam. Liq. 2, STOT SE
3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H411, H336,
EUH066
P261, P301+P310, P331,
P273, P210, P240

Guaranteed analysis
Complies with standard IR spectrum: Pass

L-Histidine
pure

packaging		Mfr. No
100 g	Plastic jar	H/0467/48
3 kg	Plastic jar	H/0467/63

$C_6H_9N_3O_2$
CAS: 71-00-1
MW: 155.16

Melting point: 282°C
EINECS: 200-745-3

Assay: >98%

Holmium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLHO22Y
500 mℓ	Plastic bottle	SPPLHO22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Hyamine® 1622
For microscopy, solution 0.004M

packaging		Mfr. No
2.5 ℓ	Glass bottle	H/0480/17

Guaranteed analysis
Factor ..... : 0.97 to 1.03

Hyamine solution 5 % w/v — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	J/9016/15

Hyamine solution 0.05 M — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/9019/17

Hyamine solution 0.004 M — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/9018/17

Hydrazine hydrate — Certified AR
for analysis

packaging		Mfr. No
100 mℓ	Coated Glass bottle	H/0560/PB05
500 mℓ	HDPE Plastic bottle	H/0560/PB08

$N_2H_4.H_2O$
CAS: 7803-57-8
MW: 50.06
Boiling point: 118°C
Melting point: -51.7°C
Flash point: 75°C
ADR/RID: 8, 6.1, II
UN: 2030
GHS: Carc. 1B, Acute Tox. 3,
Skin Corr. 1B, Eye Dam. 1,

Skin Sens. 1, Aquatic Acute
1, Aquatic Chronic 1
H311, H350, H301, H314,
H331, H317, H410
P301+P310, P280, P312,
P302+P350,
P301+P330+P331,
P305+P351+P338, P310,
P201, P308+P313,
P304+P340, P273

Assay: >99%

Guaranteed analysis

Colour	<20 APHA	Sodium (Na)	<100 ppm
Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.005%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<1 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<5 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Molybdenum (Mo)	<1 ppm
Cadmium (Cd)	<1 ppm	Nickel (Ni)	<1 ppm
Chromium (Cr)	<1 ppm	Selenium (Se)	<1 ppm
Cobalt (Co)	<1 ppm	Strontium (Sr)	<1 ppm
Tin (Sn)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Hydrazine hydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 mℓ	Coated Glass bottle	H/0550/PB07
2.5 ℓ	HDPE Plastic bottle	H/0550/PB17

$N_2H_4.H_2O$
CAS: 7803-57-8
MW: 50.06
Boiling point: 118°C
Melting point: -51.7°C
Flash point: 75°C
ADR/RID: 8, 6.1, II
UN: 2030
GHS: Carc. 1B, Acute Tox. 3,
Skin Corr. 1B, Eye Dam. 1,

Skin Sens. 1, Aquatic Acute
1, Aquatic Chronic 1
H311, H350, H301, H314,
H331, H317, H410
P301+P310, P280, P312,
P302+P350,
P301+P330+P331,
P305+P351+P338, P310,
P201, P308+P313,
P304+P340, P273

Assay: >99%

Guaranteed analysis

Colour	<20 APHA	Sodium (Na)	<500 ppm
Calcium (Ca)	<50 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<20 ppm		

Hydrazine hydrate solution 60 % — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	H/0500/PB08

$N_2H_4.H_2O$
CAS: 7803-57-8
MW: 50.06
Boiling point: 118°C
Melting point: -51.7°C
Flash point: 75°C
ADR/RID: 8, 6.1, II
UN: 2030
GHS: Carc. 1B, Acute Tox. 3,
Skin Corr. 1B, Eye Dam. 1,

Skin Sens. 1, Aquatic Acute
1, Aquatic Chronic 1
H311, H350, H301, H314,
H331, H317, H410
P301+P310, P280, P312,
P302+P350,
P301+P330+P331,
P305+P351+P338, P310,
P201, P308+P313,
P304+P340, P273

Assay: 58 to 64%

Guaranteed analysis
n-Butyl formate ..... <0.03%

Hydrazinium chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	H/0600/50

$NH_2NH_2.2HCl$
CAS: 5341-61-7
MW: 104.97
Density at 20°C: 1.42
Boiling point: 200°C
Melting point: 198°C
ADR/RID: 6.1, III
EINECS: 226-283-2
UN: 2811

GHS: Carc. 1B, Acute Tox. 3,
Skin Sens. 1, Aquatic Acute
1, Aquatic Chronic 1
H311, H331, H350, H410,
H301, H317
P301+P310, P280,
P302+P350, P201,
P308+P313, P304+P340, P273

Assay: >98%

Hydrazinium sulfate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	H/0700/48
250 g	Plastic jar	H/0700/50

$H_4N_2.H_2SO_4$
CAS: 10034-93-2
MW: 130.12
Melting point: 254°C
ADR/RID: 6.1, III
EINECS: 233-110-4
UN: 3288
GHS: Carc. 1B, Acute Tox. 3,
Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H350, H331, H311, H301, H317, H410
P280, P301+P310, P302+P352, P304+P340, P308+P313, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Potassium (K)	<10 ppm
Copper (Cu)	<5 ppm	Sodium (Na)	<20 ppm
Iron (Fe)	<10 ppm	Total chloride (Cl)	<0.002%
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Manganese (Mn)	<1 ppm	Cobalt (Co)	<1 ppm
Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Chromium (Cr)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Hydrazinium sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	H/0650/53
25 kg	Plastic keg	H/0650/70

$H_4N_2.H_2SO_4$
CAS: 10034-93-2
MW: 130.12
Melting point: 254°C
ADR/RID: 6.1, III
EINECS: 233-110-4
UN: 3288
GHS: Carc. 1B, Acute Tox. 3,
Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H350, H331, H311, H301, H317, H410
P280, P301+P310, P302+P352, P304+P340, P308+P313, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Potassium (K)	<20 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<100 ppm
Iron (Fe)	<50 ppm	n-Butyl formate	<0.01%
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm

Hydriodic acid 64-68% — Certified AR
for analysis

packaging		Mfr. No
250 mℓ	Glass bottle	H/0850/07

HI
CAS: 10034-85-2
MW: 127.91
Density at 20°C: 1.7
Boiling point: 127°C
Melting point: -51°C
ADR/RID: 8, II
EINECS: 233-109-9
UN: 1787
GHS: Skin Corr. 1A, Eye Dam. 1, STOT SE 3
H335, H314
P264, P280, P301+P330+P331, P305+P351+P338, P310, P260

Assay: 64 to 68%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Nickel (Ni)	<0.5 ppm
Chloride and Bromide	<0.02%	Potassium (K)	<10 ppm
Chromium (Cr)	<0.5 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<5 ppm		

Lot analysis on the label.

Hydriodic acid 54-56% — SLR
extra pure, 1.7 specific gravity

packaging		Mfr. No
100 mℓ	Glass bottle	H/0750/05

HI
CAS: 10034-85-2
MW: 127.91
Density at 20°C: 1.7
Boiling point: 127°C
Melting point: -51°C
ADR/RID: 8, II
EINECS: 233-109-9
UN: 1787
GHS: Skin Corr. 1A, Eye Dam. 1, STOT SE 3
H335, H314
P264, P280, P301+P330+P331, P305+P351+P338, P310, P260

Assay: 54 to 56%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Nickel (Ni)	<2 ppm
Chloride and Bromide	<0.1%	Potassium (K)	<50 ppm
Chromium (Cr)	<2 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<100 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<200 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<20 ppm		

Hydrobromic acid 44-49% — NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
500 mℓ	Pre-cleaned Teflon FEP bottle	A471-500

HBr
CAS: 10035-10-6
MW: 80.92
Density at 20°C: 1.48
Boiling point: 128°C
Melting point: -11°C
ADR/RID: 8, II
EINECS: 233-113-0
UN: 1788
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H314, H335
P301+P330+P331, P280, P305+P351+P338, P261, P304+P340

Assay: 44-49%

Guaranteed analysis

Zirconium (Zr)	<10 ppt	Molybdenum (Mo)	<100 ppt
Gallium (Ga)	<100 ppt	Neodymium (Nd)	<10 ppt
Terbium (Tb)	<10 ppt	Nickel (Ni)	<100 ppt
Indium (In)	<10 ppt	Niobium (Nb)	<10 ppt
Dysprosium (Dy)	<10 ppt	Palladium (Pd)	<100 ppt
Aluminium (Al)	<100 ppt	Potassium (K)	<100 ppt
Barium (Ba)	<100 ppt	Praseodymium (Pr)	<10 ppt
Beryllium (Be)	<100 ppt	Rhenium (Re)	<100 ppt
Bismuth (Bi)	<100 ppt	Rhodium (Rh)	<100 ppt
Cadmium (Cd)	<100 ppt	Ruthenium (Ru)	<100 ppt
Calcium (Ca)	<100 ppt	Samarium (Sm)	<10 ppt
Cerium (Ce)	<10 ppt	Scandium (Sc)	<100 ppt
Cesium (Cs)	<10 ppt	Propan--1-ol	<100 ppt
Chromium (Cr)	<100 ppt	Sodium (Na)	<100 ppt
Cobalt (Co)	<100 ppt	Strontium (Sr)	<100 ppt
Copper (Cu)	<100 ppt	Tellurium (Te)	<10 ppt
Erbium (Er)	<10 ppt	Thallium (Tl)	<10 ppt
Europium (Eu)	<10 ppt	Thorium (Th)	<1 ppt
Gadolinium (Gd)	<10 ppt	Thulium (Tm)	<10 ppt
Gold (Au)	<100 ppt	Tin (Sn)	<100 ppt
Hafnium (Hf)	<10 ppt	Titanium (Ti)	<100 ppt
Holmium (Ho)	<10 ppt	Uranium (U)	<1 ppt
Iron (Fe)	<100 ppt	Vanadium (V)	<100 ppt
Lanthanum (La)	<10 ppt	Ytterbium (Yb)	<10 ppt
Lead (Pb)	<1 ppt	Yttrium (Y)	<10 ppt
Lithium (Li)	<100 ppt	Zinc (Zn)	<100 ppt
Lutetium (Lu)	<10 ppt	Platinum (Pt)	<100 ppt
Magnesium (Mg)	<100 ppt	Rubidium (Rb)	<100 ppt
Manganese (Mn)	<100 ppt	Tungsten (W)	<100 ppt

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Hydrobromic acid 48% — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	H/0950/PB08
2.5 ℓ	HDPE Plastic bottle	H/0950/PB17

HBr
CAS: 10035-10-6
MW: 80.92
Density at 20°C: 1.48
Boiling point: 126 to 128°C
Melting point: -11°C
ADR/RID: 8, II
EINECS: 233-113-0
UN: 1788
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H314, H335
P301+P330+P331, P280, P305+P351+P338, P261, P304+P340

Assay: 47 to 49%

Guaranteed analysis

Calcium (Ca)	<2 ppm	Potassium (K)	<0.5 ppm
Chromium (Cr)	<0.5 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<0.1 ppm	n-Butyl formate	<0.05%
Iodide (I)	<0.0002%	Total phosphorus (P)	<2 ppm
Iron (Fe)	<0.5 ppm	Total silicon (Si)	<5 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<0.5 ppm	Zinc (Zn)	<0.5 ppm
Nickel (Ni)	<0.5 ppm		

Calcium (Ca)	<10 ppt	Niobium (Nb)	<1 ppt
Cerium (Ce)	<10 ppt	Potassium (K)	<10 ppt
Cesium (Cs)	<10 ppt	Praseodymium (Pr)	<1 ppt
Chromium (Cr)	<10 ppt	Rhenium (Re)	<10 ppt
Cobalt (Co)	<10 ppt	Rhodium (Rh)	<10 ppt
Copper (Cu)	<10 ppt	Ruthenium (Ru)	<10 ppt
Erbium (Er)	<1 ppt	Samarium (Sm)	<1 ppt
Europium (Eu)	<1 ppt	Scandium (Sc)	<10 ppt
Gadolinium (Gd)	<1 ppt	Propan--1-ol	<10 ppt
Gold (Au)	<20 ppt	Sodium (Na)	<10 ppt
Hafnium (Hf)	<10 ppt	Strontium (Sr)	<10 ppt
Holmium (Ho)	<1 ppt	Tellurium (Te)	<1 ppt
Iron (Fe)	<10 ppt	Thallium (Tl)	<10 ppt
Lanthanum (La)	<1 ppt	Thorium (Th)	<1 ppt
Lead (Pb)	<10 ppt	Thulium (Tm)	<1 ppt
Lithium (Li)	<10 ppt	Tin (Sn)	<20 ppt
Lutetium (Lu)	<10 ppt	Titanium (Ti)	<10 ppt
Magnesium (Mg)	<10 ppt	Uranium (U)	<1 ppt
Manganese (Mn)	<10 ppt	Vanadium (V)	<10 ppt
Mercury (Hg)	<50 ppt	Ytterbium (Yb)	<1 ppt
Molybdenum (Mo)	<10 ppt	Yttrium (Y)	<1 ppt
Neodymium (Nd)	<1 ppt	Zinc (Zn)	<10 ppt
Nickel (Ni)	<20 ppt	Rubidium (Rb)	<10 ppt

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Hydrobromic acid 48% — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	H/0900/PB08
2.5 ℓ	HDPE Plastic bottle	H/0900/PB17
25 ℓ	HDPE Plastic container	H/0950/25
200 ℓ	HDPE Plastic container	H/0900/27

HBr
CAS: 10034-85-2
MW: 80.92
Density at 20°C: 1.48
Boiling point: 126 to 128°C
Melting point: -11°C
ADR/RID: 8, II
EINECS: 233-113-0
UN: 1788
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H314, H335
P301+P330+P331, P280, P305+P351+P338, P261, P304+P340

Assay: 47 to 49%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Potassium (K)	<10 ppm
Chromium (Cr)	<2 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<2 ppm	n-Butyl formate	<0.2%
Iodide (I)	<0.001%	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm
Nickel (Ni)	<2 ppm		

Hydrochloric acid 32-35% — NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
250 mℓ	Teflon PFA bottle	A466-250
500 mℓ	Pre-cleaned Teflon PFA bottle	A466-500
1 ℓ	Pre-cleaned Teflon PFA bottle	A466-1

HCl
CAS: 7647-01-0
MW: 36.46 g/mol
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C
ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789
GHS: Skin Corr. 1B, STOT SE 3
H335, H314
P305+P351+P338, P310, P280

Assay: 32-35%

Guaranteed analysis

Zirconium (Zr)	<10 ppt	Arsenic (As)	<50 ppt
Gallium (Ga)	<10 ppt	Barium (Ba)	<10 ppt
Terbium (Tb)	<1 ppt	Beryllium (Be)	<10 ppt
Indium (In)	<1 ppt	Bismuth (Bi)	<10 ppt
Dysprosium (Dy)	<1 ppt	Boron (B)	<100 ppt
Aluminium (Al)	<20 ppt	Cadmium (Cd)	<10 ppt
Antimony (Sb)	<20 ppt		

Hydrochloric acid 34-37% — NEW — Trace Metal
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE plastic bottle	A508-P500
1 ℓ	HDPE plastic bottle	A508-P1
2.5 ℓ	HDPE plastic bottle	A508-P212

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C
ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789
GHS: Skin Corr. 1B, STOT SE 3
H335, H314
P305+P351+P338, P310, P280

Assay: 34-37%

Guaranteed analysis

Colour	<10 APHA	Neodymium (Nd)	<0.1 ppb
Aluminium (Al)	<1 ppb	Nickel (Ni)	<0.5 ppb
Antimony (Sb)	<0.5 ppb	Niobium (Nb)	<0.1 ppb
Arsenic (As)	<0.5 ppb	Palladium (Pd)	<0.5 ppb
Barium (Ba)	<0.1 ppb	Platinum (Pt)	<0.5 ppb
Beryllium (Be)	<0.1 ppb	Potassium (K)	<1 ppb
Bismuth (Bi)	<0.1 ppb	Praseodymium (Pr)	<0.1 ppb
Boron (B)	<1 ppb	Rhenium (Re)	<0.1 ppb
Bromide (Br)	<10 ppm	Rhodium (Rh)	<0.1 ppb
Cadmium (Cd)	<0.1 ppb	Rubidium (Rb)	<0.1 ppb
Calcium (Ca)	<1 ppb	Ruthenium (Ru)	<0.1 ppb
Cerium (Ce)	<0.1 ppb	Samarium (Sm)	<0.1 ppb
Cesium (Cs)	<0.1 ppb	Scandium (Sc)	<0.1 ppb
Free Chlorine (Cl_2)	<0.5 ppm	Selenium (Se)	<1 ppb
Chromium (Cr)	<0.5 ppb	Silver (Ag)	<1 ppb
Cobalt (Co)	<0.1 ppb	Sodium (Na)	<1 ppb
Copper (Cu)	<0.5 ppb	Strontium (Sr)	<0.1 ppb
Dysprosium (Dy)	<0.1 ppb	Tantalum (Ta)	<1 ppb
Erbium (Er)	<0.1 ppb	Tellurium (Te)	<0.1 ppb
Europium (Eu)	<0.1 ppb	Terbium (Tb)	<0.1 ppb
Gadolinium (Gd)	<0.1 ppb	Thallium (Tl)	<0.1 ppb
Gallium (Ga)	<0.1 ppb	Thorium (Th)	<0.1 ppb
Gold (Au)	<0.5 ppb	Thulium (Tm)	<0.1 ppb
Hafnium (Hf)	<0.1 ppb	Tin (Sn)	<0.5 ppb
Holmium (Ho)	<0.1 ppb	Titanium (Ti)	<0.5 ppb
Indium (In)	<0.1 ppb	Total phosphorus (P)	<0.01 ppm
Iron (Fe)	<1 ppb	Total sulphur (S)	<0.3 ppm
Lanthanum (La)	<0.1 ppb	Tungsten (W)	<0.1 ppb
Lead (Pb)	<0.1 ppb	Uranium (U)	<0.1 ppb
Lithium (Li)	<0.1 ppb	Vanadium (V)	<0.5 ppb
Lutetium (Lu)	<0.1 ppb	Ytterbium (Yb)	<0.1 ppb
Magnesium (Mg)	<0.5 ppb	Yttrium (Y)	<0.1 ppb
Manganese (Mn)	<0.1 ppb	Zinc (Zn)	<1 ppb
Mercury (Hg)	<0.1 ppb	Zirconium (Zr)	<0.1 ppb
Molybdenum (Mo)	<0.1 ppb		

Bottled in class 10 cleanroom conditions.
Lot analysis on the label.

Hydrochloric acid 37% d=1.18 NEW PACK. — Primar Plus
for trace metal analysis

packaging		Mfr. No
250 mℓ	HDPE Plastic bottle	H/1196/PB07
500 mℓ	HDPE Plastic bottle	H/1196/PB08
1 ℓ	HDPE Plastic bottle	H/1196/PB15
2.5 ℓ	HDPE Plastic bottle	H/1196/PB17

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C

ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789
GHS: Skin Corr. 1B, STOT SE 3
H335, H314
P305+P351+P338, P310, P280

Assay: 35 to 38%

Guaranteed analysis

Aluminium (Al)	<0.02 ppm	Magnesium (Mg)	<0.02 ppm
Antimony (Sb)	<0.005 ppm	Manganese (Mn)	<0.002 ppm
Arsenic (As)	<0.01 ppm	Mercury (Hg)	<0.005 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.002 ppm
Beryllium (Be)	<0.005 ppm	Nickel (Ni)	<0.005 ppm
Bismuth (Bi)	<0.005 ppm	Potassium (K)	<0.05 ppm
Boron (B)	<0.005 ppm	Silver (Ag)	<0.002 ppm
Cadmium (Cd)	<0.002 ppm	Sodium (Na)	<0.2 ppm
Calcium (Ca)	<0.1 ppm	Strontium (Sr)	<0.002 ppm
Free Chlorine (Cl_2)	<1 ppm	Thallium (Tl)	<0.005 ppm
Chromium (Cr)	<0.005 ppm	Tin (Sn)	<0.005 ppm
Cobalt (Co)	<0.002 ppm	Titanium (Ti)	<0.005 ppm
Copper (Cu)	<0.005 ppm	Total nitrogen (N)	<5 ppm
Gallium (Ga)	<0.005 ppm	Total phosphorus (P)	<0.2 ppm
Germanium (Ge)	<0.005 ppm	Vanadium (V)	<0.002 ppm
Indium (In)	<0.005 ppm	Zinc (Zn)	<0.01 ppm
Iron (Fe)	<0.1 ppm	Residue after ignition	<0.0002%
Lead (Pb)	<0.002 ppm	Sulfate (SO_4)	<1 ppm
Lithium (Li)	<0.002 ppm		

Hydrochloric acid 37% d=1.18
for AAS

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	H/1185/PB17

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C

ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789
GHS: Skin Corr. 1B, STOT SE 3
H335, H314
P305+P351+P338, P310, P280

Assay: 35 to 38%

Guaranteed analysis

Cadmium (Cd)	<0.02 ppm	Magnesium (Mg)	<0.2 ppm
Calcium (Ca)	<0.5 ppm	Manganese (Mn)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Copper (Cu)	<0.05 ppm	Potassium (K)	<0.2 ppm
Iron (Fe)	<0.2 ppm	Sodium (Na)	<1 ppm
Lead (Pb)	<0.05 ppm	Zinc (Zn)	<0.2 ppm

Hydrochloric acid has a concentration of 11.65 M (11.65 N).

Hydrochloric acid 37% d=1.18
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	H/1111/PB17
25 ℓ	HDPE Plastic container	H/1111/25

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C

ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789
GHS: Skin Corr. 1B, STOT SE 3
H335, H314
P305+P351+P338, P310, P280

Assay: 35.5 to 37.5%

Guaranteed analysis

Colour	<10 APHA	Manganese (Mn)	<0.02 ppm
Free Chlorine (Cl_2)	<2 ppm	Molybdenum (Mo)	<0.02 ppm
Aluminium (Al)	<0.5 ppm	Nickel (Ni)	<0.01 ppm
Barium (Ba)	<0.1 ppm	Potassium (K)	<0.5 ppm
Cadmium (Cd)	<0.05 ppm	Sodium (Na)	<2 ppm
Calcium (Ca)	<1 ppm	Strontium (Sr)	<0.02 ppm
Chromium (Cr)	<0.1 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Total phosphorus (P)	<1 ppm
Copper (Cu)	<0.1 ppm	Total silicon (Si)	<0.5 ppm
Iron (Fe)	<0.5 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<0.1 ppm	Vanadium (V)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Zinc (Zn)	<0.2 ppm
Magnesium (Mg)	<0.5 ppm		

Filtered to 0.2 µm.

Hydrochloric acid 37% NEW SPECS — Certified, Eur.Ph.
for analysis with low Cadmium, Lead & Mercury level

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	H/1180/PB08
1 ℓ	HDPE Plastic bottle	H/1180/PB15
2.5 ℓ	HDPE Plastic bottle	H/1180/PB17

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C

ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789
GHS: Skin Corr. 1B, STOT SE 3
H335, H314
P305+P351+P338, P310, P280

Assay: 35.5 to 38%

Guaranteed analysis

Colour	<10 APHA	Lithium (Li)	<0.01 ppm
Free Chlorine (Cl_2)	<1 ppm	Magnesium (Mg)	<0.1 ppm
Zirconium (Zr)	<0.02 ppm	Manganese (Mn)	<0.01 ppm
Gallium (Ga)	<0.02 ppm	Mercury (Hg)	<0.005 ppm
Aluminium (Al)	<0.05 ppm	Molybdenum (Mo)	<0.02 ppm
Arsenic (As)	<0.01 ppm	Nickel (Ni)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Phosphate (PO_4)	<0.5 ppm
Beryllium (Be)	<0.01 ppm	Potassium (K)	<0.1 ppm
Bismuth (Bi)	<0.02 ppm	Sodium (Na)	<0.5 ppm
Cadmium (Cd)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Calcium (Ca)	<0.5 ppm	Sulfate (SO_4)	<1 ppm
Chromium (Cr)	<0.02 ppm	Thallium (Tl)	<0.02 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.02 ppm
Copper (Cu)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Germanium (Ge)	<0.02 ppm	Zinc (Zn)	<0.05 ppm
Iron (Fe)	<0.2 ppm	Residue after ignition	<5 ppm
Lead (Pb)	<0.01 ppm		

Lot analysis on the label

Hydrochloric acid 37% d=1.18 — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	H/1200/PB08
1 ℓ	HDPE Plastic bottle	H/1200/PB15
1 ℓ	Coated Glass bottle	H/1200/PC15
2.5 ℓ	HDPE Plastic bottle	H/1200/PB17
2.5 ℓ	Coated Glass bottle	H/1200/PC17
25 ℓ	HDPE Plastic container	H/1200/25

HCl
CAS: 7647-01-0
MW: 36.4536.46 g/mol
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C

ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789
GHS: Skin Corr. 1B, STOT SE 3
H335, H314
P305+P351+P338, P310, P280

Assay: 35 to 38%

Guaranteed analysis

Colour	<10 APHA	Mercury (Hg)	<0.05 ppm
Residue after ignition	<0.0005%	Molybdenum (Mo)	<0.02 ppm
Aluminium (Al)	<0.5 ppm	Nickel (Ni)	<0.1 ppm
Arsenic (As)	<0.01 ppm	Potassium (K)	<0.5 ppm
Barium (Ba)	<0.1 ppm	Silver (Ag)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Sodium (Na)	<2 ppm
Calcium (Ca)	<1 ppm	Strontium (Sr)	<0.02 ppm
Free Chlorine (Cl_2)	<1 ppm	Sulfate (SO_4)	<5 ppm
Cobalt (Co)	<0.02 ppm	Tin (Sn)	<0.1 ppm
Copper (Cu)	<0.1 ppm	Titanium (Ti)	<0.05 ppm
Iron (Fe)	<0.5 ppm	Total phosphorus (P)	<1 ppm
Lead (Pb)	<0.1 ppm	Vanadium (V)	<0.01 ppm
Lithium (Li)	<0.02 ppm	Zinc (Zn)	<0.5 ppm
Magnesium (Mg)	<0.5 ppm	Chromium (Cr)	<0.1 ppm
Manganese (Mn)	<0.02 ppm		

Lot analysis on the label.
Hydrochloric acid is equivalent to a strength of 11.65M (11.65N).

Hydrochloric acid 37% d=1.18 — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1150/PB15
2.5 ℓ	HDPE Plastic bottle	H/1150/PB17
5 ℓ	HDPE Plastic bottle	H/1150/21
25 ℓ	HDPE Plastic container	H/1150/25
45 ℓ	Plastic container	H/1150/26

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C

ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789
GHS: Skin Corr. 1B, STOT SE 3
H335, H314
P305+P351+P338, P310, P280

Assay: 35 to 38%

Guaranteed analysis

Colour	<20 APHA	Magnesium (Mg)	<5 ppm
Free Chlorine (Cl_2)	<10 ppm	Potassium (K)	<5 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm

Hydrochloric acid is equivalent to a strength of 11.65M (11.65N).

Hydrochloric acid 32% d=1.16 — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1100/PB15
2.5 ℓ	HDPE Plastic bottle	H/1100/PB17
45 ℓ	Plastic container	H/1100/26

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.16
Boiling point: 57°C
Melting point: -35°C
ADR/RID: 8, II
EINECS: 231-595-7

UN: 1789
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H335, H314
P301+P330+P331, P280, P305+P351+P338, P261, P301+P312, P304+P340

Assay: 31.5 to 33%

Guaranteed analysis

Colour	<10 APHA	Nickel (Ni)	<0.05 ppm
Calcium (Ca)	<1 ppm	Potassium (K)	<0.5 ppm
Free Chlorine (Cl_2)	<2 ppm	Sodium (Na)	<2 ppm
Chromium (Cr)	<0.05 ppm	Total phosphorus (P)	<1 ppm
Copper (Cu)	<0.05 ppm	Total silicon (Si)	<0.5 ppm
Iron (Fe)	<0.5 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<0.05 ppm	Zinc (Zn)	<0.2 ppm
Magnesium (Mg)	<0.5 ppm		

Typical analysis

Aluminium (Al)	<0.5 ppm	Lithium (Li)	<0.02 ppm
Silver (Ag)	<0.02 ppm	Manganese (Mn)	<0.02 ppm
Arsenic (As)	<0.05 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.1 ppm	Strontium (Sr)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Hydrochloric acid is equivalent to a strength of 10.2M (10.2N).
Lot analysis on the label.

Hydrochloric acid 32% d=1.16 — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	H/1050/PB17
45 ℓ	Plastic container	H/1050/26

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.16
Boiling point: 57°C
Melting point: -35°C
ADR/RID: 8, II
EINECS: 231-595-7

UN: 1789
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H335, H314
P301+P330+P331, P280, P305+P351+P338, P261, P301+P312, P304+P340

Assay: 31 to 33%

Guaranteed analysis

Colour	<20 APHA	Nickel (Ni)	<1 ppm
Free Chlorine (Cl_2)	<10 ppm	Potassium (K)	<5 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<10 ppm
Chromium (Cr)	<1 ppm	Total phosphorus (P)	<10 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<5 ppm		

Hydrochloric acid is equivalent to a strength of 10.2M (10.2N).

Hydrochloric acid 32% d=1.16
Technical, d=1.16

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	H/1000/PB17

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.16
Boiling point: 57°C
Melting point: -35°C
ADR/RID: 8, II
EINECS: 231-595-7

UN: 1789
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H335, H314
P301+P330+P331, P280, P305+P351+P338, P261, P301+P312, P304+P340

Guaranteed analysis

Identity test ..... : Pass

Hydrochloric acid 25% NEW — Certified AR, Eur.Ph.
for analysis with low Cadmium, Lead & Mercury level

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1020/PB15
2.5 ℓ	HDPE Plastic bottle	H/1020/PB17

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.12
Boiling point: 107°C
Melting point: -70°C
ADR/RID: 8, II
EINECS: 231-595-7

UN: 1789
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H335, H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353, P304+P340

Assay: >25.0%

Guaranteed analysis

Colour	<10 APHA	Lead (Pb)	<0.02 ppm
Free Chlorine (Cl_2)	<1 ppm	Lithium (Li)	<0.01 ppm
Zirconium (Zr)	<0.05 ppm	Magnesium (Mg)	<0.2 ppm
Aluminium (Al)	<0.2 ppm	Manganese (Mn)	<0.01 ppm
Arsenic (As)	<0.01 ppm	Mercury (Hg)	<0.01 ppm
Barium (Ba)	<0.05 ppm	Molybdenum (Mo)	<0.02 ppm
Beryllium (Be)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Bismuth (Bi)	<0.05 ppm	Potassium (K)	<0.1 ppm
Cadmium (Cd)	<0.01 ppm	Sodium (Na)	<0.5 ppm
Calcium (Ca)	<1 ppm	Strontium (Sr)	<0.01 ppm
Chromium (Cr)	<0.02 ppm	Sulfate (SO_4)	<1 ppm
Cobalt (Co)	<0.01 ppm	Thallium (Tl)	<0.05 ppm
Copper (Cu)	<0.02 ppm	Titanium (Ti)	<0.05 ppm
Germanium (Ge)	<0.05 ppm	Vanadium (V)	<0.01 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.05 ppm

Lot analysis on the label

Hydrochloric acid 20% d=1.1 NEW — Primar
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	H/1190/PB08
2.5 ℓ	HDPE Plastic bottle	H/1190/PB17

HCl
CAS: 7647-01-0
MW: 36.46
Density at 20°C: 1.05 to 1.12
Boiling point: 110°C
ADR/RID: 8, II

EINECS: 231-595-7
UN: 1789
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P305+P351+P338

Assay: >20%

Guaranteed analysis

Aluminium (Al)	<0.05 ppm	Mercury (Hg)	<0.002 ppm
Arsenic (As)	<0.02 ppm	Molybdenum (Mo)	<0.005 ppm
Barium (Ba)	<0.05 ppm	Nickel (Ni)	<0.005 ppm
Cadmium (Cd)	<0.005 ppm	Potassium (K)	<0.2 ppm
Calcium (Ca)	<0.2 ppm	Propan--1-ol	<0.005 ppm
Chromium (Cr)	<0.005 ppm	Sodium (Na)	<1 ppm
Cobalt (Co)	<0.005 ppm	Strontium (Sr)	<0.005 ppm
Copper (Cu)	<0.01 ppm	Titanium (Ti)	<0.005 ppm
Iron (Fe)	<0.1 ppm	Total phosphorus (P)	<0.2 ppm
Lead (Pb)	<0.001 ppm	Total silicon (Si)	<0.5 ppm
Lithium (Li)	<0.002 ppm	Total sulphur (S)	<0.5 ppm
Magnesium (Mg)	<0.02 ppm	Vanadium (V)	<0.005 ppm
Manganese (Mn)	<0.005 ppm	Zinc (Zn)	<0.02 ppm

Hydrochloric acid solution 2M (2N)
pure, Bench Reagent

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/4250/17

Density at 20°C: 1.0 to 1.2
Boiling point: 100°C
Melting point: 0°C
ADR/RID: 8, III
EINECS: 231-595-7

UN: 1789
GHS: Skin Corr. 1B
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ±5%.

Hydrochloric acid solution 5M
pure, Bench Reagent

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/4270/17
25 ℓ	HDPE Plastic container	J/4270/25

CAS: 7647-01-0
Density at 20°C: 1.0 to 1.2
Boiling point: 81.5 to 110°C
Melting point: -74°C
ADR/RID: 8, II
EINECS: 231-595-7

UN: 1789
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P305+P351+P338

Manufactured to a tolerance of ±2.5%.

Hydrochloric acid solution 0.2M (0.2N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/4340/15
2.5 ℓ	HDPE Plastic bottle	J/4340/17

CAS: 7647-01-0
Density at 20°C: 1
Boiling point: 100°C
EINECS: 231-595-7

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 0.1M (0.1N) — Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/4350/15
2.5 ℓ	HDPE Plastic bottle	J/4350/17
5 ℓ	HDPE Plastic bottle	J/4350/21
10 ℓ	Bag in box	J/4350/24
25 ℓ	HDPE Plastic container	J/4350/25

CAS: 7647-01-0
Density at 20°C: 1
Boiling point: 100°C
EINECS: 231-595-7

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 0.1M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/4350C/05
6	Ampoule	J/4350C/90

CAS: 7647-01-0
Density at 20°C: 1.00 to 1.05
Boiling point: 100 to 103°C
ADR/RID: 8, III
EINECS: 231-595-7

UN: 1789
GHS: Met. Corr. 1
H290
P234, P390

Stabilised with 10 ppm of Mercury(II) chloride.
Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 0.5M (0.5N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/4330/15
2.5 ℓ	HDPE Plastic bottle	J/4330/17
25 ℓ	HDPE Plastic container	J/4330/25

CAS: 7647-01-0
Density at 20°C: 1.00 to 1.05
Boiling point: 100 to 103°C
ADR/RID: 8, III
EINECS: 231-595-7

UN: 1789
GHS: Met. Corr. 1
H290
P234, P390

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 0.02M (0.02N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/4360/PB15
2.5 ℓ	HDPE Plastic bottle	J/4360/17

CAS: 7647-01-0
Density at 20°C: 1
Boiling point: 100°C
EINECS: 231-595-7

Manufactured to a tolerance of ± 0.3%.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 0.5M (0.5N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/4330C/05
6	Ampoule	J/4330C/90

CAS: 7647-01-0
Density at 20°C: 1.18
Boiling point: 57°C
Melting point: -35°C
ADR/RID: 8, II
EINECS: 231-595-7

UN: 1789
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P305+P351+P338

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 1M (1N) — Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/4320/15
2.5 ℓ	HDPE Plastic bottle	J/4320/17
5 ℓ	HDPE Plastic bottle	J/4320/21
10 ℓ	Bag in box	J/4320/24

CAS: 7647-01-0
Density at 20°C: 1.00 to 1.05
Boiling point: 100 to 103°C
ADR/RID: 8, III
EINECS: 231-595-7

UN: 1789
GHS: Met. Corr. 1
H290
P234, P390

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 1M (1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/4320C/05
6	Ampoule	J/4320C/90

CAS: 7647-01-0
Density at 20°C: 1.16
Boiling point: 57°C
Melting point: -35°C
ADR/RID: 8, II
EINECS: 231-595-7
UN: 1789

GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H335, H314
P301+P330+P331, P280, P305+P351+P338, P261, P301+P312, P304+P340

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 5M (5N)
Standard solution ready to use for volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/4310/15
2.5 ℓ	HDPE Plastic bottle	J/4310/17
5 ℓ	HDPE Plastic bottle	J/4310/21

CAS: 7647-01-0
Density at 20°C: 1.0 to 1.2
Boiling point: 81.5 to 110°C
Melting point: -74°C
ADR/RID: 8, II
EINECS: 231-595-7

UN: 1789
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P280, P305+P351+P338

Manufactured to a tolerance of ± 0.5%.
See the full range of Standard Volumetric solution page 323.

Hydrochloric acid solution 2M (2N) — Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/4315/15
2.5 ℓ	HDPE Plastic bottle	J/4315/17
10 ℓ	Bag in box	J/4315/24

CAS: 7647-01-0
Density at 20°C: 1.00 to 1.05
Boiling point: 100 to 103°C
ADR/RID: 8, III
EINECS: 231-595-7

UN: 1789
GHS: Met. Corr. 1
H290
P234, P390

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Hydrofluoric acid 58-62%
Technical

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1300/15
2.5 ℓ	HDPE Plastic bottle	H/1300/17

HF
CAS: 7664-39-3
MW: 20.01
Density at 20°C: 1.15 to1.20
Boiling point: 105°C
Melting point: -35°C
ADR/RID: 8, 6.1, II
EINECS: 231-634-8

UN: 1790
GHS: Acute Tox. 1, Skin Corr. 1A, Eye Dam. 1
H310, H314, H300, H330
P280, P303+P361+P353, P301+P310, P301+P330+P331, P305+P351+P338, P304+P340

Assay: 58 to 62%

Hydrofluoric acid 47-51% NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
250 mℓ	Pre-cleaned Teflon PFA bottle	A463-250
500 mℓ	Pre-cleaned Teflon PFA bottle	A463-500
1 ℓ	Pre-cleaned Teflon PFA bottle	A463-1

HF
CAS: 7664-39-3
MW: 20.00
Density at 20°C: 1.15 to 1.20
Boiling point: 105°C
Melting point: -35°C
ADR/RID: 8, 6.1, II
EINECS: 231-634-8

UN: 1790
GHS: Acute Tox. 1, Skin Corr. 1A, Eye Dam. 1
H310, H314, H300, H330
P280, P303+P361+P353, P301+P310, P301+P330+P331, P305+P351+P338, P304+P340

Assay: 47-51%

Guaranteed analysis

Zirconium (Zr)	<10 ppt	Mercury (Hg)	<50 ppt
Gallium (Ga)	<10 ppt	Molybdenum (Mo)	<10 ppt
Terbium (Tb)	<1 ppt	Neodymium (Nd)	<1 ppt
Indium (In)	<1 ppt	Nickel (Ni)	<20 ppt
Dysprosium (Dy)	<1 ppt	Niobium (Nb)	<10 ppt
Aluminium (Al)	<20 ppt	Palladium (Pd)	<20 ppt
Antimony (Sb)	<20 ppt	Potassium (K)	<10 ppt
Arsenic (As)	<50 ppt	Praseodymium (Pr)	<1 ppt
Barium (Ba)	<10 ppt	Rhenium (Re)	<10 ppt
Beryllium (Be)	<10 ppt	Rhodium (Rh)	<20 ppt
Bismuth (Bi)	<10 ppt	Ruthenium (Ru)	<20 ppt
Boron (B)	<100 ppt	Samarium (Sm)	<1 ppt
Cadmium (Cd)	<10 ppt	Scandium (Sc)	<10 ppt
Calcium (Ca)	<10 ppt	Propan--1-ol	<10 ppt
Cerium (Ce)	<10 ppt	Sodium (Na)	<10 ppt
Chromium (Cr)	<10 ppt	Strontium (Sr)	<10 ppt
Cobalt (Co)	<10 ppt	Tellurium (Te)	<1 ppt
Copper (Cu)	<10 ppt	Thallium (Tl)	<10 ppt
Erbium (Er)	<1 ppt	Thorium (Th)	<1 ppt
Europium (Eu)	<1 ppt	Thulium (Tm)	<1 ppt
Gadolinium (Gd)	<1 ppt	Tin (Sn)	<20 ppt
Germanium (Ge)	<10 ppt	Titanium (Ti)	<20 ppt
Gold (Au)	<20 ppt	Total sulphur (S)	<100 ppb
Hafnium (Hf)	<10 ppt	Uranium (U)	<1 ppt
Holmium (Ho)	<1 ppt	Vanadium (V)	<10 ppt
Iron (Fe)	<10 ppt	Ytterbium (Yb)	<1 ppt
Lanthanum (La)	<10 ppt	Yttrium (Y)	<1 ppt
Lead (Pb)	<10 ppt	Zinc (Zn)	<10 ppt
Lithium (Li)	<10 ppt	Platinum (Pt)	<20 ppt
Lutetium (Lu)	<1 ppt	Rubidium (Rb)	<20 ppt
Magnesium (Mg)	<10 ppt	Tungsten (W)	<20 ppt
Manganese (Mn)	<10 ppt		

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Hydrofluoric acid 47-51% NEW — Trace Metal
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE plastic bottle	A513-P500

HF
CAS: 7664-39-3
MW: 20.01
Density at 20°C: 1.15 to 1.20
Boiling point: 105°C
Melting point: -35°C
ADR/RID: 8, 6.1, II
EINECS: 231-634-8

UN: 1790
GHS: Acute Tox. 1, Skin Corr. 1A, Eye Dam. 1
H310, H314, H300, H330
P280, P303+P361+P353, P301+P310, P301+P330+P331, P305+P351+P338, P304+P340

Assay: 47-51%

Guaranteed analysis

Colour	<10 APHA	Cerium (Ce)	<0.1 ppb
Aluminium (Al)	<1ppb	Cesium (Cs)	<0.1 ppb
Antimony (Sb)	<0.2 ppb	Chromium (Cr)	<1 ppb
Arsenic (As)	<0.5 ppb	Cobalt (Co)	<0.1 ppb
Barium (Ba)	<0.1 ppb	Copper (Cu)	<0.5 ppb
Beryllium (Be)	<0.1 ppb	Dysprosium (Dy)	<0.1 ppb
Bismuth (Bi)	<0.1 ppb	Erbium (Er)	<0.1 ppb
Boron (B)	<1 ppb	Europium (Eu)	<0.1 ppb
Cadmium (Cd)	<0.1 ppb	Fluorosilicic acid (SiF_6)	<20 ppm
Calcium (Ca)	<1ppb		
Gadolinium (Gd)	<0.1 ppb	Rubidium (Rb)	<0.1 ppb
Gallium (Ga)	<0.1 ppb	Ruthenium (Ru)	<0.1 ppb
Germanium (Ge)	<0.1 ppb	Samarium (Sm)	<0.1 ppb
Gold (Au)	<0.2 ppb	Scandium (Sc)	<0.1 ppb
Hafnium (Hf)	<0.1 ppb	Selenium (Se)	<1 ppb
Holmium (Ho)	<0.1 ppb	Silver (Ag)	<0.5 ppb
Indium (In)	<0.1 ppb	Sodium (Na)	<1 ppb
Iron (Fe)	<1 ppb	Strontium (Sr)	<0.1 ppb
Lanthanum (La)	<0.1 ppb	Tantalum (Ta)	<0.1 ppb
Lead (Pb)	<0.1 ppb	Tellurium (Te)	<0.1 ppb
Lithium (Li)	<0.1 ppb	Terbium (Tb)	<0.1 ppb
Lutetium (Lu)	<0.1 ppb	Thallium (Tl)	<0.1 ppb
Magnesium (Mg)	<1 ppb	Thorium (Th)	<0.1 ppb
Manganese (Mn)	<0.1 ppb	Thulium (Tm)	<0.1 ppb
Mercury (Hg)	<1 ppb	Tin (Sn)	<0.1 ppb
Molybdenum (Mo)	<0.1 ppb	Titanium (Ti)	<1 ppb
Neodymium (Nd)	<0.1 ppb	Total chloride (Cl)	<4 ppm
Nickel (Ni)	<0.5 ppb	Total phosphorus (P)	<0.05 ppm
Niobium (Nb)	<0.1 ppb	Total sulphur (S)	<0.5 ppm
Palladium (Pd)	<0.2 ppb	Tungsten (W)	<0.5 ppb
Platinum (Pt)	<0.2 ppb	Uranium (U)	<0.1 ppb
Potassium (K)	<1 ppb	Vanadium (V)	<0.1 ppb
Praseodymium (Pr)	<0.1 ppb	Ytterbium (Yb)	<0.1 ppb
Rhenium (Re)	<0.1 ppb	Yttrium (Y)	<0.1 ppb
Rhodium (Rh)	<0.1 ppb	Zinc (Zn)	<1 ppb

Bottled in class 10 cleanroom conditions.
Lot analysis on the label.

Hydrofluoric acid 48%
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	H/1425/17

HF
CAS: 7664-39-3
MW: 20.01
Density at 20°C: 1.15 to 1.20
Boiling point: 105°C
Melting point: -35°C
ADR/RID: 8, 6.1, II
EINECS: 231-634-8

UN: 1790
GHS: Acute Tox. 1, Skin Corr. 1A, Eye Dam. 1
H310, H314, H300, H330
P280, P303+P361+P353, P301+P310, P301+P330+P331, P305+P351+P338, P304+P340

Assay: >48%

Guaranteed analysis

Colour	<10 APHA	Molybdenum (Mo)	<0.05 ppm
Aluminium (Al)	<0.5 ppm	Nickel (Ni)	<0.1 ppm
Barium (Ba)	<0.02 ppm	Potassium (K)	<0.1 ppm
Cadmium (Cd)	<0.02 ppm	Sodium (Na)	<0.2 ppm
Calcium (Ca)	<0.5 ppm	Strontium (Sr)	<0.02 ppm
Chromium (Cr)	<0.05 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	n-Butyl formate	<0.0005%
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<0.5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<10 ppm
Lithium (Li)	<0.02 ppm	Total sulphur (S)	<2 ppm
Magnesium (Mg)	<0.2 ppm	Vanadium (V)	<0.02 ppm
Manganese (Mn)	<0.05 ppm	Zinc (Zn)	<0.5 ppm

Hydrofluoric acid 48% — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1420/15
2.5 ℓ	HDPE Plastic bottle	H/1420/17

HF
CAS: 7664-39-3
MW: 20.01
Density at 20°C: 1.15 to 1.20
Boiling point: 105°C
Melting point: -35°C
ADR/RID: 8, 6.1, II
EINECS: 231-634-8

UN: 1790
GHS: Acute Tox. 1, Skin Corr. 1A, Eye Dam. 1
H310, H314, H300, H330
P280, P303+P361+P353, P301+P310, P301+P330+P331, P305+P351+P338, P304+P340

Assay: >48%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Sodium (Na)	<0.2 ppm
Chromium (Cr)	<0.05 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<0.5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<2 ppm
Magnesium (Mg)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Manganese (Mn)	<0.05 ppm	Arsenic (As)	<0.05 ppm
Nickel (Ni)	<0.05 ppm	Residue after ignition	<0.0005%

Typical analysis

Aluminium (Al)	<0.05 ppm	Lithium (Li)	<0.02 ppm
Silver (Ag)	<0.02 ppm	Molybdenum (Mo)	<0.05 ppm
Barium (Ba)	<0.1 ppm	Strontium (Sr)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Tin (Sn)	<0.02 ppm		

Lot analysis on the label.

Hydrofluoric acid 40% — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1400/15
2.5 ℓ	HDPE Plastic bottle	H/1400/17

HF
CAS: 7664-39-3
MW: 20.01
Density at 20°C: 1.15 to1.20
Boiling point: 105°C
Melting point: -35°C
ADR/RID: 8, 6.1, II
EINECS: 231-634-8

UN: 1790
GHS: Acute Tox. 1, Skin Corr. 1A, Eye Dam. 1
H310, H314, H300, H330
P280, P303+P361+P353, P301+P310, P301+P330+P331, P305+P351+P338, P304+P340

Assay: >40%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Sodium (Na)	<0.5 ppm
Chromium (Cr)	<0.05 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<0.5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<0.05 ppm	Total sulphur (S)	<2 ppm
Magnesium (Mg)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Nickel (Ni)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.05 ppm
Silver (Ag)	<0.02 ppm	Molybdenum (Mo)	<0.05 ppm
Barium (Ba)	<0.1 ppm	Strontium (Sr)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Lithium (Li)	<0.02 ppm		

Lot analysis on the label.
The hydrofluoric acid 40% has a concentration of 22.6 M (22.6 N).

Hydrofluoric acid 40% — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1350/15
2.5 ℓ	HDPE Plastic bottle	H/1350/17

HF
CAS: 7664-39-3
MW: 20.01
Density at 20°C: 1.15 to1.20
Boiling point: 105°C
Melting point: -35°C
ADR/RID: 8, 6.1, II
EINECS: 231-634-8

UN: 1790
GHS: Acute Tox. 1, Skin Corr. 1A, Eye Dam. 1
H310, H314, H300, H330
P280, P303+P361+P353, P301+P310, P301+P330+P331, P305+P351+P338, P304+P340

Assay: >40%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Potassium (K)	<5 ppm
Chromium (Cr)	<1 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<5 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<10 ppm
Nickel (Ni)	<1 ppm	Zinc (Zn)	<5 ppm

The hydrofluoric acid 40% has a concentration of 22.6 M (22.6 N).

Hydrofluoric Acid Antidote Gel
pure

packaging		Mfr. No
25 g	Pack of 6	H/1430/90

ADR/RID: /II

Guaranteed analysis

Identity test : Pass

Hydrogen peroxide 60% w/v (200 volumes) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1862/15

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.1 to1.2
Boiling point: 108°C
Melting point: -33°C
ADR/RID: 5.1, 8, I
EINECS: 231-765-0

UN: 2014
GHS: Ox. Liq. 2, Acute Tox. 4, Skin Corr. 1A, STOT SE 3
H272, H302, H332, H314, H335
P280, P305+P351+P338, P301+P330+P331, P310, P304+P340, P210

Assay: >59%

Guaranteed analysis

Acidity	<0.006 meq/g	Lead (Pb)	<1 ppm
Copper (Cu)	<1 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<2 ppm		

Hydrogen peroxide 60% w/v (200 volumes)
pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1860/15

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.1 to1.2
Boiling point: 108°C
Melting point: -33°C
ADR/RID: 5.1, 8, I
EINECS: 231-765-0

UN: 2014
GHS: Ox. Liq. 2, Acute Tox. 4, Skin Corr. 1A, STOT SE 3
H272, H302, H332, H314, H335
P280, P305+P351+P338, P301+P330+P331, P310, P304+P340, P210

Hydrogen peroxyde 30-32% NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
500 mℓ	Pre-cleaned Teflon FEP bottle	P170-500

H_2O_3
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.11
Boiling point: 108°C
Melting point: -33°C
ADR/RID: 5.1, 8, II

EINECS: 231-765-0
UN: 2014
GHS: Acute Tox. 4, Eye Dam. 1
H318, H302
P280, P305+P351+P338, P301+P330+P331, P301+P312

Assay: 30-32%

Guaranteed analysis

Aluminium (Al)	<50 ppt	Molybdenum (Mo)	<10 ppt
Antimony (Sb)	<10 ppt	Neodymium (Nd)	<1 ppt
Arsenic (As)	<100 ppt	Nickel (Ni)	<20 ppt
Barium (Ba)	<10 ppt	Niobium (Nb)	<10 ppt
Beryllium (Be)	<10 ppt	Palladium (Pd)	<10 ppt
Bismuth (Bi)	<10 ppt	Potassium (K)	<20 ppt
Boron (B)	<100 ppt	Praseodymium (Pr)	<1 ppt
Cadmium (Cd)	<10 ppt	Rhenium (Re)	<10 ppt
Calcium (Ca)	<100 ppt	Rhodium (Rh)	<10 ppt
Cerium (Ce)	<1 ppt	Rubidium (Rb)	<10 ppt
Cesium (Cs)	<1 ppt	Ruthenium (Ru)	<10 ppt
Chromium (Cr)	<10 ppt	Samarium (Sm)	<1 ppt
Cobalt (Co)	<10 ppt	Scandium (Sc)	<10 ppt
Copper (Cu)	<10 ppt	Selenium (Se)	<100 ppt
Dysprosium (Dy)	<1 ppt	Silver (Ag)	<10 ppt
Erbium (Er)	<1 ppt	Sodium (Na)	<50 ppt
Europium (Eu)	<1 ppt	Strontium (Sr)	<10 ppt
Gadolinium (Gd)	<1 ppt	Tantalum (Ta)	<10 ppt
Gallium (Ga)	<10 ppt	Tellurium (Te)	<1 ppt
Germanium (Ge)	<10 ppt	Terbium (Tb)	<1 ppt
Gold (Au)	<10 ppt	Thallium (Tl)	<1 ppt
Hafnium (Hf)	<1 ppt	Thorium (Th)	<1 ppt
Holmium (Ho)	<1 ppt	Thulium (Tm)	<1 ppt
Indium (In)	<1 ppt	Tin (Sn)	<50 ppt
Iron (Fe)	<20 ppt	Titanium (Ti)	<20 ppt
Lanthanum (La)	<1 ppt	Tungsten (W)	<20 ppt
Lead (Pb)	<10 ppt	Uranium (U)	<1 ppt
Lithium (Li)	<10 ppt	Vanadium (V)	<10 ppt
Lutetium (Lu)	<1 ppt	Ytterbium (Yb)	<1 ppt
Magnesium (Mg)	<20 ppt	Yttrium (Y)	<1 ppt
Manganese (Mn)	<10 ppt	Zinc (Zn)	<50 ppt
Mercury (Hg)	<50 ppt	Zirconium (Zr)	<10 ppt

Each bottle is individually packaged
Certificate of analysis delivered with each bottle

Hydrogen peroxyde 30%w/v (100 volumes)
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	H/1811/17
5 ℓ	HDPE Plastic bottle	H/1811/21

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.11
Boiling point: 108°C
Melting point: -33°C
ADR/RID: 5.1, 8, II

EINECS: 231-765-0
UN: 2014
GHS: Acute Tox. 4, Eye Dam. 1
H318, H302
P280, P305+P351+P338, P301+P330+P331, P301+P312

Assay: >30%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Molybdenum (Mo)	<0.1 ppm
Colour	<10 APHA	Nickel (Ni)	<0.1 ppm
Aluminium (Al)	<0.5 ppm	Potassium (K)	<1 ppm
Barium (Ba)	<0.1 ppm	Sodium (Na)	<5 ppm
Cadmium (Cd)	<0.1 ppm	Strontium (Sr)	<0.1 ppm
Calcium (Ca)	<5 ppm	Titanium (Ti)	<0.1 ppm
Chromium (Cr)	<0.1 ppm	n-Butyl formate	<0.0005%
Cobalt (Co)	<0.1 ppm	Total nitrogen (N)	<50 ppm
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<0.5 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<2 ppm
Lithium (Li)	<0.1 ppm	Vanadium (V)	<0.1 ppm
Magnesium (Mg)	<1 ppm	Zinc (Zn)	<0.5 ppm
Manganese (Mn)	<0.1 ppm		

Filtered to 0.2 µm.

Hydrogen peroxide 30%w/v (100 volumes) — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1800/15
2.5 ℓ	HDPE Plastic bottle	H/1800/17
25 ℓ	HDPE Plastic container	H/1800/25

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.11
Boiling point: 108°C
Melting point: -33°C
ADR/RID: 5.1, 8, II

EINECS: 231-765-0
UN: 2014
GHS: Acute Tox. 4, Eye Dam. 1
H318, H302
P280, P305+P351+P338, P301+P330+P331, P301+P312

Assay: 29.5 to 31.5%

Guaranteed analysis

Acidity	<0.005 meq/g	Sodium (Na)	<5 ppm
Colour	<10 APHA	Total chloride (Cl)	<0.0005%
Calcium (Ca)	<5 ppm	Total nitrogen (N)	<50 ppm
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<0.5 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<0.5 ppm
Magnesium (Mg)	<1 ppm	Zinc (Zn)	<0.5 ppm
Potassium (K)	<1 ppm		

Typical analysis

Aluminium (Al)	<0.5 ppm	Lithium (Li)	<0.1 ppm
Silver (Ag)	<0.1 ppm	Manganese (Mn)	<0.1 ppm
Arsenic (As)	<0.5 ppm	Molybdenum (Mo)	<0.1 ppm
Barium (Ba)	<0.1 ppm	Nickel (Ni)	<0.1 ppm
Cadmium (Cd)	<0.1 ppm	Strontium (Sr)	<0.1 ppm
Chromium (Cr)	<0.1 ppm	Titanium (Ti)	<0.1 ppm
Cobalt (Co)	<0.1 ppm	Vanadium (V)	<0.1 ppm

Lot analysis on the label.

Hydrogen peroxide 30%w/v (100 volumes) — Primar
for trace metal analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1820/15

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.11
Boiling point: 108°C
Melting point: -33°C
ADR/RID: 5.1, 8, II

EINECS: 231-765-0
UN: 2014
GHS: Acute Tox. 4, Eye Dam. 1
H318, H302
P280, P305+P351+P338, P301+P330+P331, P301+P312

Assay: >30 %

Guaranteed analysis

Aluminium (Al)	<0.1 ppm	Molybdenum (Mo)	<0.02 ppm
Arsenic (As)	<0.1 ppm	Nickel (Ni)	<0.005 ppm
Barium (Ba)	<0.005 ppm	Potassium (K)	<0.2 ppm
Cadmium (Cd)	<0.005 ppm	Propan--1-ol	<0.01 ppm
Calcium (Ca)	<0.2 ppm	Sodium (Na)	<2 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.005 ppm	Titanium (Ti)	<0.01 ppm
Copper (Cu)	<0.01 ppm	n-Butyl formate	<0.0005%
Iron (Fe)	<0.2 ppm	Total phosphorus (P)	<2 ppm
Lead (Pb)	<0.01 ppm	Total silicon (Si)	<0.1 ppm
Lithium (Li)	<0.005 ppm	Total sulphur (S)	<0.5 ppm
Magnesium (Mg)	<0.1 ppm	Vanadium (V)	<0.01 ppm
Manganese (Mn)	<0.005 ppm	Zinc (Zn)	<0.02 ppm

Hydrogen peroxide 30%w/v (100 volumes) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1750/15
2.5 ℓ	HDPE Plastic bottle	H/1750/17

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.11
Boiling point: 108°C
Melting point: -33°C
ADR/RID: 5.1, 8, II

EINECS: 231-765-0
UN: 2014
GHS: Acute Tox. 4, Eye Dam. 1
H318, H302
P280, P305+P351+P338, P301+P330+P331, P301+P312

Assay: 30%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<2 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<500 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<2 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<5 ppm	Zinc (Zn)	<2 ppm

Hydrogen peroxide 12%w/v (40 volumes)
pure

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	H/1650/17

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.1 to 1.2
Boiling point: 107.2°C
Melting point: -32.2°C
ADR/RID: 5.1, III
EINECS: 231-765-0

UN: 2984
GHS: Ox. Liq. 3, Acute Tox. 4, Skin Corr. 1A
H272, H332, H314
P280, P305+P351+P338, P301+P330+P331, P310, P304+P340, P210

Hydrogen peroxide 6%w/v (20 volumes) — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1600/15
2.5 ℓ	HDPE Plastic bottle	H/1600/17

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.04
Boiling point: 114°C
Melting point: -52°C

ADR/RID: 5.1(8)/II
EINECS: 231-765-0
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >6 %

Guaranteed analysis

Acidity	<0.001 meq/g	Potassium (K)	<1 ppm
Colour	<10 APHA	Sodium (Na)	<5 ppm
Calcium (Ca)	<5 ppm	Total chloride (Cl)	<0.0001%
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<0.5 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<2 ppm
Magnesium (Mg)	<1 ppm	Zinc (Zn)	<0.5 ppm

Typical analysis

Aluminium (Al)	<0.5 ppm	Lithium (Li)	<0.1 ppm
Silver (Ag)	<0.1 ppm	Manganese (Mn)	<0.1 ppm
Arsenic (As)	<0.1 ppm	Molybdenum (Mo)	<0.1 ppm
Barium (Ba)	<0.1 ppm	Nickel (Ni)	<0.1 ppm
Cadmium (Cd)	<0.1 ppm	Strontium (Sr)	<0.1 ppm
Chromium (Cr)	<0.1 ppm	Titanium (Ti)	<0.1 ppm
Cobalt (Co)	<0.1 ppm	Vanadium (V)	<0.1 ppm

Hydrogen peroxide 6%w/v (20 volumes) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	H/1550/15
2.5 ℓ	HDPE Plastic bottle	H/1550/17

H_2O_2
CAS: 7722-84-1
MW: 34.01
Density at 20°C: 1.04
Boiling point: 114°C
Melting point: -52°C

ADR/RID: 5.1(8)/II
EINECS: 231-765-0
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<2 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<2 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<5 ppm	Zinc (Zn)	<2 ppm

Hydroquinone
See Quinol, page 268

Hydroxyacetic acid
See Glycolic acid, page 137

2-Hydroxybenzaldehyde
See Salicylaldehyde, page 271

Hydroxybenzene
See Phenol detached crystals, page 240

2-Hydroxybenzoic acid
See Salicylic acid, page 271

3-Hydroxy-4-(1-hydroxy-2-naphthylazo)-7-nitro-1-naphthalene sulfonic acid, sodium salt
See Eriochrome black T, page 119

Hydroxylammonium chloride — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	H/1950/50
500 g	Plastic jar	H/1950/53
1 kg	Plastic jar	H/1950/60

$NH_2OH.HCl$
CAS: 5470-11-1
MW: 69.49
Density at 20°C: 16.7
Melting point: 155 to 158°C
ADR/RID: 8, 6.1, III
EINECS: 226-798-2
UN: 2923
GHS: Met. Corr. 1, Carc. 2,
Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 2, Aquatic Acute 1
H319, H351, H373, H315, H317, H302, H400, H290, H312
P301+P310, P302+P352, P260, P273, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	2.5 to 3.5	Magnesium (Mg)	<5 ppm
Ammonium (NH_4)	<0.1%	Potassium (K)	<20 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<5 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<2 ppm		

Lot analysis on the label

Hydroxylammonium chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	H/1900/48
500 g	Plastic jar	H/1900/53
1 kg	Plastic jar	H/1900/60

$NH_2OH.HCl$
CAS: 5470-11-1
MW: 69.49
Density at 20°C: 16.7
Melting point: 155 to 158°C
ADR/RID: 8, 6.1, III
EINECS: 226-798-2
UN: 2923
GHS: Met. Corr. 1, Carc. 2,
Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 2, Aquatic Acute 1
H319, H351, H373, H315, H317, H302, H400, H290, H312
P301+P310, P302+P352, P260, P273, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<100 ppm		

Hydroxylammonium sulfate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	H/2001/48

$(NH_2OH)_2.H_2SO_4$
CAS: 10039-54-0
MW: 164.13
Melting point: 170°C
ADR/RID: 8, III
EINECS: 233-118-8
UN: 2865
GHS: Met. Corr. 1, Carc. 2,
Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 2, Aquatic Acute 1
H351, H317, H373, H319, H315, H302, H400, H290, H312
P280, P361, P301+P312, P260, P273, P302+P352, P305+P351+P338

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	3 to 4	Potassium (K)	<10 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<2 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<5 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm

N-2-Hydroxyethylpiperazine-N'-2-ethanesulfonic acid
for biochemistry, HEPES

packaging		Mfr. No
100 g	Plastic jar	H/2230/48

$C_8H_{18}N_2O_4S$
CAS: 7365-45-9
MW: 259.18
Melting point: 234 to 238°C
EINECS: 230-907-9

Assay: >99%

Guaranteed analysis

Water	<0.5%	Sulfate (SO_4)	<0.01%
pKa at 37°C	: 7.3 to 7.32	n-Butyl formate	<0.005%
Solution	: Pass	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Residue after ignition	<0.1%
Lead (Pb)	<10 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
250 nm (sol. aqu. 10%) : <0.1 A.U.

1-(1-Hydroxy-4-methyl-2-phenylazo)-2-naphthol-4-sulfonic acid
pure, metal indicator (Calmagite)

packaging		Mfr. No
5 g	Glass jar	H/2350/44

$C_{17}H_{14}N_2O_5S$
CAS: 3147-14-6
MW: 358.37
Melting point: 300°C
ADR/RID: III
EINECS: 221-563-0
UN: 2585
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Guaranteed analysis
Complies with standard IR spectrum: Pass

1-Hydroxynaphthalene
See 1-Naphthol, page 210

4-[(4-Hydroxy-1-naphthalenyl)phenylmethylene]-1(4H)-naphthalenone
See p-Naphtholbenzein, page 211

7-Hydroxy-8-(phenylazo)-1.3-naphthalenedisulfonic acid, disodium salt
See Orange G sodium salt, page 221

2-Hydroxy-1.2,3-propanetricarboxylic acid
See Citric acid, page 90

L-Hydroxyproline
for biochemistry

packaging		Mfr. No
5 g	Plastic jar	H/2415/44

$C_5H_9NO_3$
CAS: 51-35-4
MW: 131.13
Melting point: 274 to 275°C
EINECS: 200-091-9

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Lead (Pb)	<10 ppm
Specific rotation	-77° to -75°	Residue after ignition	<0.1%
Iron (Fe)	<10 ppm		

8-Hydroxyquinoline — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	H/2500/48

C_9H_7NO
CAS: 148-24-3
MW: 145.16
Boiling point: 267°C
Melting point: 72 to 74°C
ADR/RID: 6.1, III
EINECS: 205-711-1
UN: 2811
GHS: Muta. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335, H332, H312, H302, H341
P281, P260, P301+P312, P304+P340, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<20 ppm

DL-Hydroxysuccinic acid
See DL-Malic acid, page 190

3-Hydroxytoluene
See m-Cresol, page 98

2-Hydroxytoluene
See o-Cresol 98-100 %, page 98

Hypophosphorous acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	H/2650/PB08

H_3PO_2
CAS: 6303-21-5
MW: 66.00
Density at 20°C: 1.27
Boiling point: 108°C
Melting point: -25°C
ADR/RID: 8, II
EINECS: 228-601-5
UN: 3264
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >49%

Guaranteed analysis

Lead (Pb)	<20 ppm	n-Butyl formate	<0.1%
Sulfate (SO_4)	<0.1%		

Indol-3-ylacetic acid
pure, 96+%

packaging		Mfr. No
1 g	Vial	I/0370/43

$C_{10}H_9NO_2$
CAS: 87-51-4
MW: 175.07
EINECS: 201-748-2
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H319, H315, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test : Pass

Imidazole — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	I/0012/48
1 kg	Plastic jar	I/0012/60
10 kg	Plastic keg	I/0012/68

$C_3H_4N_2$
CAS: 288-32-4
MW: 68.08
Boiling point: 255 to 256°C
Melting point: 86 to 90°C
Flash point: 145°C
ADR/RID: 8, 6.1, III
EINECS: 206-019-2
UN: 2923
GHS: Repr. 1B, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H302, H314, H360D
P301+P330+P331, P280, P305+P351+P338, P310, P281, P301+P312

Assay: >99.5%

Guaranteed analysis

Copper (Cu)	<5 ppm	Lead (Pb)	<5 ppm
Iron (Fe)	<5 ppm	Mercury (Hg)	<2 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
325 nm (sol. aqu. 12%) <0.15 A.U.

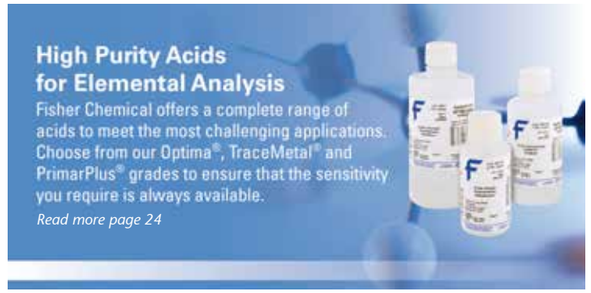
Imidazole
pure

packaging		Mfr. No
100 g	Plastic jar	I/0010/48
500 g	Plastic jar	I/0010/53

$C_3H_4N_2$
CAS: 288-32-4
MW: 68.08
Boiling point: 255 to 256°C
Melting point: 86 to 90°C
Flash point: 145°C
ADR/RID: 8, 6.1, III
EINECS: 206-019-2
UN: 2923
GHS: Repr. 1B, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H302, H314, H360D
P301+P330+P331, P280, P305+P351+P338, P310, P281, P301+P312

Assay: >99%

2.2'-Iminodiethanol
See Diethanolamine, page 108



pH Indicator

designation	pH range	colour change	packsize		Mfr. No	page
Alizarin	11.0-13.0	pink to violet	10 g		A/1460/45	27
Alizarin red S, C.I.58005	4.0-6.0	yellow to orange-red	25 g		A/1520/46	27
Bromocresol green	3.6-5.2	yellow to blue	1 g		B/4320/43	61
	3.6-5.2	yellow to blue	5 g		B/4320/44	61
	3.6-5.2	yellow to blue	25 g		B/4320/46	61
Bromocresol purple	5.2-6.8	yellow to violet	5 g		B/4330/44	61
	5.2-6.8	yellow to violet	25 g		B/4330/46	61
Bromophenol blue	2.8-4.6	yellow to blue-violet	5 g		B/4630/44	62
	2.8-4.6	yellow to blue-violet	25 g		B/4630/46	62
Full range indicator, pH range 1-13	1.0-13.0	colour chart on bottle	100 mℓ		U/0025/PB05	67
	1.0-13.0	colour chart on bottle	500 mℓ		U/0025/PB08	67
Universal indicator, pH range 4-10	4.0-10.0	colour chart on bottle	100 mℓ		U/0020/PB05	67
	4.0-10.0	colour chart on bottle	500 mℓ		U/0020/PB08	67
	4.0-10.0	colour chart on bottle	2.5 L		U/0020/PB17	67
Congo red	3.0-5.0	violet to red-orange	25 g		C/7020/46	94
Cresol red	0.2-1.8	red to yellow	5 g		C/7460/44	98
Litmus	5.0-8.0	red to blue	25 g		L/2500/46	185
Methyl orange solid C.I. 13025	2.9-4.6	orange red to orange yellow	25 g		M/5000/46	206
	2.9-4.6	orange red to orange yellow	100 g		M/5000/48	206
Methyl red spirit soluble C.I. 13020	4.2-6.3	red to yellow	10 g		M/5150/45	207
	4.2-6.3	red to yellow	25 g		M/5150/46	207
Methyl red solid water soluble	4.2-6.3	red to yellow	5 g		M/5170/44	207
	4.2-6.3	red to yellow	100 g		M/5170/48	207
Methyl violet solid (crystal violet) C.I. 42555	0.1-3.2	yellow to violet	10 g		M/5370/45	208
	0.1-3.2	yellow to violet	25 g		M/5370/46	208
p-Naphtholbenzein	8.5-9.8	yellow to green	25 g		N/0500/46	211
Neutral red C.I 50040	6.8-8.0	red to yellow-orange	5 g		N/1270/44	212
Thymol blue	1.2-2.8	red to yellow	5 g		T/1470/44	349
Thymolphthalein solid	9.3-10.5	colourless to blue	5 g		T/1480/44	349
	9.3-10.5	colourless to blue	25 g		T/1480/46	349
Titan yellow C.I. 19540	12.0-13.0	yellow to red	25 g		T/2060/46	353

Redox Indicator

designation	transition	colour change (oxidised to reduced state)	packsize	package type		Mfr. No	page
Barium diphenylamine-4-sulfonate	+ 0.84	violet to colourless	5 g	Plastic jar		B/0620/44	54
Diphenylamine	+ 0.76	violet to colourless	100 g	Glass jar		D/4600/48	117
Methylene blue solid C.I. 52015	+ 0.53	violet to colourless	10 g	Glass jar		M/4870/45	205
	+ 0.87	violet to colourless	25 g	Glass jar		M/4870/46	205
1.10-Phenanthroline mono-hydrate	+ 1.08	faint blue to red	1 g	Vial		P/2200/43	239
	+ 1.08	faint blue to red	5 g	Glass bottle		P/2200/44	239
	+ 0.67	red to colourless	1 g	Glass jar		P/2390/43	240
	+ 0.67	red to colourless	5 g	Glass jar		P/2390/44	240
Phenosafranine	+ 0.28	blue to colourless	5 g	Glass jar		P/2450/44	241
N-Phenylanthranilic acid	+ 1.08	purple-red to colourless	5 g	Plastic jar		P/2460/44	241
Sodium diphenylamine-4-sulfonate	+ 0.84	red-violet to colourless	5 g	Glass jar		S/3780/44	289

Adsorption Indicator

designation	colour in-dex	packsize	package type		Mfr. No	page
Alizarin	C.I. 58000	10 g	Glass jar		A/1460/45	27
Bromocresol purple		5 g	Glass jar		B/4330/44	61
		25 g	Glass jar		B/4330/46	61
Bromophenol blue		5 g	Glass jar		B/4630/44	62
		25 g	Glass jar		B/4630/46	62
Congo red	C.I. 22120	25 g	Glass jar		C/7020/46	94
Dichloro (R) fluorescein		5 g	Glass jar		D/1820/44	105
1.5-Diphenylcarbazone		10 g	Glass jar		D/4850/45	117

Adsorption Indicator

designation	colour in-dex	packsize	package type		Mfr. No	page
Fluorescein sodium		100 g	Glass jar		F/1300/48	130
		500 g	Glass jar		F/1300/53	130
Mercury(II) thiocyanate		25 g	Plastic jar		M/3300/46	198
Phenosafranine	C.I. 50200	5 g	Glass jar		P/2450/44	241
Tetrabromo (R) fluorescein	C.I. 45380	10 g	Glass jar		T/0470/45	343
		50 g	Glass jar		T/0470/47	343

Indigo carmine — SLR
extra pure, C.I. 73015

packaging		Mfr. No
25 g	Glass jar	I/0300/46

$C_{16}H_8N_2Na_2O_8S_2$
CAS: 860-22-0
MW: 466.36
EINECS: 212-728-8

GHS: Acute Tox. 4
H302
P301+P312

Guaranteed analysis
Complies with standard IR spectrum: Pass

Conforming to the IR spectrum of reference.

5.5'-Indigodisulfonic acid, disodium salt
See Indigo carmine, page 160

Indium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLIN22Y
500 mℓ	Plastic bottle	SPPLIN22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Indium standard metal solution 10 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLIN21AY

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

myo-Inositol
pure

packaging		Mfr. No
100 g	Plastic jar	I/0385/48

$C_6H_{12}O_6$
CAS: 87-89-8
MW: 180.16

Melting point: 220 to 228°C
EINECS: 201-781-2

Invertase concentrate yeast
technical, Stabilized with glycerol 10%

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	I/0395/05

GHS: Resp. Sens. 1
H334
P304+P341, P260, P280, P285

Guaranteed analysis
Activity ..... 11020 to 13340 U/mℓ

Iodine — Certified AR
for analysis

packaging		Mfr. No
100 g	Glass bottle	I/0500/48
250 g	Glass bottle	I/0500/50
500 g	Glass bottle	I/0500/53

I_2
CAS: 7553-56-2
MW: 253.81
Boiling point: 185°C
Melting point: 113°C
ADR/RID: 8, 6.1, III
EINECS: 231-442-4

UN: 3495
GHS: Acute Tox. 4, Aquatic Acute 1
H332, H312, H400
P280, P302+P352, P273, P304+P340

Assay: >99.9%

Guaranteed analysis

Insoluble matter	Pass	Magnesium (Mg)	<2 ppm
Calcium (Ca)	<5 ppm	Potassium (K)	<20 ppm
Chloride and Bromide	<0.005%	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<10 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<5 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<1 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Iodine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass bottle	I/0450/48
250 g	Glass bottle	I/0450/50
500 g	Glass bottle	I/0450/53
25 kg	Plastic keg	I/0450/70

I_2
CAS: 7553-56-2
MW: 253.81
Boiling point: 185°C
Melting point: 113°C
ADR/RID: 8, 6.1, III
EINECS: 231-442-4

UN: 3495
GHS: Acute Tox. 4, Aquatic Acute 1
H332, H312, H400
P280, P302+P352, P273, P304+P340

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Magnesium (Mg)	<10 ppm
Chloride and Bromide	<0.02%	Potassium (K)	<100 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<50 ppm	Total sulphur (S)	<200 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<10 ppm

Iodine indicator
pure, indicator grade

packaging		Mfr. No
250 g	Plastic jar	I/0505/50
1 kg	Plastic jar	I/0505/60

I_2
CAS: 9005-25-8
Density at 20°C: 1.5

ADR/RID: 8(6.1)/II
EINECS: 232-679-6
UN: 2923

Guaranteed analysis
Identity test ..... : Pass

Iodine indicator is a stable white powder which is readily soluble in water. It forms a blue complex with iodine: 0.2-0.5g being the usual amount per titration.
Sensitivity to iodine: 0.05 mℓ of 0.01N iodine gives a distinct blue colour in 100mℓ solution.
Glassware is easily cleaned after use.

Iodine solution - Wij's
pure, indicator grade

packaging		Mfr. No
1 ℓ	Coated Glass bottle	J/4500/PB15
2.5 ℓ	Coated Glass bottle	J/4500/PB17

CAS: 7782-50-5
Density at 20°C: 1.06
Boiling point: 117.8°C
Melting point: 17.2°C
Flash point: 41.1°C
ADR/RID: 8, 3, II
EINECS: 200-580-7
UN: 2920

GHS: Flam. Liq. 3, Skin Corr. 1A, Eye Dam. 1
H226, H314
P280, P301+P330+P331, P305+P351+P338, P310, P304+P340, P302+P352, P273, P210

Formulation free of carbon tetrachloride.

Iodine solution 1% w/v in potassium iodide
pure

packaging		Mfr. No
1 ℓ	Glass bottle	J/4450/15
2.5 ℓ	Glass bottle	J/4450/17

GHS: Aquatic Chronic 3
H412
P273

Iodine solution 0.05M (0.1N) — Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/4410/15
2.5 ℓ	Glass bottle	J/4410/17

CAS: 7553-56-2
Density at 20°C: 1.02
Boiling point: 100°C
Melting point: 0°C

EINECS: 231-442-4
GHS: Aquatic Chronic 3
H412
P273

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Iodine solution 0.5M (1N) — Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/4400/PB08
1 ℓ	Coated Glass bottle	J/4400/PB15
2.5 ℓ	Coated Glass bottle	J/4400/PB17

CAS: 7553-56-2
Density at 20°C: 1.4
EINECS: 231-442-4

GHS: Aquatic Chronic 2
H411
P273

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Iodine bromide
pure

packaging		Mfr. No
100 g	Glass bottle	I/0510/48

BrI
CAS: 7789-33-5
MW: 206.81
Density at 20°C: 4.41
Boiling point: 116°C
Melting point: 42 to 50°C
ADR/RID: 8, II

EINECS: 232-159-9
UN: 3260
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H335, H314
P301+P330+P331, P280, P305+P351+P338, P310, P261

Guaranteed analysis
Identity test ..... : Pass

Iodine trichloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Coated Glass bottle	I/0650/48

ICl_3
CAS: 865-44-1
MW: 233.26
Melting point: 63°C
ADR/RID: 8, II
EINECS: 212-739-8
UN: 3260

GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H314, H335
P305+P351+P338, P280, P260, P310, P264, P301+P330+P331

Assay: >96%

1-Iodobutane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 mℓ	Glass bottle	I/0697/04

C_4H_9I
CAS: 542-69-8
MW: 184.02
Boiling point: 130 to 131°C
Melting point: -103°C
ADR/RID: 3, III
EINECS: 208-824-4
UN: 1993
GHS: Flam. Liq. 3, Acute

Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H226, H335, H315, H319, H302, H332
P261, P301+P312, P302+P352, P280, P305+P351+P338, P210, P304+P341

Assay (CG): >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Refractive index ..... 1.49 to 1.51

Iodoethane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	I/0700/PB05

C_2H_5I
CAS: 75-03-6
MW: 155.97
Density at 20°C: 1.95
Boiling point: 69 to 73°C
Melting point: -108°C
Flash point: 53°C
ADR/RID: 3, III
EINECS: 200-833-1

UN: 1993
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H226, H319, H335, H315, H332, H302
P261, P301+P312, P302+P352, P280, P305+P351+P338, P210

Iodoform — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	I/0750/48

CHI_3
CAS: 75-47-8
MW: 393.73
Melting point: 119 to 122°C
Flash point: 204°C
ADR/RID: 6.1, III
EINECS: 200-874-5
UN: 2811

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H332, H302, H315, H312
P280, P302+P352, P261, P301+P312, P304+P340, P305+P351+P338

Iodomethane SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	I/0800/PB05

CH_3I
CAS: 74-88-4
MW: 141.94
Density at 20°C: 2.28
Boiling point: 42.5°C
Melting point: -66°C
ADR/RID: 6.1, I
EINECS: 200-819-5

UN: 2644
GHS: Carc. 2, Acute Tox. 3, Skin Irrit. 2, STOT SE 3
H315, H335, H331, H301, H312, H351
P301+P310, P280, P304+P340, P302+P352, P261

Assay (CG): >98%

2-Iodopropane SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	I/0831/PB05

C_3H_7I
CAS: 75-30-9
MW: 169.99
Density at 20°C: 1.7
Boiling point: 90 to 90°C
Melting point: -90°C
Flash point: 42°C
ADR/RID: 3, III

EINECS: 200-859-3
UN: 2392
GHS: Flam. Liq. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H226, H315, H319, H335
P261, P302+P352, P280, P305+P351+P338, P210

Assay (CG): >98%

Iridium standard metal solution 1000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLIR32Y
500 mℓ	Plastic bottle	SPPLIR32X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Iron standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8030/05
500 mℓ	HDPE Plastic bottle	J/8030/08

ADR/RID: 8, II
EINECS: 233-899-5
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Iron standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8271/08

ADR/RID: 8, II
EINECS: 233-899-5
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Iron standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8270/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B
H314

P301+P330+P331, P280, P305+P351+P338, P310, P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Iron standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLFE22Y
250 mℓ	Plastic bottle	SPPLFE22T
500 mℓ	Plastic bottle	SPPLFE22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Iron standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLFE12X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Iron standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLFE23Y
500 mℓ	Plastic bottle	SPPLFE23X

H303, H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Iron standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLFE13X

H303

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Iron standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLFE22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Iron powder SLR
extra pure, metal reduced by hydrogen

packaging		Mfr. No
500 g	Plastic jar	I/0950/53

Fe
CAS: 7439-89-6
MW: 55.84
Boiling point: 3000°C
Melting point: 1535°C
ADR/RID: 4.1, III

EINECS: 231-096-4
UN: 3089
GHS: Flam. Sol. 2
H228
P210

Guaranteed analysis
Identity test ..... : Pass

Iron filings (coarse)
pure

packaging		Mfr. No
1 kg	Plastic jar	I/0855/60
25 kg	Plastic keg	I/0855/70

Fe
CAS: 7439-89-6
MW: 55.84
Density at 20°C: 7.86

Boiling point: 3000°C
Melting point: 1535°C
EINECS: 231-096-4

Guaranteed analysis
Identity test ..... : Pass

Iron filings (fine) metal
pure

packaging		Mfr. No
250 g	Plastic jar	I/0850/50
1 kg	Plastic jar	I/0850/60
3 kg	Plastic jar	I/0850/63

Fe
CAS: 7439-89-6
MW: 55.84
Density at 20°C: 7.86

Boiling point: 3000°C
Melting point: 1535°C
EINECS: 231-096-4

Guaranteed analysis
Identity test ..... : Pass

Iron metal
technical, wire diameter ca. 0.3 mm

packaging		Mfr. No
100 g	Plastic jar	I/1001/48

Fe
CAS: 7439-89-6
MW: 55.84

Density at 20°C: 7.86
Boiling point: 3000°C
Melting point: 1535°C

Guaranteed analysis
Identity test ..... : Pass

Iron metal strip
technical, Strip 200 x 15 x 0.5mm

packaging		Mfr. No
	Plastic jar	I/1021/99

Fe
CAS: 7439-89-6
MW: 55.84
Density at 20°C: 7.86

Boiling point: 3000°C
Melting point: 1535°C
EINECS: 231-096-4

Guaranteed analysis
Identity test ..... : Pass

Iron(III) chloride hexahydrate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	I/1020/60
5 kg	Plastic keg	I/1020/65

$Cl_3Fe.6H_2O$
CAS: 10025-77-1
MW: 270.29
Density at 20°C: 1.82
Boiling point: 280 to 285°C
Melting point: 37°C

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1
H318, H302, H315
P280, P302+P352, P305+P351+P338, P313

Guaranteed analysis

Calcium (Ca)	<500 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<100 ppm	Total phosphorus (P)	<100 ppm
Iron (II)	<0.1%	Total silicon (Si)	<200 ppm
Lead (Pb)	<100 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<500 ppm
Potassium (K)	<200 ppm		

Iron(III) chloride anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	I/1035/50
500 g	Plastic jar	I/1035/53
3 kg	Plastic jar	I/1035/63

$FeCl_3$
CAS: 7705-08-0
MW: 162.21
Density at 20°C: 2.9
Boiling point: 316°C
Melting point: 300°C
ADR/RID: 8, III
EINECS: 231-729-4

UN: 1773
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1
H302, H315, H318, H317
P305+P351+P338, P261, P280, P302+P352, P301+P312, P333+P313

Assay: >97%

Guaranteed analysis
Iron (II) ..... <1%

Iron(III) chloride
pure, solution about 60% w/v, $FeCl_3$

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	I/1045/PB17

$FeCl_3$
CAS: 7705-08-0
MW: 162.21
ADR/RID: 8, III
EINECS: 231-729-4
UN: 2582

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1
H302, H315, H318, H317
P305+P351+P338, P261, P280, P302+P352, P301+P312, P333+P313

Iron(III) chloride solution about 60% w/v — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	I/1047/PB08

$FeCl_3$
CAS: 7705-08-0
MW: 162.21
ADR/RID: 8, III
EINECS: 231-729-4
UN: 2582

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1
H302, H315, H318, H317
P305+P351+P338, P261, P280, P302+P352, P301+P312, P333+P313

Assay: 59 to 61%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Total phosphorus (P)	<100 ppm
Copper (Cu)	<100 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<100 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<500 ppm
Potassium (K)	<200 ppm	Iron (II)	<0.1%
Sodium (Na)	<1000 ppm		

Iron(III) citrate trihydrate
pure

packaging		Mfr. No
500 g	Plastic jar	I/1060/53

$C_6H_5FeO_7.3H_2O$
CAS: 17217-76-4
MW: 299.00
EINECS: 222-536-6

Guaranteed analysis
Identity test ..... : Pass

Iron(II) disulfide — SLR
extra pure, powder

packaging		Mfr. No
1 kg	Glass jar	I/1165/60
25 kg	Fibre Keg	I/1165/70

FeS_2
CAS: 12068-85-8
MW: 119.97

EINECS: 235-106-8
EUH032
P233

Guaranteed analysis
Identity test ..... : Pass

Iron(III) nitrate nonahydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	I/1075/50
500 g	Plastic jar	I/1075/53
1 kg	Plastic jar	I/1075/60

$Fe(NO_3)_3.9H_2O$
CAS: 7782-61-8
MW: 404.00
Density at 20°C: 1.68
Melting point: 47°C
ADR/RID: 5.1, III

UN: 1466
GHS: Ox. Sol. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H319, H315, H335
P261, P302+P352, P280, P305+P351+P338, P210

Assay: 98 to 102%

Guaranteed analysis

Acidity	<0.1 meq/g	Sodium (Na)	<100 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Silver (Ag)	<5 ppm	Lithium (Li)	<5 ppm
Arsenic (As)	<5 ppm	Manganese (Mn)	<0.02 %
Barium (Ba)	<5 ppm	Molybdenum (Mo)	<0.001 %
Cadmium (Cd)	<0.005 %	Strontium (Sr)	<5 ppm
Chromium (Cr)	<0.005 %	Titanium (Ti)	<5 ppm
Cobalt (Co)	<0.001 %	Vanadium (V)	<5 ppm

Lot analysis on the label.

Iron(III) nitrate nonahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	I/1070/50
500 g	Plastic jar	I/1070/53
1 kg	Plastic jar	I/1070/60

$Fe(NO_3)_3.9H_2O$
CAS: 7782-61-8
MW: 404.00
Density at 20°C: 1.68
Melting point: 47°C
ADR/RID: 5.1, III

UN: 1466
GHS: Ox. Sol. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H319, H315, H335
P261, P302+P352, P280, P305+P351+P338, P210

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<500 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<100 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<100 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<200 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<500 ppm
Sodium (Na)	<1000 ppm		

Iron oxide
pure, magnetic precipitated

packaging		Mfr. No
500 g	Glass jar	I/1100/53

Fe_3O_4
CAS: 1317-61-9
MW: 231.50
Density at 20°C: 5.18

Melting point: 1588.9°C
EINECS: 215-277-5
P262

Guaranteed analysis
Identity test ..... : Pass

Iron oxide
pure, precipitated

packaging		Mfr. No
500 g	Plastic jar	I/1150/53

Fe_2O_3
CAS: 1309-37-1
MW: 159.69

Density at 20°C: 5.24
Melting point: 1538°C
EINECS: 215-168-2

Guaranteed analysis
Identity test ..... : Pass

Iron(III) oxide calcined
pure

packaging		Mfr. No
1 kg	Glass jar	I/1013/60
25 kg	Fibre Keg	I/1013/70

Fe_2O_3
CAS: 1309-37-1
MW: 159.69

Density at 20°C: 5.24
Melting point: 1538°C
EINECS: 215-168-2

Assay: >95%

Iron(II) sulfate heptahydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	I/1157/50
500 g	Plastic jar	I/1157/53
1 kg	Plastic jar	I/1157/60

$FeSO_4.7H_2O$
CAS: 7782-63-0
MW: 278.01
Melting point: 64°C
EINECS: 231-753-5

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H315, H319, H302
P301+P312, P302+P352, P280, P305+P351+P338

Assay: 98 to 102%

Guaranteed analysis

pH (aqueous solution 5%)	3 to 4	Potassium (K)	<50 ppm
Identity test	: Pass	Sodium (Na)	<100 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<10 ppm	Total nitrogen (N)	<20 ppm
Iron (III)	<0.05%	Total phosphorus (P)	<10 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<100 ppm

Typical analysis

Silver (Ag)	<5 ppm	Lithium (Li)	<5 ppm
Arsenic (As)	<5 ppm	Manganese (Mn)	<0.05 %
Barium (Ba)	<5 ppm	Molybdenum (Mo)	<5 ppm
Cadmium (Cd)	<0.01 %	Strontium (Sr)	<5 ppm
Chromium (Cr)	<0.01 %	Titanium (Ti)	<5 ppm
Cobalt (Co)	<0.001 %	Vanadium (V)	<5 ppm

Lot analysis on the label.

Iron(II) sulfate heptahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	I/1155/60
2.5 kg	Plastic jar	I/1155/62
5 kg	Plastic jar	I/1155/65
25 kg	Plastic keg	I/1155/70

$FeSO_4.7H_2O$
CAS: 7782-63-0
MW: 278.01
Melting point: 64°C
EINECS: 231-753-5

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H315, H319, H302
P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Identity test	: Pass	Sodium (Na)	<500 ppm
Calcium (Ca)	<200 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<500 ppm
Potassium (K)	<500 ppm		

Iron(II) sulfate heptahydrate
Technical

packaging		Mfr. No
2 kg	Plastic jar	I/1154/61

$FeSO_4.7H_2O$
CAS: 7782-63-0
MW: 278.01
Melting point: 64°C
EINECS: 231-753-5

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H315, H319, H302
P301+P312, P302+P352, P280, P305+P351+P338

Iron(II) sulfate dried — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	I/1159/60

$FeSO_4$
CAS: 7782-63-0
MW: 278.01
Melting point: 64°C
EINECS: 231-753-5

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H315, H319, H302
P301+P312, P302+P352, P280, P305+P351+P338

Assay: 77 to 90%

Guaranteed analysis
Copper (Cu) ..... <500 ppm Lead (Pb) ..... <50 ppm

Content 77 to 90 % in FeSO 4

Iron(III) sulfate monohydrate
Technical

packaging		Mfr. No
500 g	Plastic jar	I/1160/53
1 kg	Plastic jar	I/1160/60

$Fe_2(SO_4)_3.H_2O$
CAS: 15244-10-7
MW: 399.86
EINECS: 233-072-9

GHS: Acute Tox. 4
H302
P301+P312

Guaranteed analysis
Identity test ..... : Pass

Iron(II) sulfide
Technical

packaging		Mfr. No
1 kg	Plastic jar	I/1170/60

FeS
CAS: 1317-37-9
MW: 87.92
Density at 20°C: 4.84

Melting point: 1194°C
EINECS: 215-268-6
EUH032

Guaranteed analysis
Identity test ..... : Pass

Isobutanol *See iso-Butyl alcohol, page 68*

Isohexane (contains <5% n-Hexane) NEW PACK. Certified
for HPLC

packaging		Mfr. No
1 ℓ	Coated Glass bottle	H/0405/PB15
2.5 ℓ	Coated Glass bottle	H/0405/PB17
5 ℓ	Aluminium can	H/0405/21
10 ℓ	Returnable Drum	H/0405/10RSS
25 ℓ	Aluminium can	H/0405/25
25 ℓ	Returnable Drum	H/0405/25RSS
30 ℓ	Returnable Drum	H/0405/30RSS

C_6H_{14}
CAS: 73513-42-5
MW: 86.18
Density at 20°C: 0.660
Boiling point: 60°C
Melting point: -154°C
Flash point: -23°C
ADR/RID: 3, II
EINECS: 203-523-4

UN: 1208
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H315, H336, H411
P261, P273, P301+P330+P331, P302+P352, P210

Guaranteed analysis
Acidity / Alkalinity ..... <0.00015 meq/g
Water ..... <0.01%
Residue after evaporation ..... <2 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
200 nm ..... <0.3 A.U.
210 nm ..... <0.15 A.U.
220 nm ..... <0.07 A.U.
230 nm ..... <0.03 A.U.
240 nm ..... <0.02 A.U.
250 nm ..... <0.01 A.U.
260 nm ..... <0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Isohexane (contains <5% n-Hexane) Certified
HPLC for fluorescence detection

packaging		Mfr. No
1 ℓ	Coated Glass bottle	H/0410/PB15
2.5 ℓ	Coated Glass bottle	H/0410/PB17

C_6H_{14}
CAS: 73513-42-5
MW: 86.18
Density at 20°C: 0.660
Boiling point: 60°C
Melting point: -154°C
Flash point: -23°C
ADR/RID: 3, II
EINECS: 203-523-4

UN: 1208
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H315, H336, H411
P261, P273, P301+P330+P331, P302+P352, P210

Guaranteed analysis
Acidity / Alkalinity ..... <0.00015 meq/g
Water ..... <0.01%
Residue after evaporation ..... <2 ppm
N-Hexane ..... <5%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
200 nm ..... <0.3 A.U.
210 nm ..... <0.15 A.U.
220 nm ..... <0.07 A.U.
230 nm ..... <0.03 A.U.
240 nm ..... <0.02 A.U.
250 nm ..... <0.01 A.U.
260 nm ..... <0.005 A.U.
Fluorescence ..... Pass

Excitation in the range 250-750nm produces no fluorescence emission greater than the solvents natural Raman signal at 350nm excittation.This is equivalent to the emission maximum of approximately 1ppb quinine sulfate.
Lot analysis on the label (excluding fluorescence scan).
Filtered to 0.2 µm.

Isohexane (contains <5% n-Hexane) Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	H/0408/15
2.5 ℓ	Glass bottle	H/0408/17

C_6H_{14}
CAS: 73513-42-5
MW: 86.18
Density at 20°C: 0.660
Boiling point: 60°C
Melting point: -154°C
Flash point: -23°C
ADR/RID: 3, II
EINECS: 203-523-4

UN: 1208
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H315, H336, H411
P261, P273, P301+P330+P331, P302+P352, P210

Guaranteed analysis
Water ..... <0.01%
Residue after evaporation ..... <2 ppm
GC (ECD) Analysis ..... Pass
GC (FID) Analysis ..... Pass
GC (NPD) analysis ..... Pass

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachlo-réoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile: (1) 50°C, 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Isohexane (contains <5% n-Hexane) NEW PACK. Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	H/0411/PB15
2.5 ℓ	Coated Glass bottle	H/0411/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	H/0411/21
200 ℓ	Metal drum	H/0411/27

C_6H_{14}
CAS: 73513-42-5
MW: 86.18
Density at 20°C: 0.660
Boiling point: 60°C
Melting point: -154°C
Flash point: -23°C
ADR/RID: 3, II
EINECS: 203-523-4

UN: 1208
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H315, H336, H411
P261, P273, P301+P330+P331, P302+P352, P210

Guaranteed analysis
Acidity / Alkalinity ..... <0.00008 meq/g
Colour ..... <10 APHA
Water ..... <0.02%
Residue after evaporation ..... <20 ppm
Substances darkened by (H_2SO_4) ..... Pass
Bromine number ..... <0.5
Calcium (Ca) ..... <0.2 ppm
Copper (Cu) ..... <0.02 ppm
Iron (Fe) ..... <0.1 ppm
Lead (Pb) ..... <0.02 ppm
Magnesium (Mg) ..... <0.05 ppm
Potassium (K) ..... <0.1 ppm
Sodium (Na) ..... <0.1 ppm
Total phosphorus (P) ..... <0.1 ppm
Total silicon (Si) ..... <0.05 ppm
Total sulphur (S) ..... <10 ppm
Zinc (Zn) ..... <0.1 ppm
Aromatic Hydrocarbons ..... <0.01%
N-Hexane ..... <5%

Typical analysis
Aluminium (Al) ..... <0.1 ppm
Barium (Ba) ..... <0.02 ppm
Cadmium (Cd) ..... <0.02 ppm
Chromium (Cr) ..... <0.02 ppm
Cobalt (Co) ..... <0.02 ppm
Lithium (Li) ..... <0.02 ppm
Manganese (Mn) ..... <0.02 ppm
Molybdenum (Mo) ..... <0.02 ppm
Nickel (Ni) ..... <0.02 ppm
Strontium (Sr) ..... <0.02 ppm
Titanium (Ti) ..... <0.02 ppm
Vanadium (V) ..... <0.02 ppm

Lot analysis on the label.

Isohexane (contains <5% n-Hexane) NEW PACK. SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	H/0401/15
2.5 ℓ	Coated Glass bottle	H/0401/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	H/0401/21
10 ℓ	Metal can	H/0401/24
25 ℓ	Metal drum	H/0401/25
200 ℓ	Metal drum	H/0401/27

C_6H_{14}
CAS: 73513-42-5
MW: 86.18
Density at 20°C: 0.660
Boiling point: 60°C
Melting point: -154°C
Flash point: -23°C
ADR/RID: 3, II
EINECS: 203-523-4

UN: 1208
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H315, H336, H411
P261, P273, P301+P330+P331, P302+P352, P210

Guaranteed analysis
Acidity / Alkalinity ..... <0.0002 meq/g
Colour ..... <20 APHA
Water ..... <0.05%
Residue after evaporation ..... <50 ppm
Bromine number ..... <0.5
Calcium (Ca) ..... <2 ppm
Copper (Cu) ..... <1 ppm
Iron (Fe) ..... <5 ppm
Lead (Pb) ..... <1 ppm
Magnesium (Mg) ..... <1 ppm
Potassium (K) ..... <1 ppm
Sodium (Na) ..... <2 ppm
Total phosphorus (P) ..... <1 ppm
Total silicon (Si) ..... <1 ppm
Total sulphur (S) ..... <50 ppm
Zinc (Zn) ..... <2 ppm
N-Hexane ..... <5%

Isooctane *See 2, page 360*

Isopentyl alcohol *See iso-Amyl alcohol, page 47*

Isopropanol NEW Optima
for LC/MS analysis

packaging		Mfr. No
500 mℓ	Glass bottle	A461-500
1 ℓ	Glass bottle	A461-1
2.5 ℓ	Glass bottle	A461-212
4 ℓ	Glass bottle	A461-4

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280, P305+P351+P338, P210, P240

Assay: >99.9%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0001 meq/g
Colour ..... <5 APHA
Water ..... <0.05%
Residue after evaporation ..... <1 ppm
Aluminium (Al) ..... <10 ppb
Calcium (Ca) ..... <10 ppb
Copper (Cu) ..... <5 ppb
Iron (Fe) ..... <5 ppb
Lead (Pb) ..... <5 ppb
Magnesium (Mg) ..... <5 ppb
Manganese (Mn) ..... <5 ppb
Nickel (Ni) ..... <5 ppb
Potassium (K) ..... <10 ppb
Propan--1-ol ..... <5 ppb
Sodium (Na) ..... <50 ppb
Zinc (Zn) ..... <10 ppb

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
210 nm ..... <0.4 A.U.
220 nm ..... <0.1 A.U.
230 nm ..... <0.05 A.U.
254 nm ..... <0.005 A.U.
LC/MS Gradient Suitability ..... : Pass Test

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.
Filtered to 0.2µm.

Isopropanol Certified
HPLC for gradient analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/7508/17

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0001 meq/g
Water ..... <0.1%
Residue after evaporation ..... <2 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
205 nm ..... <1 A.U.
220 nm ..... <0.2 A.U.
230 nm ..... <0.1 A.U.
240 nm ..... <0.05 A.U.
250 nm ..... <0.01 A.U.
260 nm ..... <0.005 A.U.
270 nm ..... <0.005 A.U.
Gradient (max eluted peak). . <0.002 A.U.
Wavelength at 1 A.U. ..... : <205 nM

HPLC analysis:
Gradient analysis
Absorbance of the largest peak <0.002A.U.
Conditions:
Column: C18 Reverse Phase
Flow rate: 0.5 mℓ / min
Wavelength 254 nm
Solvent A: Water
Solvent B: Propan -2-ol
Gradient: Linear from 95% A/ 5% B to 100% B over 20mins.
Lot analysis on the label.
Filtered to 0.2 µm.
Gamme d'absorbance:

Isopropanol NEW PACK. Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	P/7507/15
2.5 ℓ	Glass bottle	P/7507/17
2.5 ℓ	Coated Glass bottle	P/7507/PB17
10 ℓ	Returnable Drum	P/7507/10RSS
25 ℓ	Returnable Drum	P/7507/25RSS
30 ℓ	Returnable Drum	P/7507/30RSS

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0001 meq/g
Water ..... <0.1%
Residue after evaporation ..... <2 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
205 nm ..... <1 A.U.
220 nm ..... <0.2 A.U.
230 nm ..... <0.1 A.U.
240 nm ..... <0.05 A.U.
250 nm ..... <0.01 A.U.
260 nm ..... <0.005 A.U.
270 nm ..... <0.005 A.U.
Wavelength at 1 A.U. ..... : <205 nM

Lot analysis on the label.
Filtered to 0.2 µm.

Isopropanol — Certified
HPLC for electrochemical detection

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/7509/17

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280,
P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Residue after evaporation	<2 ppm
Water	<0.05%	Electrochemical test	Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

205 nm	<1 A.U.	250 nm	<0.01 A.U.
220 nm	<0.2 A.U.	260 nm	<0.005 A.U.
230 nm	<0.1 A.U.	270 nm	<0.005 A.U.
240 nm	<0.05 A.U.	Wavelength at 1 A.U.	: <205 nM

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

Isopropanol — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	P/7501/15
2.5 ℓ	Glass bottle	P/7501/17

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280,
P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Water	<0.1%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachlo-réoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile:
(1) 50°C for 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Isopropanol
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Glass bottle	P/7503/15
2.5 ℓ	Glass bottle	P/7503/17

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280,
P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Water	<0.01%	Residue after evaporation	<2 ppm

Isopropanol
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/7555/17
5 ℓ	HDPE Plastic bottle	P/7555/21
25 ℓ	Metal drum	P/7555/25

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280,
P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Nickel (Ni)	<0.02 ppm
Colour	<5 APHA	Potassium (K)	<0.2 ppm
Water	<0.1%	Sodium (Na)	<1 ppm
Residue after evaporation	<10 ppm	Strontium (Sr)	<0.02 ppm
Aluminium (Al)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Total phosphorus (P)	<0.1 ppm
Cadmium (Cd)	<0.02 ppm	Total silicon (Si)	<0.05 ppm
Calcium (Ca)	<0.2 ppm	Total sulphur (S)	<0.5 ppm
Chromium (Cr)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Zinc (Zn)	<0.1 ppm
Copper (Cu)	<0.02 ppm	Substances darkened	
Iron (Fe)	<0.1 ppm	by H_2SO_4	<10 APHA
Lead (Pb)	<0.02 ppm	Alcohols C 4	<0.005%
Lithium (Li)	<0.02 ppm	Alcohols C 5	<0.005%
Magnesium (Mg)	<0.1 ppm	Ethanol 90 % v/v	<0.005%
Manganese (Mn)	<0.02 ppm	Methanol	<0.005%
Molybdenum (Mo)	<0.02 ppm	Propan--1-ol	<0.05%

Isopropanol (Propan-2-ol) NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/7500/PB08
1 ℓ	Glass bottle	P/7500/15
2.5 ℓ	Glass bottle	P/7500/17
2.5 ℓ	Coated Glass bottle	P/7500/PB17
2.5 ℓ	HDPE Plastic bottle	P/7500/PC17
5 ℓ	Fluorinated HDPE Plastic bottle	P/7500/21
10 ℓ	HDPE Plastic container	P/7500/24
25 ℓ	Metal drum	P/7500/25
25 ℓ	HDPE Plastic container	P/7500/PC25
200 ℓ	Metal drum	P/7500/27

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280,
P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Sodium (Na)	<1 ppm
Colour	<5 APHA	Total phosphorus (P)	<0.1 ppm
Water	<0.1%	Total silicon (Si)	<0.05 ppm
Residue after evaporation	<10 ppm	Total sulphur (S)	<0.5 ppm
Substances		Zinc (Zn)	<0.1 ppm
reducing $KMnO_4$	<0.0005%	Alcohols C 4	<0.005%
Calcium (Ca)	<0.2 ppm	Alcohols C 5	<0.005%
Copper (Cu)	<0.02 ppm	Ethanol 90 % v/v	<0.005%
Iron (Fe)	<0.1 ppm	Methanol	<0.005%
Lead (Pb)	<0.02 ppm	Propan--1-ol	<0.05%
Magnesium (Mg)	<0.1 ppm	Substances darkened	
Potassium (K)	<0.2 ppm	by H_2SO_4	<10 APHA

Typical analysis

Aluminium (Al)	<0.02 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

Isopropanol (Propan-2-ol) NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/7490/08
500 mℓ	Coated Glass bottle	P/7490/PB08
1 ℓ	Glass bottle	P/7490/15
2.5 ℓ	Glass bottle	P/7490/17
2.5 ℓ	Coated Glass bottle	P/7490/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	P/7490/21
5 ℓ	Fluorinated HDPE square Drum	P/7490/FP21
25 ℓ	Metal drum	P/7490/25
25 ℓ	HDPE Plastic container	P/7490/PC25
200 ℓ	Metal drum	P/7490/27

$(CH_3)_2CHOH$
CAS: 67-63-0
MW: 60.10
Density at 20°C: 0.785
Boiling point: 81 to 83°C
Melting point: -89.5°C
Flash point: 12°C
ADR/RID: 3, II

EINECS: 200-661-7
UN: 1219
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319
P261, P280,
P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Iron (Fe)	<5 ppm
Colour	<10 APHA	Lead (Pb)	<2 ppm
Water	<0.2%	Magnesium (Mg)	<2 ppm
Residue after evaporation	<50 ppm	Potassium (K)	<2 ppm
Substances darkened		Sodium (Na)	<5 ppm
by (H_2SO_4)	<10 APHA	Total phosphorus (P)	<2 ppm
Substances		Total silicon (Si)	<2 ppm
reducing $KMnO_4$	<0.0005%	Total sulphur (S)	<2 ppm
Calcium (Ca)	<5 ppm	Zinc (Zn)	<2 ppm
Copper (Cu)	<2 ppm		

Isopropylacetone
See 4-Methylpentan-2-one, page 206

Isopropyl alcohol
See Isopropanol, page 168

Isopropyl iodide
See 2-Iodopropane, page 162

Kaolin
technical

packaging		Mfr. No
3 kg	Plastic keg	K/0045/63

$H_2Al_2Si_2O_8.H_2O$
CAS: 1332-58-7
MW: 258.20

Density at 20°C: 1.8 to 2.
Melting point: 1760°C
EINECS: 310-194-1

Kaolin light
pure, washed with acid

packaging		Mfr. No
1 kg	Plastic jar	K/0050/60
3 kg	Plastic keg	K/0050/63
25 kg	Fibre Keg	K/0050/70

$H_2Al_2Si_2O_8.H_2O$
CAS: 1332-58-7
MW: 258.20

Density at 20°C: 1.8 to 2.
Melting point: 1750°C
EINECS: 310-194-1

Guaranteed analysis
Identity test : Pass

Karl Fischer reagents for Volumetric Analysis

For high water content.
Available as 1 or 2 component system, pyridine free.
See alphabetical entry in the main body of this catalogue for full details.

designation	packsize	package type		Mfr. No	page
Karl Fischer Aqualine® Complete 1	1 L	Glass bottle		K/1900/15	171
Karl Fischer Aqualine® Complete 2	1 L	Glass bottle		K/1950/15	171
Karl Fischer Aqualine® Complete 5	1 L	Glass bottle		K/2000/15	171
Karl Fischer Aqualine® Complete 5K	500 mℓ	Glass bottle		K/2250R/08	171
	1 L	Glass bottle		K/2250R/15	171
Karl Fischer Aqualine® Matrix K	500 mℓ	Glass bottle		K/2300R/08	171
	1 L	Glass bottle		K/2300R/15	171
Karl Fischer Aqualine® Solvent	1 L	Glass bottle		K/2100/15	171
	2.5 L	Glass bottle		K/2100/17	171
Karl Fischer Aqualine® solvent CM	1 L	Glass bottle		K/2110/15	172
	2.5 L	Glass bottle		K/2110/17	172
Karl Fischer Aqualine® Titrant 2	1 L	Glass bottle		K/2150/15	172
Karl Fischer Aqualine® Titrant 5	1 L	Glass bottle		K/2200/15	172

Karl Fischer reagents for Coulometric Analysis

For low water content at ppm level.
Anolytes & Catholyte solutions.
See alphabetical entry in the main body of this catalogue for full details.

designation	packsize	package type		Mfr. No	page
Karl Fischer Aqualine® Electrolyte A	500 mℓ	Glass bottle		K/2500/08	172
Karl Fischer Aqualine® Electrolyte AD	500 mℓ	Glass bottle		K/2510/08	172
Karl Fischer Aqualine® Electrolyte AD-G	500 mℓ	Glass bottle		K/2515/08	172
Karl Fischer Aqualine® Electrolyte AG	500 mℓ	Glass bottle		K/2520/08	173
Karl Fischer Aqualine® Electrolyte CG	25 mℓ	Vial		K/2560/04	173
Karl Fischer Aqualine® Electrolyte AG-H	500 mℓ	Glass bottle		K/2530/08	174

Standards for Volumetric & Coulometric application

designation	packsize	package type		Mfr. No	page
Karl Fischer Aqualine® sodium tartrate standard	100 g	Plastic jar		K/2770/48	173
Karl Fischer Aqualine® tri-Potassium citrate standard	10 g	Glass bottle		K/2760/45	173
Karl Fischer Aqualine® Water solution	500 mℓ	Coated Glass bottle		J/9000/PB08	173
	1 L	Glass bottle		J/9000/15	173
Karl Fischer Aqualine® Water standard 0.2 mg/g, 10 x 4mℓ ampoules	40 mℓ	Ampoule		K/2740/99	173
Karl Fischer Aqualine® Water standard 1 mg/g, 10 x 4mℓ ampoules	40 mℓ	Ampoule		K/2710/99	173
Karl Fischer Aqualine® Water standard 5 mg/mℓ	500 mℓ	Glass bottle		K/2730/08	173
Karl Fischer Aqualine® Water standard 10 mg/g, 10 x 8mℓ ampoules	80 mℓ	Ampoule		K/2720/99	174
Karl Fischer Aqualine Buffer	500 mℓ	Glass bottle		K/2350/08	174
Karl Fischer reagent solution, modified	500 mℓ	Coated Glass bottle		J/4620/PB08	174
	1 L	Coated Glass bottle		J/4620/PB15	174
	2.5 L	Coated Glass bottle		J/4620/PB17	174

Karl Fischer Aqualine® Complete 1
For Karl Fischer titration by Volumetry

packaging		Mfr. No
1 ℓ	Glass bottle	K/1900/15

ADR/RID: 8, III
EINECS: 203-919-7
UN: 1760
GHS: Repr. 2, Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1

H314, H302, H361d, H331
P280, P301+P330+P331, P305+P351+P338, P304+P340, P302+P350, P310, P273

Guaranteed analysis
Factor ..... : 1.3 to 1.5 mg/mℓ

Single component (composite) reagent with a water equivalence of 1mg Water/mℓ (pyridine free)

Karl Fischer Aqualine® Complete 2
For Karl Fischer titration by Volumetry

packaging		Mfr. No
1 ℓ	Glass bottle	K/1950/15
2.5 ℓ	Glass bottle	K/1950/17

ADR/RID: 8, III
EINECS: 203-919-7
UN: 1760
GHS: Repr. 2, Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1

H314, H302, H361d, H331
P280, P301+P330+P331, P305+P351+P338, P304+P340, P302+P350, P310, P273

Guaranteed analysis
Factor ..... : 2.4 to 2.6 mg/mℓ

Single component (composite) reagent with a water equivalence of 2mg Water/mℓ (pyridine free)

Karl Fischer Aqualine® Complete 5
For Karl Fischer titration by Volumetry

packaging		Mfr. No
1 ℓ	Glass bottle	K/2000/15
2.5 ℓ	Glass bottle	K/2000/17

ADR/RID: 8, III
EINECS: 203-919-7
UN: 1760
GHS: Repr. 2, Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1

H314, H302, H361d, H331
P280, P301+P330+P331, P305+P351+P338, P304+P340, P302+P350, P310, P273

Guaranteed analysis
Factor ..... : 5.3 to 5.6 mg/mℓ

Single component (composite) reagent with a water equivalence of 5mg Water/mℓ (pyridine free)

Karl Fischer Aqualine® Complete 5K
For Karl Fischer titration by Volumetry

packaging		Mfr. No
500 mℓ	Glass bottle	K/2250R/08
1 ℓ	Glass bottle	K/2250R/15

ADR/RID: 8, III
EINECS: 203-919-7
UN: 1760
GHS: Repr. 2, Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1

H302, H312, H332, H314, H361d, H400
P280, P301+P330+P331, P305+P351+P338, P301+P312, P304+P340, P273

Guaranteed analysis
Factor ..... : 5.3 to 5.5 mg/mℓ

Single component (composite) reagent for water determination in aldehydes and ketones with a water equivalence of 5mg Water/mℓ (pyridine free).
Must be used in conjunction with Aqualine® Matrix K.

Karl Fischer Aqualine® Matrix K
For Karl Fischer titration by Volumetry

packaging		Mfr. No
500 mℓ	Glass bottle	K/2300R/08
1 ℓ	Glass bottle	K/2300R/15

Flash point: >36.1°C
ADR/RID: 3, 6.1, III
EINECS: 200-663-8
UN: 1992
GHS: Flam. Liq. 3, Carc. 2, Acute Tox. 4, Skin Irrit. 2,

Eye Irrit. 2, STOT RE 2
H226, H302, H312, H332, H351, H373, H319, H315
P280, P304+P340, P302+P352, P260, P305+P351+P338, P210

A mixture of solvents used as working medium for the determination of water in aldehydes and ketones.
Must be used in conjunction with Aqualine® Complete 5K.

Karl Fischer Aqualine® Solvent
For Karl Fischer titration by Volumetry

packaging		Mfr. No
1 ℓ	Glass bottle	K/2100/15
2.5 ℓ	Glass bottle	K/2100/17

Flash point: >11°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1992
GHS: Flam. Liq. 2, Repr. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT SE 1
H225, H301, H331, H370,

H311, H314, H361d
P301+P310, P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P310, P281, P307+P311, P304+P340, P210, P240

Aqualine® Solvent acts as the working medium with the two-component reagent (pyridine free). Water capacity of at least 8mg water/mℓ.

Karl Fischer Aqualine® Solvent CM
For Karl Fischer titration by Volumetry

packaging		Mfr. No
1 ℓ	Glass bottle	K/2110/15
2.5 ℓ	Glass bottle	K/2110/17

Flash point: 31°C
ADR/RID: 3, 6.1, II
EINECS: 200-663-8
UN: 1992
GHS: Flam. Liq. 2, Carc. 2, Repr. 1B, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT SE 1, STOT RE 2
H225, H301, H311, H331, H314, H351, H370, H373, H360D
P201, P280, P302+P350, P305+P351+P338, P308+P313, P210

Aqualine® Solvent CM acts as the working medium with the two-component reagent (pyridine free) for samples with high hydrocarbon content.

Karl Fischer Aqualine® Titrant 2
For Karl Fischer titration by Volumetry

packaging		Mfr. No
1 ℓ	Glass bottle	K/2150/15
2.5 ℓ	Glass bottle	K/2150/17

Boiling point: 64°C
Flash point: 10°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H331, H311, H301, H370
P261, P280, P307+P311, P302+P352, P210, P240

Guaranteed analysis
Factor ..... : 2.1 to 2.3 mg/mℓ

Aqualine® two component reagent with a water equivalence of 2mg Water/mℓ (pyridine free).
Aqualine® Titrant 2 is used as the titration reagent in conjunction with Aqualine® Solvent.

Karl Fischer Aqualine® Titrant 5
For Karl Fischer titration by Volumetry

packaging		Mfr. No
1 ℓ	Glass bottle	K/2200/15
2.5 ℓ	Glass bottle	K/2200/17

Boiling point: 64°C
Flash point: >11°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

Guaranteed analysis
Factor ..... : 5.1 to 5.3 mg/mℓ

Aqualine® two component reagent with a water equivalence of 5mg Water/mℓ (pyridine free).
Aqualine® Titrant 5 is used as the titration reagent in conjunction with Aqualine® Solvent.

Karl Fischer Aqualine® Electrolyte A
For Karl Fischer titration by Coulometry

packaging		Mfr. No
500 mℓ	Glass bottle	K/2500/08

Flash point: 10°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1992
GHS: Flam. Liq. 2, Carc. 2, Acute Tox. 2, Skin Corr. 1B, STOT SE 1, STOT RE 2
H225, H314, H330, H311, H301, H370, H373, H351
P307+P311, P280, P301+P330+P331, P305+P351+P338, P304+P340, P302+P352, P260, P210

Anolyte solution for general use in conventional cells with a diaphragm.

Karl Fischer Aqualine® Electrolyte AD
For Karl Fischer titration by Coulometry

packaging		Mfr. No
500 mℓ	Glass bottle	K/2510/08

Flash point: 10°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1992
GHS: Flam. Liq. 2, Carc. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT SE 1, STOT RE 2
H225, H331, H301, H373, H311, H314, H370, H351
P301+P310, P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P310, P281, P307+P311, P304+P340, P260, P210, P240

Anolyte for cells without diaphragm (fritless).

Karl Fischer Aqualine® Electrolyte AD-G
For Karl Fischer titration by Coulometry

packaging		Mfr. No
500 mℓ	Glass bottle	K/2515/08

Flash point: 10°C
ADR/RID: 3, 6.1, II
UN: 1992
GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1B, STOT SE 1, Aquatic Chronic 2
H225, H301, H311, H314, H331, H370, H411
P210, P240, P280, P301+P310, P304+P340, P302+P350, P273

Halogen-free anolyte solution for use in cells without diaphragm (fritless).

Karl Fischer Aqualine® Electrolyte AG
For Karl Fischer titration by Coulometry

packaging		Mfr. No
500 mℓ	Glass bottle	K/2520/08

Flash point: 10°C
ADR/RID: 3, 6.1, II
UN: 1992
GHS: Flam. Liq. 2, Acute Tox. 2, Skin Corr. 1B, STOT SE 1, Aquatic Acute 1
H225, H301, H311, H330, H314, H370, H400
P280, P301+P330+P331, P305+P351+P338, P304+P340, P210, P273, P240

Halogen-free anolyte solution for general use in conventional cells with diaphragm.

Karl Fischer Aqualine® Electrolyte CG
For Karl Fischer titration by Coulometry

packaging		Mfr. No
25 mℓ	Vial	K/2560/04

Density at 20°C: >> 1.0
Boiling point: 64°C
Flash point: >11°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1992
GHS: Flam. Liq. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 1, Aquatic Acute 1
H225, H311, H331, H301, H315, H319, H370, H400
P280, P304+P340, P302+P350, P302+P352, P305+P351+P338, P210, P273

Chlorine-free catholyte solution for general use in conventional cells with a diaphragm.

Karl Fischer Aqualine® Sodium tartrate-2-H_2O
For Karl Fischer titration

packaging		Mfr. No
100 g	Plastic jar	K/2770/48

$(CH(OH).COONa)_2$
CAS: 6106-24-7
MW: 230.08
Density at 20°C: 1.8
Melting point: 150°C
EINECS: 212-773-2

Guaranteed analysis
Loss on drying ..... 15.61 to 15.71%

Primary standard for volumetric analysis.
water content 15.66±0.05%.

Karl Fischer Aqualine® tri-Potassium citrate standard
For Karl Fischer titration

packaging		Mfr. No
10 g	Glass bottle	K/2760/45

$K_3C_6H_5O_7$
CAS: 6100-05-6
EINECS: 212-755-5

Guaranteed analysis
Loss on drying 200°C ..... : 5.5 to 5.61%

Potassium citrate monohydrate for use in KF oven techniques. Actual water content by weight (as loss on drying) is specified on the label.

Karl Fischer Aqualine® Water solution
For Karl Fischer titration

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/9000/PB08
1 ℓ	Glass bottle	J/9000/15

H_2O
CAS: 7732-18-5
MW: 18.02
Density at 20°C: 0.79
Boiling point: 64.7°C
Flash point: 12°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

1 mℓ is equivalent to 5.00 + /-0.05 mg water.

Karl Fischer Aqualine® Water standard 0.2 mg
For Karl Fischer titration

packaging		Mfr. No
40 mℓ	Ampoule	K/2740/99

Density at 20°C: 0.865
Boiling point: 138.5 to 142
Melting point: -47.4°C
Flash point: 27°C
ADR/RID: 3, III
EINECS: 215-535-7
UN: 1307
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2
H226, H312, H332, H315
P210, P261, P280, P302+P352, P304+P340

Guaranteed analysis
Water equivalent ..... : 0.195 to 0.205 mg

Standard for Karl Fischer titration.
1 mℓ is equivalent to 0.200 + /-0.005 mg water.
Each pack contains 10 x 4mℓ ampoules and is supplied with a certificate of analysis.
Each ampoule has a shelf life of at least 5 years unopened.

Karl Fischer Aqualine® Water standard 1.0 mg
For Karl Fischer titration

packaging		Mfr. No
40 mℓ	Ampoule	K/2710/99

ADR/RID: 3, III
EINECS: 203-273-6
UN: 2222
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H332, H315, H318, H335
P304+P340, P302+P352, P210, P305+P351+P338, P261, P280

Guaranteed analysis
Water equivalent ... : 0.97 to 1.03 mg/mℓ

Standard for Karl Fischer titration.
1 mℓ is equivalent to 1.00 + /-0.03 mg water.
Each pack contains 10 x 4mℓ ampoules and is supplied with a certificate of analysis.
Each ampoule has a shelf life of at least 5 years unopened.

Karl Fischer Aqualine® Water standard 5 mg
For Karl Fischer titration

packaging		Mfr. No
500 mℓ	Glass bottle	K/2730/08

Flash point: 29°C
ADR/RID: 3, III
EINECS: 215-535-7
UN: 1993
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H336, H318, H335, H315, H312, H302, H332
P210, P280, P305+P351+P338

Guaranteed analysis
Water equivalent ... : 4.98 to 5.02 mg/mℓ

Standard for Karl Fischer titration.
1 mℓ is equivalent to 5.00 + /-0.02 mg water.

Karl Fischer Aqualine® Water standard 10 mg
For Karl Fischer titration

packaging		Mfr. No
80 mℓ	Ampoule	K/2720/99

Flash point: 32.2°C
ADR/RID: 3, III
EINECS: 203-572-1
UN: 1993
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H302, H312, H332, H318, H315, H335, H336
P280, P305+P351+P338, P304+P340, P302+P352, P210, P261

Guaranteed analysis
Water equivalent ..... : 9.9 to 10.1 mg/mℓ

Standard for Karl Fischer titration.
1 mℓ is equivalent to 10.00 + /-0.1 mg water.
Each pack contains 10 x 8mℓ ampoules and is supplied with a certificate of analysis.
Each ampoule has a shelf life of at least 5 years unopened.

Karl Fischer, Aqualine buffer
For Karl Fischer titration

packaging		Mfr. No
500 mℓ	Glass bottle	K/2350/08

Flash point: 10°C
ADR/RID: 3, 8, II
UN: 2924
GHS: Flam. Liq. 2, Repr. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT SE 1
H225, H370, H301, H314, H311, H331, H361d
P210, P240, P305+P351+P338, P280

Guaranteed analysis
Use test ..... : Pass

Buffer for use with acidic samples

Karl Fischer reagent solution, modified
For Karl Fischer titration

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/4620/PB08
1 ℓ	Coated Glass bottle	J/4620/PB15
2.5 ℓ	Coated Glass bottle	J/4620/PB17

Density at 20°C: 0.93
Flash point: 38°C
ADR/RID: 3, III
EINECS: 231-195-2
UN: 1993
GHS: Flam. Liq. 3, Repr. 1B, Acute Tox. 3
H226, H360, H331, H311, H301
P301+P310, P302+P352, P304+P312, P210, P201

Water equivalent approximately 5 mg / mℓ when prepared.

Karl Fischer reagent solution
For Karl Fischer titration

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/4600/PB08
1 ℓ	Coated Glass bottle	J/4600/PB15
2.5 ℓ	Coated Glass bottle	J/4600/PB17

ADR/RID: 3, 6.1, II
UN: 1992
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P210, P240, P301+P310, P304+P340, P302+P350, P307+P311

Guaranteed analysis
pH (10% aq. soln.) ..... : 3.5 to 5.5

Water equivalent approximately 5 mg / mℓ when prepared.
This solution deteriorates on storage even closed containers.

Karl Fischer Aqualine® Electrolyte AG-H
For Karl Fischer titration by Coulometry

packaging		Mfr. No
500 mℓ	Glass bottle	K/2530/08

Flash point: 12°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1992
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H370, H331
P280, P301+P310, P302+P350, P304+P340, P310, P210, P240

Halogen-free anolyte solution for general use in conventional cells with a diaphragm.

Kieselguhr
pure, white

packaging		Mfr. No
1 kg	Plastic keg	K/0090/60

SiO_2
CAS: 61790-53-2
MW: 60.08
GHS: Eye Irrit. 2, STOT SE 3,
STOT RE 2
H373, H319, H335
P260, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Kieselguhr
pure, washed with acid

packaging		Mfr. No
500 g	Plastic jar	K/0100/53
1 kg	Plastic keg	K/0100/60

SiO_2
CAS: 61790-53-2
MW: 60.08
GHS: Eye Irrit. 2, STOT SE 3,
STOT RE 2
H373, H319, H335
P260, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Kjedhal Boric acid solution
pure, solution 4% alkaline with indicator

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	K/0200/15
5 ℓ	HDPE Plastic bottle	K/0200/21

Assay: 3.9 to 4.1

Guaranteed analysis
pH at 20°C ..... : 3.8 to 4.2

Kjeldahl catalyst Copper tablets
pure

packaging		Mfr. No
500 PC	Plastic jar	K/0120/80
1000 PC	Plastic jar	K/0120/81

ADR/RID: 9, III
EINECS: 231-820-9
UN: 3077
GHS: Aquatic Chronic 2
H411
P273, P501

Each tablet contains 1 g of sodium sulphate and the equivalent of 0.1 g of copper sulfate (II)

Kjeldahl catalyst tablets Copper

packaging		Mfr. No
1000 PC	Plastic jar	K/0125/81

CAS: 7778-80-5
EINECS: 231-915-5
GHS: Aquatic Chronic 3
H412
P273

Kjeldahl catalyst Mercury tablets
pure

packaging		Mfr. No
500 PC	Plastic jar	K/0130/80

ADR/RID: 6.1, III
UN: 3288
GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H300, H310, H330, H373, H410
P280, P260, P304+P340, P301+P310, P273

Each tablet contains 1 g of sodium sulphate and the equivalent of 0.1 g of mercury

Kjeldahl catalyst Selenium tablets
pure

packaging		Mfr. No
500 PC	Plastic jar	K/0150/80
1 kg	Plastic jar	K/0150/81

EINECS: 231-820-9
UN: 3283
GHS: Acute Tox. 4, STOT RE 2
H302, H332, H373
P280, P260, P304+P341, P308+P313, P301+P312

Each tablet contains 1 g of sodium sulphate and the equivalent of 0.05 g selenium

Kjeldahl catalyst Sodium sulfate tablets
pure

packaging		Mfr. No
500 PC	Plastic jar	K/0160/80
1000 PC	Plastic jar	K/0160/81

Each tablet contains 1 g of sodium sulphate

Kjeldahl catalyst Titanium tablets
pure

packaging		Mfr. No
1000 PC	Plastic jar	K/0170/81

ADR/RID: 9, III
UN: 3077
GHS: Aquatic Chronic 2
H411
P273

Guaranteed analysis
Identity test ..... : Pass

Each tablet contains 1 g of sodium sulphate and the equivalent of 0.03 g titanium dioxide and 0.03 g of copper sulphate

Kjeldahl Digestion reagent
pure

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	K/0210/PB17

ADR/RID: 8, II
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Kjeldahl phenol reagent
pure, for determination of nitrogen

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	K/0220/15

ADR/RID: 8, 6.1, II
UN: 2922
GHS: Muta. 2, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, STOT RE 2
H302, H312, H332, H314, H341, H373
P201, P280, P301+P330+P331, P305+P351+P338, P304+P340, P302+P350, P310

Kjeldhal Sodium hydroxide/sodium thiosulfate solution
pure, for Kjel-Foss automatic nitrogen analyser

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	K/0310/21

ADR/RID: 8, II
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Guaranteed analysis
Sodium hydroxide ..... : 39 to 41 Sodium thiosulfate ..... : 7.7 to 8.3

Solution: Sodium Hydroxide at 400 g / ℓ and Sodium Thiosulfate 80 g / ℓ

Lacmoid indicator
pure

packaging		Mfr. No
1 g	Vial	L/0060/43

$C_{12}H_7NO_3.H_3N$
CAS: 42249-61-6
MW: 230.22
EINECS: 255-736-7

Lactic acid — Certified AR, Eur.Ph.
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	L/0150/PB08
2.5 ℓ	HDPE Plastic bottle	L/0150/PB17

$C_3H_6O_3$
CAS: 50-21-5
MW: 90.08
Density at 20°C: 1.2
Boiling point: 122°C
Melting point: 18°C
Flash point: 110°C
ADR/RID: 8/III

EINECS: 200-018-0
UN: 3265
GHS: Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H318, H335, H315
P261, P280, P305+P351+P338, P302+P352

Assay: >88%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<10 ppm
Reducing sugar	Pass	Sodium (Na)	<20 ppm
Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<1 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Lactic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	L/0100/PB08
2.5 ℓ	HDPE Plastic bottle	L/0100/PB17

$C_3H_6O_3$
CAS: 50-21-5
MW: 90.08
Density at 20°C: 1.2
Boiling point: 122°C
Melting point: 18°C
Flash point: 110°C
ADR/RID: 8/III

EINECS: 200-018-0
UN: 3265
GHS: Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H318, H335, H315
P261, P280, P305+P351+P338, P302+P352

Assay: >88%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Potassium (K)	<50 ppm
Chromium (Cr)	<5 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<200 ppm
Nickel (Ni)	<5 ppm	Zinc (Zn)	<50 ppm

Lactose monohydrate — Certified AR
for analysis, fine powder

packaging		Mfr. No
500 g	Plastic jar	L/0250/53
1 kg	Plastic jar	L/0250/60

$C_{12}H_{22}O_{11}.H_2O$
CAS: 63-42-3
MW: 360.32

Density at 20°C: 1.525
Melting point: 219°C
EINECS: 200-559-2

Guaranteed analysis

Acidity	<0.005 meq/g	Potassium (K)	<100 ppm
Water	4.8 to 5.4%	Sodium (Na)	<100 ppm
Specific rotation	52° to 52.8°	n-Butyl formate	<0.005%
Soluble in alcohol	<0.2%	Total nitrogen (N)	<500 ppm
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<200 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<5 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<10 ppm		

Lactose monohydrate — SLR
extra pure, fine powder

packaging		Mfr. No
500 g	Plastic jar	L/0200/53
1 kg	Plastic jar	L/0200/60
5 kg	Plastic keg	L/0200/65
25 kg	Fibre Keg	L/0200/70

$C_{12}H_{22}O_{11}.H_2O$
CAS: 63-42-3
MW: 360.32

Density at 20°C: 1.525
Melting point: 219°C
EINECS: 200-559-2

Guaranteed analysis

Water	4.5 to 6%	Potassium (K)	<500 ppm
Specific rotation	52° to 53°	Sodium (Na)	<500 ppm
Calcium (Ca)	<200 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<1000 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm

Lanolin anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	L/0350/53
1 kg	Plastic jar	L/0350/60

CAS: 8006-54-0
Melting point: 38 to 40°C
Flash point: 209°C
EINECS: 232-348-6

Guaranteed analysis
Complies with standard IR spectrum: Pass

Lanthanum chloride solution 10%w/v
for AAS

packaging		Mfr. No
250 mℓ	Glass bottle	L/0460/07
1 ℓ	Glass bottle	L/0460/15

$LaCl_3.7H_2O$
MW: 371.36
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3

H335, H319, H315
P305+P351+P338, P302+P352, P261, P280

Assay: 9.5 to 10.5

Guaranteed analysis

Calcium (Ca)	<2 ppm	Lead (Pb)	<1 ppm
Copper (Cu)	<0.5 ppm	Magnesium (Mg)	<0.5 ppm
Iron (Fe)	<0.5 ppm	Zinc (Zn)	<0.5 ppm

Lanthanum standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLLA22Y
500 mℓ	Plastic bottle	SPPLLA22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lanthanum standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLLA23Y
500 mℓ	Plastic bottle	SPPLLA23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lanthanum chloride heptahydrate
for AAS

packaging		Mfr. No
25 g	Plastic jar	L/0455/46
100 g	Plastic jar	L/0455/48

$LaCl_3.7H_2O$
CAS: 10025-84-0
MW: 371.36
Melting point: 91°C
EINECS: 233-237-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Calcium (Ca)	<10 ppm	Magnesium (Mg)	<1 ppm

Lanthanum chloride heptahydrate — Certified AR
for analysis

packaging		Mfr. No
25 g	Plastic jar	L/0451/46
100 g	Plastic jar	L/0451/48

$LaCl_3.7H_2O$
CAS: 10025-84-0
MW: 371.36
Melting point: 91°C
EINECS: 233-237-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<5 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<2 ppm
Potassium (K)	<20 ppm		

Lot analysis on the label.

Lanthanum nitrate hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	L/0500/46
100 g	Plastic jar	L/0500/48

$La(NO_3)_3.6H_2O$
CAS: 10277-43-7
MW: 433.03
Density at 20°C: >> 1.0
Boiling point: 126°C
Melting point: 40°C
ADR/RID: 5.1, II

EINECS: 233-238-0
UN: 1477
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H319, H335
P210, P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Identity test	: Pass	Manganese (Mn)	<=5 ppm
Cadmium (Cd)	<=5 ppm	Nickel (Ni)	<=5 ppm
Calcium (Ca)	<=20 ppm	Potassium (K)	<=10 ppm
Chromium (Cr)	<=5 ppm	Sodium (Na)	<=10 ppm
Cobalt (Co)	<=5 ppm	Total phosphorus (P)	<=50 ppm
Copper (Cu)	<=5 ppm	Total silicon (Si)	<=20 ppm
Iron (Fe)	<=10 ppm	Total sulphur (S)	<=50 ppm
Lead (Pb)	<=10 ppm	Zinc (Zn)	<=5 ppm
Magnesium (Mg)	<=5 ppm		

Lanthanum oxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	L/0510/48

La_2O_3
CAS: 1312-81-8
MW: 325.82
Density at 20°C: 6.51
Boiling point: 4200°C

Melting point: 2315°C
EINECS: 215-200-5
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
Identity test : Pass

Lauric acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	L/0560/53

$C_{12}H_{24}O_2$
CAS: 143-07-7
MW: 200.32
Density at 20°C: 0.8830
Boiling point: 225°C
Melting point: 44 to 46°C

Flash point: 156°C
EINECS: 205-582-1
GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P280, P302+P352, P305+P351+P338

Assay: 98 to 101%

di-Lauroyl peroxide
pure

packaging		Mfr. No
100 g	Plastic jar	L/0565/48
Pack	Vial	L/0565/99

$C_{24}H_{46}O_4$
CAS: 105-74-8
MW: 398.63
Melting point: 53 to 57°C
ADR/RID: 5.2, II

EINECS: 203-326-3
UN: 3106
GHS: Org. Perox. D
H242
P280, P210, P220

Guaranteed analysis
Complies with standard IR spectrum: Pass

Lead standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8035/05
500 mℓ	HDPE Plastic bottle	J/8035/08

Boiling point: 100°C
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Lead standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8276/08

Boiling point: 100°C
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Lead standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8275/05

Density at 20°C: >1.0
ADR/RID: 6.1, 8, II
UN: 3289
GHS: Repr. 1A, Acute Tox. 4, Skin Corr. 1B, STOT RE 2

H360Df, H332, H302, H373, H412
P280, P301+P330+P331, P310, P305+P351+P338, P304+P340, P308+P313

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Lead standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLPB22Y
250 mℓ	Plastic bottle	SPPLPB22T
500 mℓ	Plastic bottle	SPPLPB22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lead standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLPB23Y
500 mℓ	Plastic bottle	SPPLPB23X

H314, H360, H373, H412

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lead standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLPB22Y

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lead metal powder
SLR
extra pure, below 200 mesh

packaging		Mfr. No
500 g	Plastic jar	L/0750/53

Pb
CAS: 7439-92-1
MW: 207.19
Density at 20°C: 11.3
Boiling point: 1740°C
Melting point: 327.4°C
ADR/RID: 9, III
EINECS: 231-100-4

UN: 3077
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H410, H373, H302, H360Df
P281, P260, P273, P301+P312, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lead metal foil
SLR
extra pure, about 0.13 mm

packaging		Mfr. No
500 g	Plastic jar	L/0610/53

Pb
CAS: 7439-92-1
MW: 207.19
Density at 20°C: 11.3
Boiling point: 1740°C
Melting point: 327.4°C
ADR/RID: 9, III
EINECS: 231-100-4

UN: 3077
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H410, H373, H302, H360Df
P281, P260, P273, P301+P312, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lead metal shot
SLR
extra pure, about 2 mm

packaging		Mfr. No
500 g	Plastic jar	L/0800/53
1 kg	Plastic jar	L/0800/60

Pb
CAS: 7439-92-1
MW: 207.19
Density at 20°C: 11.3
Boiling point: 1740°C
Melting point: 327.4°C
ADR/RID: 9, III
EINECS: 231-100-4

UN: 3077
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H410, H373, H302, H360Df
P281, P260, P273, P301+P312, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lead metal granulated
pure

packaging		Mfr. No
500 g	Plastic jar	L/0700/53

Pb
CAS: 7439-92-1
MW: 207.19
Density at 20°C: 11.3
Boiling point: 1740°C
Melting point: 327.4°C
ADR/RID: 9, III
EINECS: 231-100-4

UN: 3077
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H410, H373, H302, H360Df
P281, P260, P273, P301+P312, P304+P340

Guaranteed analysis
Copper (Cu) ..... <200 ppm Iron (Fe) ..... <10 ppm

Lead metal
technical, sheet 1mm

packaging		Mfr. No
1 kg	Plastic jar	L/0605/60

Pb
CAS: 7439-92-1
MW: 207.19
Density at 20°C: 11.3
Boiling point: 1740°C
Melting point: 327.4°C
ADR/RID: 9, III
EINECS: 231-100-4

UN: 3077
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H410, H373, H302, H360Df
P281, P260, P273, P301+P312, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lead(II) acetate trihydrate
Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	L/1000/50
500 g	Plastic jar	L/1000/53
1 kg	Plastic jar	L/1000/60

$Pb(CH_3CO_2)_2.3H_2O$
CAS: 6080-56-4
MW: 379.33
Melting point: 75°C
ADR/RID: 6.1, III
UN: 1616

GHS: Repr. 1A, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H360Df, H373, H410
P281, P260, P273, P301+P312, P304+P340

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<5 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<20 ppm
Magnesium (Mg)	<5 ppm	Total silicon (Si)	<20 ppm
Potassium (K)	<10 ppm	Total sulphur (S)	<50 ppm
Sodium (Na)	<20 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Arsenic (As)	<2 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Chromium (Cr)	<1 ppm	Vanadium (V)	<1 ppm
Cobalt (Co)	<1 ppm		

Lot analysis on the label.

Lead(II) acetate trihydrate
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	L/0950/50
500 g	Plastic jar	L/0950/53
1 kg	Plastic jar	L/0950/60

$Pb(CH_3CO_2)_2.3H_2O$
CAS: 6080-56-4
MW: 379.33
Melting point: 75°C
ADR/RID: 6.1, III
UN: 1616

GHS: Repr. 1A, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H360Df, H373, H410
P281, P260, P273, P301+P312, P304+P340

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm
Sodium (Na)	<200 ppm		

Lead(II) bromide
pure

packaging		Mfr. No
100 g	Plastic jar	L/1100/48
250 g	Plastic jar	L/1100/50

$PbBr_2$
CAS: 10031-22-8
MW: 367.01
Density at 20°C: 6.66
Boiling point: 916°C
Melting point: 373°C
ADR/RID: 6.1, III
EINECS: 233-084-4

UN: 2291
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H332, H373, H360Df, H302
P281, P260, P273, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lead(II) carbonate basic
SLR
extra pure, precipitated

packaging		Mfr. No
250 g	Plastic jar	L/1150/50
500 g	Plastic jar	L/1150/53

$(PbCO_3)_2.Pb(OH)_2$
CAS: 1319-46-6
MW: 775.59
Melting point: 400°C
ADR/RID: 6.1, III
EINECS: 215-290-6
UN: 3288

GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H373, H410, H360Df, H302
P281, P260, P273, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lead(II) chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	L/1200/50

$PbCl_2$
CAS: 7758-95-4
MW: 278.09
Boiling point: 950°C
Melting point: 501°C
ADR/RID: 6.1, III
EINECS: 231-845-5

UN: 2291
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H302, H373, H410, H360Df
P281, P308+P313, P260, P273

Guaranteed analysis
Identity test ..... : Pass

Lead(II) acetate basic
pure, for sugar analysis

packaging		Mfr. No
500 g	Plastic jar	L/1050/53
25 kg	Plastic keg	L/1050/70

$(CH_3COO)_2Pb.2Pb(OH)_2$
CAS: 1335-32-6
MW: 807.69
ADR/RID: 6.1, III
EINECS: 215-630-3
UN: 1616

GHS: Carc. 2, Repr. 1A, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H351, H373, H410, H360Df
P281, P260, P273

Assay: >95%

Guaranteed analysis

Copper (Cu)	<100 ppm	Nitrate (NO_3)	<0.01%
Iron (Fe)	<100 ppm		

Lead(II) sulfide
pure

packaging		Mfr. No
100 g	Glass jar	L/1730/48

PbS
CAS: 1314-87-0
MW: 239.26
ADR/RID: 6.1, III
EINECS: 215-246-6
UN: 3288

GHS: Repr. 2, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H373, H360Df, H302, H332
P281, P260, P273, P301+P312

Guaranteed analysis
Identity test ..... : Pass

Lead(II) iodide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	L/1400/48

PbI_2
CAS: 10101-63-0
MW: 461.00
Density at 20°C: 6.16
Melting point: 402°C
ADR/RID: 6.1, III
EINECS: 233-256-9

UN: 2291
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H373, H410, H332, H302, H360Df
P281, P260, P273, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lead(II) nitrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	L/1500/50
500 g	Plastic jar	L/1500/53
1 kg	Plastic jar	L/1500/60

$Pb(NO_3)_2$
CAS: 10099-74-8
MW: 331.20
Density at 20°C: 4.53
Melting point: 470°C
ADR/RID: 5.1, 6.1, II
EINECS: 233-245-9
UN: 1469

GHS: Ox. Sol. 2, Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H272, H332, H373, H410, H302, H360Df
P281, P210, P301+P312, P260, P273, P304+P340

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<5 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<5 ppm
Sodium (Na)	<20 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Lithium (Li)	<1 ppm
Arsenic (As)	<2 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Chromium (Cr)	<1 ppm	Vanadium (V)	<1 ppm
Cobalt (Co)	<1 ppm		

Lot analysis on the label.

Lead(II) nitrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	L/1450/50
500 g	Plastic jar	L/1450/53
1 kg	Plastic jar	L/1450/60

$Pb(NO_3)_2$
CAS: 10099-74-8
MW: 331.20
Density at 20°C: 4.53
Melting point: 470°C
ADR/RID: 5.1, 6.1, II
EINECS: 233-245-9
UN: 1469

GHS: Ox. Sol. 2, Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H272, H332, H373, H410, H302, H360Df
P281, P210, P301+P312, P260, P273, P304+P340

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm
Sodium (Na)	<200 ppm		

Lead(II) nitrate
technical

packaging		Mfr. No
500 g	Plastic jar	L/1445/53

$Pb(NO_3)_3$
CAS: 10099-74-8
MW: 331.20
Density at 20°C: 4.53
Melting point: 470°C
ADR/RID: 5.1, 6.1, II
EINECS: 233-245-9
UN: 1469

GHS: Ox. Sol. 2, Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H272, H332, H373, H410, H302, H360Df
P281, P210, P301+P312, P260, P273, P304+P340

Assay: >99%

Lead(II) oxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	L/1600/53

PbO
CAS: 1317-36-8
MW: 223.19
Boiling point: 1470°C
Melting point: 886°C
ADR/RID: 6.1, III
EINECS: 215-267-0

UN: 2291
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H373, H410, H360Df, H302
P281, P260, P273, P304+P340

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm
Sodium (Na)	<200 ppm		

Lead(II) oxide
Technical, canary yellow

packaging		Mfr. No
500 g	Plastic jar	L/1670/53

PbO
CAS: 1317-36-8
MW: 223.19
Boiling point: 1470°C
Melting point: 886°C
ADR/RID: 6.1, III
EINECS: 215-267-0

UN: 2291
GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H332, H373, H410, H360Df, H302
P281, P260, P273, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lead (II,V)oxide — SLR
extra pure, minium, red lead

packaging		Mfr. No
500 g	Plastic jar	L/1700/53

Pb_3O_4
CAS: 1314-41-6
MW: 685.57
Density at 20°C: 8.32 to 9.16
Melting point: 500 to 530°C
ADR/RID: 5.1, III
EINECS: 215-235-6
UN: 1479

GHS: Ox. Sol. 2, Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H272, H373, H332, H302, H361, H410
P281, P308+P313, P260, P273, P210

Guaranteed analysis
Identity test ..... : Pass

Lead(IV) dioxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	L/1350/50
500 g	Plastic jar	L/1350/53

PbO_2
CAS: 1309-60-0
MW: 239.19
Melting point: 290°C
ADR/RID: 5.1, 6.1, III
EINECS: 215-174-5
UN: 1872
GHS: Ox. Sol. 2, Repr. 1A,

Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H271, H410, H332, H373, H360Df, H302
P281, P301+P312, P260, P273, P304+P340, P210

Assay: >94%

Guaranteed analysis
Sulfate (SO_4) ..... <0.01%

Lead(II) sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	L/1720/53

$PbSO_4$
CAS: 7446-14-2
MW: 303.25
Melting point: 1170°C
ADR/RID: 6.1, III
EINECS: 231-198-9
UN: 3288

GHS: Repr. 1A, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H302, H410, H332, H373, H360Df
P281, P260, P273, P301+P312, P304+P340

Guaranteed analysis
Identity test ..... : Pass

Lecithin
technical, egg about 90%

packaging		Mfr. No
25 g	Plastic jar	L/1814/46

CAS: 8002-43-5
Density at 20°C: 1.03
Melting point: 236.1°C
EINECS: 297-639-2

Guaranteed analysis
Complies with standard IR spectrum: Pass

Leishman's stain
pure

packaging		Mfr. No
10 g	Glass jar	L/1815/45

$C_6H_5NO_5$
CAS: 12627-53-1
MW: 171.04
Melting point: 79 to 81°C
EINECS: 235-732-1

GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280,
P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Leishman's stain solution
pure, in 100% Methanol

packaging		Mfr. No
100 mℓ	Coated Glass bottle	L/1815L/PB05

Flash point: 10°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6
UN: 1992
GHS: Flam. Liq. 2, Acute

Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P210, P240, P301+P310,
P304+P340, P302+P352,
P308+P313

Guaranteed analysis
Identity test ..... : Pass

L-Leucine
specified reagents for general laboratory work- extra pure SLR

packaging		Mfr. No
100 g	Plastic jar	L/1819/48

$C_6H_{13}NO_2$
CAS: 61-90-5
MW: 131.18

Melting point: 286-288°C
EINECS: 200-522-0

Assay: >99%

L-iso-Leucine
pure

packaging		Mfr. No
25 g	Plastic jar	L/1822/46

$C_6H_{13}NO_2$
CAS: 73-32-5
MW: 131.18

Melting point: 168-170°C
EINECS: 200-798-2

Assay: >99%

Light green SF C.I 42095
pure

packaging		Mfr. No
25 g	Glass jar	L/1840/46

$C_{37}H_{34}N_2Na_2O_9S_3$
CAS: 5141-20-8
MW: 792.84

Melting point: 288°C
EINECS: 225-906-5

Guaranteed analysis
Complies with standard IR spectrum: Pass

Lime water
pure

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	J/5000/21

Density at 20°C: 1.0
Boiling point: 100°C
Melting point: 0°C

D(+) Limonene
pure

packaging		Mfr. No
250 mℓ	Glass bottle	L/1860/07

$C_{10}H_{16}$
CAS: 5989-27-5
MW: 136.24
Density at 20°C: 0.841
Boiling point: 175.4 to 176°C
Melting point: -74°C
Flash point: 48°C
ADR/RID: 3, III

EINECS: 227-813-5
UN: 2052
GHS: Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H226, H315, H317, H410
P280, P273, P302+P352, P210

Linseed oil
pure, raw approx.d= 0.93

packaging		Mfr. No
500 mℓ	Glass bottle	L/1950/08
2.5 ℓ	Glass bottle	L/1950/17

CAS: 8001-26-1
Density at 20°C: 0.925 to 0.935
Boiling point: 315.6°C
Melting point: -23.9°C
Flash point: 206.1°C
EINECS: 232-278-6

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H315
P280, P261, P302+P352,
P304+P340,
P305+P351+P338, P312

Guaranteed analysis
Density at 15.5°C ..... : 0.92 to 0.94

Linseed oil
pure, boiled approx.d= 0.95

packaging		Mfr. No
2.5 ℓ	Glass bottle	L/1900/17

CAS: 8001-26-1
EINECS: 232-278-6
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3

H319, H335, H315
P280, P261, P302+P352,
P304+P340,
P305+P351+P338, P312

Guaranteed analysis
Density at 15.5°C ..... : 0.94 to 0.96

Lithium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8037/05
500 mℓ	HDPE Plastic bottle	J/8037/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338,
P261, P302+P352

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Lithium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8281/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338,
P261, P302+P352

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Lithium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8280/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314

P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Lithium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLLI22Y
500 mℓ	Plastic bottle	SPPLLI22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lithium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLLI12X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lithium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLLI23Y
500 mℓ	Plastic bottle	SPPLLI23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lithium standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLLI13X

H303

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Lithium standard solution 1000 ppm (1 mg/mℓ)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4550/05

Manufactured to a tolerance of ± 1%.

Lithium metal in liquid paraffin
specified reagents for general laboratory work- extra pure SLR

packaging		Mfr. No
10 g	Aluminium jar	L/2000/45

Li
CAS: 7439-93-2
MW: 6.94
Density at 20°C: 0.534
Boiling point: 1317.2°C
Melting point: 180.6°C
ADR/RID: 4.3, I

EINECS: 231-102-5
UN: 1415
GHS: Water-react. 1, Skin Corr. 1B, Eye Dam. 1
H260, H314, EUH014
P280, P301+P330+P331,
P402+P404, P223, P310

Guaranteed analysis
Identity test ..... : Pass

Lithium acetate dihydrate
specified reagents for general laboratory work- extra pure SLR

packaging		Mfr. No
250 g	Plastic jar	L/2050/50

$C_2H_3LiO_2 \cdot 2H_2O$
CAS: 6108-17-4
MW: 102.02
Melting point: 280 to 285°C

EINECS: 208-914-3
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Lithium aluminium hydride
pure

packaging		Mfr. No
10 g	Plastic jar	A/2160/45

$LiAlH_4$
CAS: 16853-85-3
MW: 37.95
Density at 20°C: 0.910
Melting point: 125°C
ADR/RID: 4.3, I
EINECS: 240-877-9

UN: 1410
GHS: Water-react. 1, Skin Corr. 1A, Eye Dam. 1
H260, H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >95%

Lithium bromide anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	L/2080/48
500 g	Plastic jar	L/2080/53

LiBr
CAS: 7550-35-8
MW: 86.85
Density at 20°C: 3.46
Boiling point: 1265°C

Melting point: 550°C
EINECS: 231-439-8
GHS: Acute Tox. 4
H302
P301+P312

Assay: >98%

Guaranteed analysis

Iron (Fe)	<50 ppm	Sulfate (SO_4)	<0.02%
Lead (Pb)	<50 ppm		

Lithium carbonate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	L/2105/48

Li_2CO_3
CAS: 554-13-2
MW: 73.89
Density at 20°C: 2.11
Melting point: 720°C
EINECS: 209-062-5

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H302, H315, H318, H335
P305+P351+P338, P310, P280, P261, P302+P352

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<20 ppm	n-Butyl formate	<0.002%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<10 ppm
Sodium (Na)	<50 ppm		

Lot analysis on the label.

Lithium carbonate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	L/2100/50

Li_2CO_3
CAS: 554-13-2
MW: 73.89
Density at 20°C: 2.11
Melting point: 720°C
EINECS: 209-062-5

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H302, H315, H318, H335
P305+P351+P338, P310, P280, P261, P302+P352

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<1000 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<50 ppm

Lithium chloride anhydrous — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	L/2201/50
5 kg	Plastic jar	L/2201/65

LiCl
CAS: 7447-41-8
MW: 42.38
Density at 20°C: 2.06
Boiling point: 1382°C
Melting point: 605°C

EINECS: 231-212-3
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H302, H312, H335
P280, P302+P352, P301+P312, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	6 to 9	Potassium (K)	<50 ppm
Loss on drying	<2%	Sodium (Na)	<50 ppm
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<10 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Tin (Sn)	<2 ppm
Arsenic (As)	<2 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Chromium (Cr)	<1 ppm	Vanadium (V)	<1 ppm
Cobalt (Co)	<1 ppm		

Lot analysis on the label.

Lithium chloride anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	L/2200/48
250 g	Plastic jar	L/2200/50
5 kg	Plastic jar	L/2200/65
25 kg	Fibre Keg	L/2200/70

LiCl
CAS: 7447-41-8
MW: 42.38
Density at 20°C: 2.06
Boiling point: 1382°C
Melting point: 605°C

EINECS: 231-212-3
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H302, H312, H335
P280, P302+P352, P301+P312, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<200 ppm		

Lithium hydroxide monohydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	L/2301/53

$LiOH.H_2O$
CAS: 1310-66-3
MW: 41.96
Density at 20°C: 1.51
Boiling point: 920°C
Melting point: 462°C
ADR/RID: 8, II
EINECS: 215-183-4

UN: 2680
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H302, H314
P301+P330+P331, P305+P351+P338, P270, P280, P301+P312

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<50 ppm
Carbonate (Na_2CO_3)	<0.5%	n-Butyl formate	<0.002%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Lithium hydroxide monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	L/2300/48
250 g	Plastic jar	L/2300/50
1 kg	Plastic jar	L/2300/60
10 kg	Plastic keg	L/2300/68

$LiOH.H_2O$
CAS: 1310-66-3
MW: 41.96
Density at 20°C: 1.51
Boiling point: 920°C
Melting point: 462°C
ADR/RID: 8, II
EINECS: 215-183-4

UN: 2680
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H302, H314
P301+P330+P331, P305+P351+P338, P270, P280, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Carbonate (Na_2CO_3)	<1%	n-Butyl formate	<0.005%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<500 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<50 ppm		

Lithium iodide trihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	L/2320/48

$LiI.3H_2O$
CAS: 7790-22-9
MW: 187.89
Boiling point: 1171°C
Melting point: 446°C
EINECS: 233-822-5

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H302, H315, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Identity test	: Pass

Lithium metaborate anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	L/2330/48

$LiBO_2$
CAS: 13453-69-5
MW: 49.75

Melting point: 845°C
EINECS: 236-631-5

Guaranteed analysis

Calcium (Ca)	<50 ppm	Lead (Pb)	<50 ppm
Iron (Fe)	<50 ppm	Magnesium (Mg)	<20 ppm

To determine the melting point.

Lithium nitrate anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	L/2350/48
500 g	Plastic jar	L/2350/53
5 kg	Plastic jar	L/2350/65
10 kg	Plastic keg	L/2350/68

$LiNO_3$
CAS: 7790-69-4
MW: 68.95
Density at 20°C: 2.38
Boiling point: 600°C
Melting point: 251°C
ADR/RID: 5.1, III

EINECS: 232-218-9
UN: 2722
GHS: Ox. Sol. 3, Acute Tox. 4, Eye Irrit. 2
H272, H302, H319
P301+P312, P210, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<20 ppm	Zinc (Zn)	<20 ppm

Lithium sulfate monohydrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	L/2450/48

$Li_2SO_4.H_2O$
CAS: 10102-25-7
MW: 127.95
Melting point: 860°C
EINECS: 233-820-4

GHS: Acute Tox. 4
H302
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<5 ppm	Total nitrogen (N)	<20 ppm
Lead (Pb)	<5 ppm	Total phosphorus (P)	<20 ppm
Magnesium (Mg)	<5 ppm	Total silicon (Si)	<20 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Lithium sulfate monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	L/2400/53

$Li_2SO_4.H_2O$
CAS: 10102-25-7
MW: 127.95
Melting point: 860°C
EINECS: 233-820-4

GHS: Acute Tox. 4
H302
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<200 ppm		

Litmus
pure, indicator grade

packaging		Mfr. No
25 g	Glass jar	L/2500/46

CAS: 1393-92-6
EINECS: 215-739-6

Guaranteed analysis

pH colour change test	: Pass

Litmus solution
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	L/2500L/08
2.5 ℓ	Glass bottle	L/2500L/17

Guaranteed analysis

pH colour change test	: Pass

Lotoxane®
pure

packaging		Mfr. No
1 ℓ	Glass bottle	L/2550/15
2.5 ℓ	Glass bottle	L/2550/17
25 ℓ	Metal drum	L/2550/25

Density at 20°C: 0.77
Boiling point: 180°C
Flash point: 62°C

GHS: Asp. Tox. 1
H304, EUH066
P301+P310, P331, P405, P501

Non chlorinated aromatic solvent to replace 1.1,1-trichloroethane in cold cleaning applications.

Luminol
See 3-Aminophthalhydrazide (Luminol), page 33

Lutetium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLLU22Y
500 mℓ	Plastic bottle	SPPLLU22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

L-Lysine monohydrochloride
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	L/2700/48
1 kg	Plastic jar	L/2700/60

$C_6H_{14}N_2O_2.HCl$
CAS: 657-27-2
MW: 182.65

Melting point: 263 to 264°C
EINECS: 211-519-9

Assay: >98%

Guaranteed analysis

Loss on drying	<0.5%	Iron (Fe)	<10 ppm
Specific rotation	19° to 22°	Lead (Pb)	<10 ppm
Residue after ignition	<0.1%		

Magnesium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8040/05
500 mℓ	HDPE Plastic bottle	J/8040/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338,
P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

UHPLC
Filtered to 0.1 µm, Fisher Chemical UHPLC gradient grade solvents (Acetonitrile, Methanol and Water) are perfect for those working at high pressure.
See page 309 for more information

Magnesium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8286/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338,
P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Magnesium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8285/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338,
P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Magnesium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLMG22Y
250 mℓ	Plastic bottle	SPPLMG22T

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Magnesium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLMG12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Magnesium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLMG23Y
500 mℓ	Plastic bottle	SPPLMG23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Magnesium standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLMG13X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Magnesium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMG22Y

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Magnesium metal powder
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	M/0050/50
500 g	Plastic jar	M/0050/53

Mg
CAS: 7439-95-4
MW: 24.30
Density at 20°C: 1.74
Boiling point: 1107°C
Melting point: 651°C
Flash point: 500°C

ADR/RID: 4.3, 4.2, II
EINECS: 231-104-6
UN: 1418
GHS: Pyr. Sol. 1, Water-react. 1
H260, H250
P223, P210, P280

Guaranteed analysis
Identity test ..... : Pass

Magnesium metal turnings
pure, for Grignard reaction

packaging		Mfr. No
250 g	Plastic jar	M/0200/50
500 g	Plastic jar	M/0200/53

Mg
CAS: 7439-95-4
MW: 24.30
Boiling point: 1107°C
Melting point: 651°C
Flash point: 500°C
ADR/RID: 4.1, III

EINECS: 231-104-6
UN: 1869
GHS: Flam. Sol. 1, Self-heat. 1, Water-react. 2
H228, H261, H252
P210, P223

Guaranteed analysis
Identity test ..... : Pass

High Volume Solvent Delivery Systems
High-volume solvent delivery systems are available in 10L to 1000L, in Europe only. Please email your contact details and a brief description of your requirements to begel.sha.quotes@thermofisher.com

Magnesium acetate tetrahydrate
Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	M/0350/53

$C_4H_6O_4Mg.4H_2O$
CAS: 16674-78-5
MW: 214.46

Melting point: 80°C
EINECS: 205-554-9

Assay: 99.5 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	7 to 9	n-Butyl formate	<0.001%
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<5 ppm
Sodium (Na)	<10 ppm		

Lot analysis on the label.

Magnesium acetate tetrahydrate
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/0300/53

$C_4H_6O_4Mg.4H_2O$
CAS: 16674-78-5
MW: 214.46

Density at 20°C: 1.454
Melting point: 80°C
EINECS: 205-554-9

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm
Sodium (Na)	<50 ppm		

Magnesium bromide hexahydrate
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/0400/53

$MgBr_2.6H_2O$
CAS: 13446-53-2
MW: 292.22
Density at 20°C: 20
Melting point: 165°C
EINECS: 232-170-9

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Magnesium carbonate pentahydrate
Certified AR
for analysis, basic light

packaging		Mfr. No
100 g	Plastic jar	M/0515/48

$MgCO_3.5H_2O$
CAS: 12125-28-9
MW: 62.31
EINECS: 235-192-7

Assay: 99 to 103%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<10 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<50 ppm
Potassium (K)	<20 ppm	Total sulphur (S)	<50 ppm
Sodium (Na)	<2000 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Magnesium carbonate pentahydrate — SLR, Eur.Ph.,BP
extra pure, basic light

packaging		Mfr. No
500 g	Plastic jar	M/0500/53
25 kg	Plastic keg	M/0500/70

$MgCO_3.5H_2O$
CAS: 12125-28-9
MW: 62.31
EINECS: 235-192-7

Guaranteed analysis

Residue after ignition	42 to 45%	Sodium (Na)	<5000 ppm
Calcium (Ca)	<10000 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<500 ppm	Total sulphur (S)	<5000 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<200 ppm		

Magnesium carbonate pentahydrate — SLR, Eur.Ph.,BP
extra pure, basic heavy

packaging		Mfr. No
500 g	Plastic jar	M/0450/53

$MgCO_3.5H_2O$
CAS: 12125-28-9
MW: 62.31
EINECS: 235-192-7

Guaranteed analysis

Residue after ignition	42 to 45%	Sodium (Na)	<5000 ppm
Calcium (Ca)	<10000 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<500 ppm	Total silicon (Si)	<500 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<5000 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<100 ppm

Magnesium chloride hexahydrate — Certified AR, Eur.Ph.,BP
for analysis

packaging		Mfr. No
500 g	Plastic jar	M/0600/53
1 kg	Plastic jar	M/0600/60
2 kg	Plastic jar	M/0600/61
5 kg	Plastic keg	M/0600/65

$MgCl_2.6H_2O$
CAS: 7791-18-6
MW: 203.31
Density at 20°C: 1.56
Melting point: 117°C
EINECS: 232-094-6
GHS: Eye Irrit. 2, STOT SE 3
H335, H319
P261, P280, P305+P351+P338

Assay: 99 to 101%

Guaranteed analysis

Acidity / Alkalinity	Pass	Potassium (K)	<10 ppm
Water	51 to 55%	Sodium (Na)	<10 ppm
pH (aqueous solution 5%)	5 to 7	Total nitrogen (N)	<20 ppm
Bromides	: <500 ppm	Total phosphorus (P)	<5 ppm
Heavy metals	<10 ppm	Total silicon (Si)	<5 ppm
Calcium (Ca)	<20 ppm	Total sulphur (S)	<20 ppm
Copper (Cu)	<2 ppm	Zinc (Zn)	<5 ppm
Iron (Fe)	<2 ppm	Arsenic (As)	<2 ppm
Lead (Pb)	<2 ppm	Sulfate (SO_4)	<100 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<5 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<0.001 %	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.002 %
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Magnesium chloride hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/0550/53
1 kg	Plastic jar	M/0550/60
5 kg	Plastic keg	M/0550/65

$MgCl_2.6H_2O$
CAS: 7791-18-6
MW: 203.31
Density at 20°C: 1.56
Melting point: 117°C
EINECS: 232-094-6
GHS: Eye Irrit. 2, STOT SE 3
H335, H319
P261, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm

Magnesium chloride 50% w/w solution — Certified AR
for analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	M/0602/17

$MgCl_2$+aq
CAS: 7786-30-3
MW: 203.31
EINECS: 232-094-6
GHS: Eye Irrit. 2, STOT SE 3
H319, H335
P280, P305+P351+P338

Assay: 49 to 51%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 5.5	Sodium (Na)	<10 ppm
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<5 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<5 ppm

Lot analysis on the label.

Magnesium hydroxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	M/0650/50
500 g	Plastic jar	M/0650/53

$Mg(OH)_2$
CAS: 1309-42-8
MW: 58.33
Density at 20°C: 2.36
Melting point: 350°C
EINECS: 215-170-3
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H315
P261, P302+P352, P280, P305+P351+P338

Magnesium nitrate hexahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	M/0752/53
1 kg	Plastic jar	M/0752/60

$MgCl_2.6H_2O$
CAS: 13446-18-9
MW: 256.41
Boiling point: 330°C
Melting point: 89°C
Flash point: 93.3°C
ADR/RID: 5.1/III
EINECS: 233-826-7
UN: 1474
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 7	Sodium (Na)	<10 ppm
Ammonium (NH_4)	<0.002%	Total chloride (Cl)	<0.001%
Calcium (Ca)	<20 ppm	Total phosphorus (P)	<5 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<5 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<10 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<5 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<0.001 %	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.002 %
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Magnesium nitrate hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/0750/53

$Mg(NO_3)_2.6H_2O$
CAS: 13446-18-9
MW: 256.41
Boiling point: 330°C
Melting point: 89°C
Flash point: 93.3°C
ADR/RID: 5.1/III
EINECS: 233-826-7
UN: 1474
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<500 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm
Sodium (Na)	<50 ppm		

Magnesium oxide — SLR, Eur.Ph.,BP
extra pure, light

packaging		Mfr. No
500 g	Plastic jar	M/0850/53
1 kg	Plastic keg	M/0850/60

MgO
CAS: 1309-48-4
MW: 40.29
Density at 20°C: 3.58
Boiling point: 3600°C
Melting point: 2800°C
EINECS: 215-171-9

Guaranteed analysis

Loss on ignition	<5%	Lead (Pb)	<20 ppm
Arsenic (As)	<5 ppm	n-Butyl formate	<0.1%
Copper (Cu)	<50 ppm	Total sulphur (S)	<10000 ppm
Iron (Fe)	<500 ppm	Zinc (Zn)	<50 ppm

Magnesium oxide — SLR, Eur.Ph.,USP,BP
extra pure, heavy

packaging		Mfr. No
250 g	Plastic jar	M/0800/50
500 g	Plastic jar	M/0800/53

MgO
CAS: 1309-48-4
MW: 40.29
Density at 20°C: 3.58
Boiling point: 3600°C
Melting point: 2800°C
EINECS: 215-171-9

Guaranteed analysis

Loss on ignition	<5%	Lead (Pb)	<20 ppm
Arsenic (As)	<5 ppm	n-Butyl formate	<0.1%
Copper (Cu)	<50 ppm	Total sulphur (S)	<10000 ppm
Iron (Fe)	<500 ppm	Zinc (Zn)	<50 ppm

UHPLC
Filtered to 0.1 µm, Fisher Chemical UHPLC gradient grade solvents (Acetonitrile, Methanol and Water) are perfect for those working at high pressure.
See page 309 for more information

Magnesium perchlorate dried
pure, powder, Desiccating agent

packaging		Mfr. No
250 g	Plastic jar	M/0950/50
500 g	Plastic jar	M/0950/53
25 kg	Plastic keg	M/0950/70

$Mg(ClO_4)_2$
CAS: 10034-81-8
MW: 223.21
Melting point: 251°C
ADR/RID: 5.1, II
EINECS: 233-108-3
UN: 1475
GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H319, H335, H315, EUH014
P210, P261, P402+P404, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Identity test : Pass

Magnesium stearate — SLR, Eur.Ph.,BP,USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/0955/53

$C_{36}H_{70}MgO_4$
CAS: 557-04-0
MW: 591.27
Melting point: 130 to 140°C
EINECS: 209-150-3
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Complies with standard IR spectrum: Pass

Magnesium sulfate — SLR
extra pure, dried

packaging		Mfr. No
500 g	Plastic jar	M/1100/53
1 kg	Plastic jar	M/1100/60
2 kg	Plastic jar	M/1100/61
10 kg	Plastic keg	M/1100/68

$MgSO_4$
CAS: 7487-88-9
MW: 120.37
Density at 20°C: 2.65
Melting point: 1124°C
EINECS: 231-298-2

Assay: 62 to 70%

Guaranteed analysis

Iron (Fe)	<10 ppm	n-Butyl formate	<0.05%
Lead (Pb)	<10 ppm		

Magnesium sulfate heptahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	M/1050/53
1 kg	Plastic jar	M/1050/60

$MgSO_4.7H_2O$
CAS: 10034-99-8
MW: 246.48
Density at 20°C: 1.678
EINECS: 231-229-8

Assay: 99.5 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 7	Sodium (Na)	<20 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<2 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<2 ppm	Total phosphorus (P)	<5 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<5 ppm
Potassium (K)	<20 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<5 ppm
Silver (Ag)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<0.001 %	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.002 %
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Magnesium sulfate heptahydrate — SLR, Eur.Ph.,USP,BP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	M/1000/60
2.5 kg	Plastic jar	M/1000/62
5 kg	Plastic keg	M/1000/65

$MgSO_4.7H_2O$
CAS: 10034-99-8
MW: 246.48
Density at 20°C: 1.678
EINECS: 231-229-8

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<500 ppm
Potassium (K)	<500 ppm	Zinc (Zn)	<20 ppm

Malachite Green (oxalate) C.I. 42000
pure

packaging		Mfr. No
25 g	Glass jar	M/1245/46

$C_{23}H_{25}N_2.1/2C_2H_2O_4.C_2HO_4$
CAS: 2437-29-8
MW: 927.03
Melting point: 164°C
ADR/RID: 6.1, III
EINECS: 219-441-7
UN: 2811
GHS: Repr. 2, Acute Tox. 3, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H301, H318, H410, H361d
P301+P310, P301+P330+P331, P280, P305+P351+P338, P310, P281, P273

Guaranteed analysis

pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

Maleic acid — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	M/1255/53

$C_4H_4O_4$
CAS: 110-16-7
MW: 116.08
Density at 20°C: 1.59
Melting point: 134 to 138°C
Flash point: 127°C
EINECS: 203-742-5
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3
H317, H335, H319, H315, H302
P280, P301+P330+P331, P305+P351+P338, P302+P352, P264, P261

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<5 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<20 ppm
Potassium (K)	<20 ppm	Zinc (Zn)	<5 ppm
Sodium (Na)	<20 ppm	Fumaric acid	<1.5%

Lot analysis on the label.

Maleic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/1250/53

$C_4H_4O_4$
CAS: 110-16-7
MW: 116.08
Density at 20°C: 1.59
Melting point: 134 to 138°C
Flash point: 127°C
EINECS: 203-742-5
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3
H317, H335, H319, H315, H302
P280, P301+P330+P331, P305+P351+P338, P302+P352, P264, P261

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<20 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<100 ppm	Fumaric acid	<2%
Sodium (Na)	<100 ppm		

Maleic anhydride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/1300/53
10 kg	Plastic keg	M/1300/68

$C_4H_2O_3$
CAS: 108-31-6
MW: 98.06
Density at 20°C: 1.48
Boiling point: 200°C
Melting point: 52 to 55°C
Flash point: 102°C
ADR/RID: 8, III
EINECS: 203-571-6
UN: 2215
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1
H302, H314, H317, H334
P280, P301+P330+P331, P305+P351+P338, P302+P352, P310, P342+P311

Assay: >99.5%

DL-Malic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/1350/53

$C_4H_6O_5$
CAS: 6915-15-7
MW: 134.09
Melting point: 128 to 132°C
Flash point: 203°C
EINECS: 230-022-8
GHS: Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H318, H315, H335
P280, P305+P351+P338, P310, P261, P302+P352

Assay: >99%

Guaranteed analysis

Residue after ignition	<0.03%	n-Butyl formate	<0.02%
Sulfate (SO_4)	<0.02%		

Malonic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	M/1400/48

$C_3H_4O_4$
CAS: 141-82-2
MW: 104.07
Density at 20°C: 1.63
Melting point: 130 to 135°C
Flash point: 172°C
EINECS: 205-503-0
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H335, H318, H315, H302
P280, P305+P351+P338, P310, P261, P301+P312, P302+P352

Assay: >99%

Maltose monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	M/1450/48
500 g	Plastic jar	M/1450/53

$C_{12}H_{22}O_{11}.H_2O$
CAS: 69-79-4
MW: 360.32
Melting point: 130°C
EINECS: 200-716-5

Guaranteed analysis

Complies with standard IR spectrum: Pass

Manganese standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8045/05
500 mℓ	HDPE Plastic bottle	J/8045/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Manganese standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8291/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Manganese standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8290/05

Density at 20°C: 1.0
ADR/RID: 8, II
EINECS: 231-104-6
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Manganese standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLMN22Y
250 mℓ	Plastic bottle	SPPLMN22T
500 mℓ	Plastic bottle	SPPLMN22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Manganese standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLMN23Y
500 mℓ	Plastic bottle	SPPLMN23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Manganese standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMN22Y

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Manganese(II) acetate tetrahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	M/1700/50

$C_4H_6O_4Mn.4H_2O$
CAS: 6156-78-1
MW: 245.09
Melting point: >300°C
Flash point: >130°C
EINECS: 211-334-3
GHS: Repr. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335, H361f
P281, P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Iron (Fe)	<100 ppm	n-Butyl formate	<0.005%
Lead (Pb)	<100 ppm	Total sulphur (S)	<100 ppm

Manganese(II) chloride tetrahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	M/1850/53
1 kg	Plastic jar	M/1850/60
25 kg	Fibre Keg	M/1850/70

$MnCl_2.4H_2O$
CAS: 13446-34-9
MW: 197.91
Melting point: 58°C
EINECS: 231-869-6

GHS: Acute Tox. 4, STOT RE 2, Aquatic Chronic 3
H302, H412, H373
P280, P260, P301+P312, P273

Assay: 98 to 102%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 6	Potassium (K)	<20 ppm
Substances		Sodium (Na)	<50 ppm
reducing $KMnO_4$	<0.0005%	Total nitrogen (N)	<30 ppm
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<50 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<100 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<20 ppm		

Typical analysis

Arsenic (As)	<5 ppm	Lithium (Li)	<2 ppm
Cadmium (Cd)	<2 ppm	Titanium (Ti)	<2 ppm
Chromium (Cr)	<2 ppm	Vanadium (V)	<2 ppm
Cobalt (Co)	<2 ppm		

Lot analysis on the label.

Manganese(II) chloride tetrahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	M/1800/50
500 g	Plastic jar	M/1800/53

$MnCl_2.4H_2O$
CAS: 13446-34-9
MW: 197.91
Melting point: 58°C
EINECS: 231-869-6

GHS: Acute Tox. 4, STOT RE 2, Aquatic Chronic 3
H302, H412, H373
P280, P260, P301+P312, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<200 ppm
Potassium (K)	<50 ppm		

Manganese (II) nitrate tetrahydrate — NEW — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	M/2052/53

$Mn(NO_3)_2.4H_2O$
CAS: 10377-66-9
ADR/RID: 5.1, III
EINECS: 231-104-6
UN: 2724

GHS: Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335, H272
P210, P261, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<20 ppm		

Typical analysis

Cadmium (Cd)	<1 ppm	Lithium (Li)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label

Manganese(IV) oxide — SLR
extra pure, precipitated

packaging		Mfr. No
250 g	Glass jar	M/1665/50
500 g	Glass jar	M/1665/53

MnO_2
CAS: 1313-13-9
MW: 86.94
Boiling point: DC°C
Melting point: 535°C
ADR/RID: 5.1, II

EINECS: 215-202-6
UN: 1479
GHS: Acute Tox. 4
H332, H302
P210, P270, P264, P301+P312, P304+P340

Guaranteed analysis
Identity test : Pass

Manganese(IV) oxide
Technical, powder

packaging		Mfr. No
500 g	Glass jar	M/1660/53

MnO_2
CAS: 1313-13-9
MW: 86.94
Boiling point: DC°C
Melting point: 535°C
ADR/RID: 5.1, II

EINECS: 215-202-6
UN: 1479
GHS: Acute Tox. 4
H332, H302
P210, P270, P264, P301+P312, P304+P340

Guaranteed analysis
Identity test : Pass

Manganese(II) sulfate tetrahydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	M/2300/50
500 g	Plastic jar	M/2300/53

$MnSO_4.4H_2O$
CAS: 10101-68-5
MW: 223.05
ADR/RID: 9, III
UN: 3077

GHS: STOT RE 2, Aquatic Chronic 2
H373, H411
P260, P273

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 6	Potassium (K)	<20 ppm
Substances		Sodium (Na)	<50 ppm
reducing $KMnO_4$	<0.0005%	n-Butyl formate	<0.001%
Calcium (Ca)	<50 ppm	Total nitrogen (N)	<10 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<20 ppm		

Typical analysis

Arsenic (As)	<5 ppm	Lithium (Li)	<2 ppm
Cadmium (Cd)	<2 ppm	Titanium (Ti)	<2 ppm
Chromium (Cr)	<2 ppm	Vanadium (V)	<2 ppm
Cobalt (Co)	<2 ppm		

Lot analysis on the label

Manganese(II) sulfate tetrahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/2250/53
1 kg	Plastic jar	M/2250/60

$MnSO_4.4H_2O$
CAS: 10101-68-5
MW: 223.05
Boiling point: 850°C
Melting point: -700°C
ADR/RID: 9, III

EINECS: 232-089-9
UN: 3077
GHS: STOT RE 2, Aquatic Chronic 2
H373, H411
P260, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<50 ppm		

Manganese(II) sulfate monohydrate
pure, dried powder

packaging		Mfr. No
1 kg	Plastic jar	M/2350/60

$MnSO_4.H_2O$
CAS: 10034-96-5
MW: 169.02
Boiling point: 850°C
Melting point: 700°C
ADR/RID: 9, III

EINECS: 232-089-9
UN: 3077
GHS: STOT RE 2, Aquatic Chronic 2
H373, H411
P260, P273

Guaranteed analysis
Identity test : Pass

Mannitol — Certified AR, Eur.Ph., BP
for analysis

packaging		Mfr. No
500 g	Plastic jar	M/2405/53

$C_6H_{14}O_6$
CAS: 69-65-8
MW: 182.17

Melting point: 165 to 170°C
EINECS: 200-711-8

Assay (CG): 99 to 102%

Guaranteed analysis

Water	<0.5%	Iron (Fe)	<5 ppm
Specific rotation	23° to 24°	Lead (Pb)	<0.5 ppm
Reducing sugars	: <0.05%	Magnesium (Mg)	<5 ppm
Conductivity	<20 µS	Potassium (K)	<10 ppm
Isomalt	: <2%	Sodium (Na)	<50 ppm
D-Maltitol	: <2%	Total chloride (Cl)	<0.001%
D-Sorbitol	: <2%	Total phosphorus (P)	<20 ppm
Acidity	<0.0008 meq/g	Total silicon (Si)	<20 ppm
Calcium (Ca)	<10 ppm	Total sulphur (S)	<50 ppm
Copper (Cu)	<5 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Tin (Sn)	<2 ppm
Arsenic (As)	<5 ppm	Lithium (Li)	<1 ppm
Barium (Ba)	<1 ppm	Manganese (Mn)	<1 ppm
Cadmium (Cd)	<1 ppm	Nickel (Ni)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Mannitol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/2400/53

$C_6H_{14}O_6$
CAS: 69-65-8
MW: 182.17

Melting point: 165 to 170°C
EINECS: 200-711-8

Guaranteed analysis

Water	<0.5%	Potassium (K)	<50 ppm
Reducing sugars	: <0.2%	Sodium (Na)	<200 ppm
Calcium (Ca)	<100 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<10 ppm

D(+)-Mannose — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Plastic jar	M/2420/45

$C_6H_{12}O_6$
CAS: 3458-28-4
MW: 180.16

Melting point: 133°C
EINECS: 222-392-4

Guaranteed analysis

Loss on drying	<0.5%	Residue after ignition	<0.1%
Specific rotation	13.3° to 14.3°	Lead (Pb)	<10 ppm

Marble chips
pure

packaging		Mfr. No
1 kg	Plastic jar	M/2450/60
3 kg	Plastic jar	M/2450/63

$CCaO_3$
CAS: 471-34-1
MW: 100.09
Melting point: 825°C
EINECS: 207-439-9

GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test : Pass

Marble chips
technical, granule size 2-3 mm

packaging		Mfr. No
1 kg	Plastic jar	M/2451/60
3 kg	Plastic jar	M/2451/63

$CCaO_3$
CAS: 471-34-1
MW: 100.09
Density at 20°C: 2.7 to 2.9
Melting point: 825°C

EINECS: 207-439-9
GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P261, P280, P302+P352, P305+P351+P338

Guaranteed analysis
Identity test : Pass

MEK *See Ethyl methyl ketone, page 128*

D(+)Melibiose monohydrate
pure

packaging		Mfr. No
10 g	Plastic jar	M/2510/45

$C_{12}H_{22}O_{11}.H_2O$
CAS: 66009-10-7
MW: 360.32

Melting point: 182°C
EINECS: 209-568-6

Guaranteed analysis

Loss on drying	<6%	Residue after ignition	<0.2%
Specific rotation	133° to 137°	Lead (Pb)	<10 ppm

Menthol
extra pure, natural

SLR

packaging		Mfr. No
100 g	Glass jar	M/2550/48

$C_{10}H_{20}O$
CAS: 2216-51-5
MW: 156.28
Density at 20°C: 0.890
Boiling point: 212°C
Melting point: 41 to 43°C
Flash point: 93°C

EINECS: 218-690-9
GHS: Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H315, H318, H335
P280, P305+P351+P338, P310, P261, P302+P352

Guaranteed analysis
Specific rotation ..... -50° to -49°

Mercaptoethanol
technical

packaging		Mfr. No
100 mℓ	Glass bottle	M/P200/05

C_2H_6OS
CAS: 60-24-2
MW: 78.13
Density at 20°C: 1.11
Boiling point: 157 to 158°C
Melting point: -100°C
Flash point: 73°C
ADR/RID: 6.1, II
EINECS: 200-464-6

UN: 2966
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 2
H302, H411, H315, H335, H311, H319
P280, P312, P302+P350, P261, P273, P301+P312, P305+P351+P338

Assay (CG): >98%

Guaranteed analysis
Colour ..... <30 APHA

Mercury standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8047/05
500 mℓ	HDPE Plastic bottle	J/8047/08

Density at 20°C: 1.0
ADR/RID: 6.1, 8, II
UN: 3289
GHS: Skin Corr. 1B, Eye Dam. 1, STOT RE 2
H373, H314
P280, P305+P351+P338, P301+P330+P331, P310, P260

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Mercury standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8293/08

Density at 20°C: 1.0
ADR/RID: 6.1, 8, II
UN: 3289
GHS: Skin Corr. 1B, Eye Dam. 1, STOT RE 2
H373, H314
P280, P305+P351+P338, P301+P330+P331, P310, P260

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Mercury standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8292/05

ADR/RID: 6.1, 8, II
UN: 3289
GHS: Repr. 1B, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT RE 2
H314, H331, H372, H360D

P202, P280, P260, P304+P340, P301+P330+P331, P305+P351+P338, P302+P352, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Mercury standard metal solution 1000 ppm
for ICP solution in HNO_3 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLHG42Y
250 mℓ	Plastic bottle	SPPLHG42T
500 mℓ	Plastic bottle	SPPLHG42X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Mercury standard metal solution 10 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLHG21AY
500 mℓ	Plastic bottle	SPPLHG21AX
500 mℓ	Plastic bottle	SPPLHG21X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314
Check with your local distributor for availability of Spex product

Mercury standard metal solution 10 000 ppm
for ICP solution in HNO_3 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLHG43Y
500 mℓ	Plastic bottle	SPPLHG43X

H314, H412

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Mercury standard metal solution 10 ppm
for ICP-MS solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLHG21AY

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Mercury (metal)
pure, for polarography

packaging		Mfr. No
100 g	Plastic jar	M/3751/48

Hg
CAS: 7439-97-6
MW: 200.59
Density at 20°C: 13.54
Boiling point: 356.5°C
Melting point: -38.9°C
ADR/RID: 8, III
EINECS: 231-106-7

UN: 2809
GHS: Repr. 1B, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H410, H330, H360D, H372
P280, P308+P313, P304+P340, P260, P273

Guaranteed analysis
Identity test ..... : Pass

The price charged for this item is subject to alteration and will be that ruling at time of despatch.

Mercury (metal)
for analysis,

Certified AR

packaging		Mfr. No
100 g	Plastic jar	M/3750/48
250 g	Plastic jar	M/3750/50
500 g	Plastic jar	M/3750/53
1 kg	HDPE Plastic bottle	M/3750/60

Hg
CAS: 7439-97-6
MW: 200.59
Density at 20°C: 13.54
Boiling point: 356.5°C
Melting point: -38.9°C
ADR/RID: 8, III
EINECS: 231-106-7

UN: 2809
GHS: Repr. 1B, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H410, H330, H360D, H372
P280, P308+P313, P304+P340, P260, P273

Assay: >99.99%

Guaranteed analysis

Cadmium (Cd)	<0.2 ppm	Magnesium (Mg)	<0.5 ppm
Calcium (Ca)	<1 ppm	Nickel (Ni)	<0.2 ppm
Copper (Cu)	<0.5 ppm	Potassium (K)	<1 ppm
Iron (Fe)	<0.5 ppm	Sodium (Na)	<2 ppm
Lead (Pb)	<0.5 ppm	Total sulphur (S)	<1 ppm
Lithium (Li)	<0.2 ppm	Zinc (Zn)	<0.5 ppm

The prices applied to mercury and derivatives vary with the price of the raw material.
Lot analysis on the label.

Mercury clean up kit
pure

packaging		Mfr. No
Pack	Box	M/3754/90

ADR/RID: 8, III
UN: 3260
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1

H314, H302, H410
P301+P330+P331, P280, P305+P351+P338, P310, P273, P301+P312

The Mercury Clean-up kit is a compact safety pack used for cleaning up split mercury.It contains the special mercury absorber, safety gloves, brush, and scoop, and a spare container for holding the collected mercury prior to disposal. Full instructions are only included with each kit.

Mercury absorber spillage treatment
technical

packaging		Mfr. No
100 g	Plastic jar	M/3755/48

ADR/RID: 8, III
UN: 3260
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1

H314, H302, H410
P301+P330+P331, P280, P305+P351+P338, P310, P273, P301+P312

Mercury (metal)
specified reagents for general laboratory work- extra pure

SLR

packaging		Mfr. No
250 g	HDPE Plastic bottle	M/3650/50
1 kg	Plastic jar	M/3650/60

Hg
CAS: 7439-97-6
MW: 200.59
Density at 20°C: 13.54
Boiling point: 356.5°C
Melting point: -38.9°C
ADR/RID: 8, III
EINECS: 231-106-7

UN: 2809
GHS: Repr. 1B, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H410, H330, H360D, H372
P280, P308+P313, P304+P340, P260, P273

Assay: > 99%

Guaranteed analysis
Cadmium (Cd) ..... <0.2 ppm Lead (Pb) ..... <0.5 ppm

The price charged for this item is subject to alteration and will be that ruling at time of despatch..

Mercury(II) acetate — Certified AR
for analysis

packaging		Mfr. No
50 g	Plastic jar	M/2652/47
250 g	Plastic jar	M/2652/50

$C_4H_6HgO_4$
CAS: 1600-27-7
MW: 318.68
Density at 20°C: 32.5
Melting point: 179 to 182°C
ADR/RID: 6.1, II
EINECS: 216-491-1
UN: 1629

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H330, H300, H310, H373, H410
P301+P310, P280, P361, P302+P350, P310, P304+P340, P260, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.005%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<10 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<5 ppm
Sodium (Na)	<20 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Barium (Ba)	<1 ppm	Manganese (Mn)	<1 ppm
Cadmium (Cd)	<1 ppm	Nickel (Ni)	<2 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Mercury(II) acetate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	M/2650/50

$C_4H_6HgO_4$
CAS: 1600-27-7
MW: 318.68
Density at 20°C: 32.5
Melting point: 179 to 182°C
ADR/RID: 6.1, II
EINECS: 216-491-1
UN: 1629

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H330, H300, H310, H373, H410
P301+P310, P280, P361, P302+P350, P310, P304+P340, P260, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<50 ppm

Mercury(I) chloride — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	M/3450/48

Hg_2Cl_2
CAS: 10112-91-1
MW: 472.09
Density at 20°C: 7.15
Melting point: 400°C
ADR/RID: 6.1, III
EINECS: 233-307-5
UN: 2025

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H302, H319, H335, H315, H410
P280, P304+P340, P260, P273, P305+P351+P338, P302+P352

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<5 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Mercury (II) chloride — Certified AR, BP & USP
for analysis

packaging		Mfr. No
100 g	Plastic jar	M/2850/48
250 g	Plastic jar	M/2850/50
500 g	Plastic jar	M/2850/53

Cl_2Hg
CAS: 7487-94-7
MW: 271.50
Density at 25°C: 5.44
Boiling point: 302°C
Melting point: 277°C
ADR/RID: 6.1, II
EINECS: 231-299-8
UN: 1624
GHS: Muta. 2, Repr. 2,

Acute Tox. 2, Skin Corr. 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H300, H314, H410, H372, H341, H361f
P301+P310, P280, P361, P302+P350, P301+P330+P331, P305+P351+P338, P310, P273

Assay: >99.5%

Guaranteed analysis

Acidity / Alkalinity	Pass	Potassium (K)	<10 ppm
Loss on drying	<1%	Sodium (Na)	<20 ppm
Mercurous chloride test	: Pass	Total nitrogen (N)	<10 ppm
Calcium (Ca)	<20 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<5 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<1 ppm
Barium (Ba)	<1 ppm	Manganese (Mn)	<1 ppm
Cadmium (Cd)	<1 ppm	Nickel (Ni)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label

Mercury(II) chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	M/2800/48
250 g	Plastic jar	M/2800/50
500 g	Plastic jar	M/2800/53

$HgCl_2$
CAS: 7487-94-7
MW: 271.50
Density at 25°C: 5.44
Boiling point: 302°C
Melting point: 277°C
ADR/RID: 6.1, II
EINECS: 231-299-8
UN: 1624
GHS: Muta. 2, Repr. 2,
Acute Tox. 2, Skin Corr. 1B,

Eye Dam. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H300, H314, H341, H410, H361f, H372
P301+P310, P280, P361, P302+P350, P301+P330+P331, P305+P351+P338, P310, P281, P304+P340, P260, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<50 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<50 ppm		

Mercury(II) iodide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	M/2950/46
100 g	Plastic jar	M/2950/48

HgI_2
CAS: 7774-29-0
MW: 454.39
Boiling point: 354°C
Melting point: 259°C
ADR/RID: 6.1, II
EINECS: 231-873-8
UN: 1638

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H373, H300, H310, H330
P301+P310, P280, P302+P350, P310, P304+P340, P273

Assay: >99%

Mercury(II) nitrate monohydrate — NEW — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	M/3012/48

$HgN_2O_6.H_2O$
CAS: 7783-34-8
MW: 342.60
ADR/RID: 6.1, II
UN: 1625
GHS: Acute Tox. 1, STOT RE

2, Aquatic Acute 1, Aquatic Chronic 1
H373, H300, H410, H310, H330
P280, P302+P350, P310, P304+P340, P309+P311, P260, P273

Assay: >98%

Guaranteed analysis

Iron (Fe)	<10 ppm	n-Butyl formate	<0.002%
Sulfate (SO_4)	<0.002%	Residue after ignition	<0.01%

Lot analysis on the label

Mercury(I) nitrate dihydrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	M/3550/48

$Hg_2(NO_3)_2.2H_2O$
CAS: 7782-86-7
MW: 561.22
Density at 20°C: 4.78
Melting point: 70°C
ADR/RID: 6.1, II
UN: 1627

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H300, H310, H330, H410, H373
P260, P280, P301+P310, P302+P350, P304+P340, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Optima LC/MS
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Find out more on page 308

Mercury(I) nitrate dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/3500/53

$Hg_2(NO_3)_2.2H_2O$
CAS: 7782-86-7
MW: 561.22
Density at 20°C: 4.78
Melting point: 70°C
ADR/RID: 6.1, II
UN: 1627

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H300, H310, H330, H410, H373
P260, P280, P301+P310, P302+P350, P304+P340, P273

Assay: >95%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<50 ppm

Mercury(II) oxide yellow
pure

packaging		Mfr. No
100 g	Plastic jar	M/3100/48

HgO
CAS: 21908-53-2
MW: 216.59
Melting point: 500°C
ADR/RID: 6.1, II
EINECS: 244-654-7
UN: 1641

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H310, H410, H373, H330, H300
P301+P310, P280, P361, P302+P350, P310, P304+P340, P260, P273

Assay: >99%

Guaranteed analysis

n-Butyl formate <0.2%

Mercury(II) oxide red — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	M/3050/48

HgO
CAS: 21908-53-2
MW: 216.59
Melting point: 500°C
ADR/RID: 6.1, II
EINECS: 244-654-7
UN: 1641

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H310, H410, H373, H330, H300
P301+P310, P280, P361, P302+P350, P310, P304+P340, P260, P273

Assay: >99%

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Mercury(II) sulfate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	M/3220/50

$HgSO_4$
CAS: 7783-35-9
MW: 296.64
Density at 20°C: 6.47
ADR/RID: 6.1, II
EINECS: 231-992-5
UN: 1645

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H330, H300, H373, H310
P260, P280, P301+P310, P302+P350, P304+P340, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total nitrogen (N)	<50 ppm
Lead (Pb)	<5 ppm	Total phosphorus (P)	<20 ppm
Magnesium (Mg)	<5 ppm	Total silicon (Si)	<20 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label

Mercury(II) sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	M/3200/48
250 g	Plastic jar	M/3200/50

$HgSO_4$
CAS: 7783-35-9
MW: 296.64
Density at 20°C: 6.47
ADR/RID: 6.1, II
EINECS: 231-992-5
UN: 1645

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H330, H300, H373, H310
P260, P280, P301+P310, P302+P350, P304+P340, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<50 ppm		

Mercury(II) sulfate solution 20% w/v
pure

packaging		Mfr. No
500 mℓ	Glass bottle	J/5100/08

Density at 20°C: 1.3
ADR/RID: 8, 6.1, II
UN: 2922
GHS: Acute Tox. 2, Skin Irrit. 2, Eye Irrit. 2, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1

H301, H330, H373, H410, H319, H315
P280, P260, P304+P340, P301+P310, P305+P351+P338, P302+P352, P310, P273

Guaranteed analysis
Dichromate demand (mℓ $FeSO_4$) ... <2 mℓ

Mercury(II) thiocyanate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	M/3300/46

$C_2HgN_2S_2$
CAS: 592-85-8
MW: 316.75
Melting point: 165°C
ADR/RID: 6.1, II
EINECS: 209-773-0
UN: 1646

GHS: Acute Tox. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H330, H300, H310, H373, H410
P301+P310, P280, P302+P350, P310, P304+P340, P260, P273

Guaranteed analysis
Identity test ..... : Pass

Metaphosphoric acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	M/3851/53

HPO_3
CAS: 37267-86-0
ADR/RID: 8, III
EINECS: 253-433-4
UN: 3260
GHS: Skin Corr. 1B, Eye

Dam. 1, STOT SE 3
H335, H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353, P261

Guaranteed analysis

Arsenic (As)	<5 ppm	Lead (Pb)	<10 ppm
Iron (Fe)	<100 ppm	n-Butyl formate	<0.002%

Methanesulfonic acid
For protein hydrolysis with reduced TRP losses

packaging		Mfr. No
100 g	Coated Glass bottle	M/3874/48

CH_4O_3S
CAS: 75-75-2
MW: 96.10
Density at 20°C: 1.481
Boiling point: 167°C
Melting point: 19°C
Flash point: 189°C
ADR/RID: 8, 6.1, II

EINECS: 200-898-6
UN: 2922
GHS: Skin Corr. 1B
H314
P280, P361, P302+P350, P301+P330+P331, P305+P351+P338

Assay: >98%

Methanesulfonic acid, sodium salt — Certified
Ion pair chromatography

packaging		Mfr. No
25 g	Plastic jar	M/3876/46

CH_3SO_3Na
CAS: 2386-57-4
MW: 118.09
EINECS: 219-203-2
GHS: Skin Irrit. 2, Eye Irrit. 2,

STOT SE 3
H315, H319, H335
P302+P352, P280, P305+P351+P338

Assay: >95%

Lot analysis on the label.

Methanol — NEW — Optima
for LC/MS analysis

packaging		Mfr. No
500 mℓ	Glass bottle	A456-500
1 ℓ	Glass bottle	A456-1
2.5 ℓ	Glass bottle	A456-212
4 ℓ	Glass bottle	A456-4

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

Assay (CG): <99.9%

Guaranteed analysis

Acidity	0.0003 meq/g	Iron (Fe)	<10 ppb
Alkalinity	<0.0002 meq/g	Lead (Pb)	<10 ppb
Water	<0.02%	Magnesium (Mg)	<10 ppb
Residue after evaporation	<1 ppm	Manganese (Mn)	<10 ppb
Aluminium (Al)	<10 ppb	Nickel (Ni)	<10 ppb
Barium (Ba)	<10 ppb	Potassium (K)	<10 ppb
Cadmium (Cd)	<10 ppb	Propan--1-ol	<10 ppb
Calcium (Ca)	<20 ppb	Sodium (Na)	<50 ppb
Chromium (Cr)	<10 ppb	Tin (Sn)	<10 ppb
Cobalt (Co)	<10 ppb	Zinc (Zn)	<10 ppb
Copper (Cu)	<10 ppb		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<0.5 A.U.	50 ppb	
214 nm	: <0.4 A.U.	LC/MS at Positive Mode as Reserpine	: <
220 nm	<0.2 A.U.	50 ppb	
230 nm	<0.1 A.U.	LC/UV Gradient (single max peak) at 220nm	: <0.005 A.U.
254 nm	<0.01 A.U.		
260 nm	<0.005 A.U.	LC/UV Gradient (single max peak) at 254nm	: <0.001 A.U.
280 nm	<0.005 A.U.		
LC/MS at Negative Mode as Aldicarb	: <		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.
Filtered to 0.2µm.

Methanol — Certified
for HPLC-MS

packaging		Mfr. No
1 ℓ	Glass bottle	M/4062/15
2.5 ℓ	Glass bottle	M/4062/17

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity	<0.0002 meq/g	Iron (Fe)	<0.01 ppm
Alkalinity	<0.0002 meq/g	Lead (Pb)	<0.01 ppm
Water	<0.02%	Magnesium (Mg)	<0.01 ppm
Residue after evaporation	<5 ppm	Manganese (Mn)	<0.01 ppm
Aluminium (Al)	<0.2 ppm	Nickel (Ni)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Potassium (K)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Propan--1-ol	<0.01 ppm
Calcium (Ca)	<0.05 ppm	Sodium (Na)	<0.5 ppm
Chromium (Cr)	<0.01 ppm	Tin (Sn)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Zinc (Zn)	<0.01 ppm
Copper (Cu)	<0.01 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

230 nm	<0.05 A.U.	Gradient (max eluted peak)	<0.5 mA.U.
260 nm	<0.005 A.U.	LC/MS Gradient Suitability	: Pass test

Gradient analysis:
Absorbance of the largest eluted peak: <0.5 mA.U.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 2 mℓ / min
Wavelength 254 nm
Absorbance range: 0-0.08 AU.
Solvent A: Water
Solvent B: Methanol
Gradient: linear 95% /5% B 100% B during 20 min.
Lot analysis on the label.
This product has been tested on an LC-MS instrument to ensure suitability.
Filtered to 0.2 µm.

Methanol — NEW — Certified UHPLC
for UHPLC gradient grade analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	M/4070/PB15
2.5 ℓ	Coated Glass bottle	M/4070/PB17

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
ADR/RID: 3, 6.1, II
EINECS: 200-659-6

UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity	0.0002 meq/g	Water	<0.02%
Alkalinity	<0.0001 meq/g	Residue after evaporation	<1 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<0.2 A.U.	240 nm	<0.01 A.U.
220 nm	<0.1 A.U.	250 nm	<0.005 A.U.
230 nm	<0.05 A.U.	260 nm	<0.005 A.U.

Gradient analysis
Absorbance of the largest eluted peak at 220nm: <0.1mA.U.
Absorbance of the largest eluted peak at 254nm: <0.1mA.U.
Baseline Drift at 220nm<150mA.U.
Conditions:
Column:C18 reverse phase
Wavelenght: 220nm
Wavelenght: 254nm
Solvent A: Water
Solvent B: Methanol
Gradient: Linear gradient from 95%A/5%B to 100%B
Suitable for UHPLC instrument.
Lot analysis on the label.
Filtered to 0.1µm

Methanol — Certified Advanced HPLC
HPLC for gradient analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	M/4060/PB15
2.5 ℓ	Coated Glass bottle	M/4060/PB17

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute
Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280,
P302+P350, P304+P340,
P210, P240

Assay (CG): >99.9%

Guaranteed analysis
Acidity / Alkalinity ..... 0.0002 meq/g
Residue after evaporation ..... <5 ppm
Water ..... <0.05%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
210 nm ..... <0.2 A.U.
220 nm ..... <0.1 A.U.
230 nm ..... <0.05 A.U.
240 nm ..... <0.01 A.U.
250 nm ..... <0.005 A.U.
260 nm ..... <0.005 A.U.
Drift in gradient baseline ..... <150 mA.U.

Gradient analysis(30% to 95% of the solvent)
Absorbance of the largest eluted peak: <0.1 mA.U.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 3 mℓ / min
Wavelength 220 nm
Solvent A: Water
Solvent B: Methanol
Gradient: 10 min at 30% solvent B followed by a linear gradient to 95% solvent B over 15 min.
Lot analysis on the label.
Filtered to 0.2 µm.

Methanol HPLC gradient grade — NEW PACK. — Certified
HPLC for gradient analysis

packaging		Mfr. No
1 ℓ	Glass bottle	M/4058/15
2.5 ℓ	Glass bottle	M/4058/17
2.5 ℓ	Coated Glass bottle	M/4058/PB17
5 ℓ	Aluminium can	M/4058/21
10 ℓ	Returnable Drum	M/4058/10RSS
25 ℓ	Returnable Drum	M/4058/25RSS
30 ℓ	Returnable Drum	M/4058/30RSS

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute
Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280,
P302+P350, P304+P340,
P210, P240

Assay (CG): >99.9%

Guaranteed analysis
Acidity / Alkalinity ..... 0.0002 meq/g
Residue after evaporation ..... <5<5 ppm
Water ..... <0.05<0.03%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
210 nm ..... <0.2 A.U.
220 nm ..... <0.1 A.U.
230 nm ..... <0.05 A.U.
240 nm ..... <0.01 A.U.
250 nm ..... <0.005 A.U.
260 nm ..... <0.005 A.U.
Gradient (max eluted peak). . <0.001 A.U.

Gradient analysis
Absorbance of the largest eluted peak: <0.001A.U.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 2 mℓ / min
Wavelength 254 nm
Absorbance range: 0-0.08 AU.
Solvent A: Water
Solvent B: Methanol
Gradient: linear 95% /5% B 100% B during 20 min.
Lot analysis on the label (except gradient analysis).
Filtered to 0.2 µm.

Methanol — NEW PACK. — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	M/4056/15
2.5 ℓ	Glass bottle	M/4056/17
2.5 ℓ	Coated Glass bottle	M/4056/PB17
5 ℓ	Aluminium can	M/4056/21
10 ℓ	Returnable Drum	M/4056/10RSS
25 ℓ	Returnable Drum	M/4056/25RSS
30 ℓ	Returnable Drum	M/4056/30RSS

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute
Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280,
P302+P350, P304+P340,
P210, P240

Assay (CG): >99.8%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0002 meq/g
Residue after evaporation ..... <5 ppm
Water ..... <0.02%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
205 nm ..... <1 A.U.
210 nm ..... <0.2 A.U.
220 nm ..... <0.1 A.U.
230 nm ..... <0.05 A.U.
240 nm ..... <0.02 A.U.
250 nm ..... <0.005 A.U.
260 nm ..... <0.005 A.U.
Wavelength at 1 A.U. ..... : <205 nM

Lot analysis on the label.
Filtered to 0.2 µm.

Methanol — Certified
HPLC for fluorescence detection

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	M/4057/PB17

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute
Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280,
P302+P350, P304+P340,
P210, P240

Assay (CG): >99.8%

Guaranteed analysis
Acidity / Alkalinity ..... 0.0002 meq/g
Residue after evaporation ..... <5 ppm
Water ..... <0.02%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
210 nm ..... <0.2 A.U.
220 nm ..... <0.1 A.U.
230 nm ..... <0.05 A.U.
240 nm ..... <0.01 A.U.
250 nm ..... <0.005 A.U.
260 nm ..... <0.005 A.U.
Fluorescence ..... Pass

Excitation in the range 250-750nm produces no fluorescence emission greater than the solvents natural Raman signal at 350nm excittation.This is equivalent to the emission maximum of approximately 1ppb quinine sulfate.
Lot analysis on the label (excluding fluorescence scan).
Filtered to 0.2 µm.

Methanol — Certified
HPLC for electrochemical detection

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	M/4059/PB17

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute
Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280,
P302+P350, P304+P340,
P210, P240

Assay (CG): >99.8%

Guaranteed analysis
Acidity / Alkalinity ..... 0.0002 meq/g
Residue after evaporation ..... <5 ppm
Water ..... <0.02%
Electrochemical test ..... Pass

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

Methanol — Primar
for trace metal analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	M/4020/17

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute
Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280,
P302+P350, P304+P340,
P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Manganese (Mn)	<0.005 ppm
Colour	<5 APHA	Molybdenum (Mo)	<0.005 ppm
Water	<0.05%	Nickel (Ni)	<0.005 ppm
Residue after evaporation	<2 ppm	Potassium (K)	<0.05 ppm
Aluminium (Al)	<0.02 ppm	Propan--1-ol	<0.005 ppm
Barium (Ba)	<0.005 ppm	Sodium (Na)	<0.2 ppm
Cadmium (Cd)	<0.005 ppm	Strontium (Sr)	<0.005 ppm
Calcium (Ca)	<0.05 ppm	Titanium (Ti)	<0.005 ppm
Chromium (Cr)	<0.005 ppm	Total phosphorus (P)	<0.02 ppm
Cobalt (Co)	<0.005 ppm	Total silicon (Si)	<0.02 ppm
Copper (Cu)	<0.01 ppm	Total sulphur (S)	<0.1 ppm
Iron (Fe)	<0.05 ppm	Vanadium (V)	<0.005 ppm
Lead (Pb)	<0.005 ppm	Zinc (Zn)	<0.01 ppm
Lithium (Li)	<0.005 ppm	Propan--2-ol	<0.002%
Magnesium (Mg)	<0.02 ppm	Ethanol 90 % v/v	<0.005%

Methanol — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	M/4053/15
2.5 ℓ	Glass bottle	M/4053/17

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute
Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280,
P302+P350, P304+P340,
P210, P240

Guaranteed analysis
Water ..... <0.1% GC (FID) Analysis ..... Pass
Residue after evaporation ..... <2 ppm GC (NPD) analysis ..... Pass
GC (ECD) Analysis ..... Pass

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ heptachloreoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile: (1) 50°C, 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Methanol
extra dry, for synthesis

packaging		Mfr. No
500 mℓ	Glass bottle	M/4050/08
1 ℓ	Glass bottle	M/4050/15
2.5 ℓ	Glass bottle	M/4050/17
2.5 ℓ	Coated Glass bottle	M/4050/PB17
25 ℓ	Metal drum	M/4050/25

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute
Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280,
P302+P350, P304+P340,
P210, P240

Guaranteed analysis
Water ..... <0.01% Residue after evaporation ..... <5 ppm

Reagent for anhydrous Karl Fischer titration and non-aqueous peptide sequencing.

Methanol NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	M/4000/PB08
1 ℓ	Glass bottle	M/4000/15
1 ℓ	Coated Glass bottle	M/4000/PB15
2.5 ℓ	Glass bottle	M/4000/17
2.5 ℓ	Coated Glass bottle	M/4000/PB17
2.5 ℓ	HDPE Plastic bottle	M/4000/PC17
5 ℓ	Fluorinated HDPE Plastic bottle	M/4000/21
5 ℓ	Fluorinated HDPE square Drum	M/4000/FP21
25 ℓ	Metal drum	M/4000/25
25 ℓ	HDPE Plastic container	M/4000/PC25
200 ℓ	Metal drum	M/4000/27

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Iron (Fe)	<0.1 ppm
Colour	<5 APHA	Lead (Pb)	<0.02 ppm
Water	<0.05%	Magnesium (Mg)	<0.05 ppm
Residue after evaporation	<10 ppm	Potassium (K)	<0.5 ppm
Substances darkened by (H_2SO_4)	<5 APHA	Sodium (Na)	<0.5 ppm
Substances reducing $KMnO_4$	<0.00025%	Total phosphorus (P)	<0.05 ppm
Carbonyl compounds	: <0.001%	Total silicon (Si)	<0.05 ppm
Solution	: Pass	Total sulphur (S)	<0.1 ppm
Calcium (Ca)	<0.2 ppm	Zinc (Zn)	<0.05 ppm
Copper (Cu)	<0.02 ppm	Ethanol 90 % v/v	<0.05%
		Propan--2-ol	<0.005%

Typical analysis

Aluminium (Al)	<0.05 ppm	Molybdenum (Mo)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Cadmium (Cd)	<0.02 ppm	Selenium (Se)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm
Manganese (Mn)	<0.01 ppm		

Lot analysis on the label.

Methanol NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	M/3950/15
2.5 ℓ	Glass bottle	M/3950/17
2.5 ℓ	Coated Glass bottle	M/3950/PB17
2.5 ℓ	HDPE Plastic bottle	M/3950/PC17
5 ℓ	Fluorinated HDPE Plastic bottle	M/3950/21
5 ℓ	Fluorinated HDPE square Drum	M/3950/FP21
25 ℓ	Metal drum	M/3950/25
25 ℓ	HDPE Plastic container	M/3950/PC25
200 ℓ	Metal drum	M/3950/27

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Magnesium (Mg)	<1 ppm
Colour	<10 APHA	Potassium (K)	<2 ppm
Water	<0.2%	Sodium (Na)	<2 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<1 ppm
Substances reducing $KMnO_4$	<0.001%	Total silicon (Si)	<1 ppm
Calcium (Ca)	<2 ppm	Total sulphur (S)	<1 ppm
Copper (Cu)	<2 ppm	Zinc (Zn)	<1 ppm
Iron (Fe)	<5 ppm	Substances darkened by H_2SO_4	<20 APHA
Lead (Pb)	<2 ppm		

Methanol — Technical

packaging		Mfr. No
2.5 ℓ	Glass bottle	M/3900/17
2.5 ℓ	Coated Glass bottle	M/3900/PB17
25 ℓ	Metal drum	M/3900/25
200 ℓ	Metal drum	M/3900/27

CH_3OH
CAS: 67-56-1
MW: 32.04
Density at 20°C: 0.791
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II

EINECS: 200-659-6
UN: 1230
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

Assay: > 98%

Methanol with 0.1% formic acid (v/v) NEW — Certified
Methanol with 0.1% formic and HPLC gradient grade

packaging		Mfr. No
2.5 ℓ	Glass bottle	FE/1300/17

Density at 20°C: 0.781
Boiling point: 64.7°C
Melting point: -98°C
Flash point: 12°C
ADR/RID: 3, 6.1, II
UN: 1230

GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H301, H311, H331, H370
P301+P310, P280, P302+P350, P304+P340, P210, P240

Guaranteed analysis

Residue after evaporation	<=1 ppm	Gradient analysis at 254 nm	: <0.01 A.U.
Formic acid (% v/v)	: 0.093 to 0.107%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

230 nm	<1 A.U.	254 nm	<0.02 A.U.
240 nm	<0.27 A.U.	260 nm	<0.01 A.U.
250 nm	<0.05 A.U.		

Lot analysis on the label.
Filtered to 0.2µm.

Methenamine See Hexamine, page 141

L-Methionine
pure

packaging		Mfr. No
100 g	Plastic jar	M/4065/48

$CH_3S(CH_2)_{2CHNH_2COOH}$
CAS: 63-68-3
MW: 149.21
EINECS: 200-562-9

Assay: >95%

Methoxybenzene See Anisole, page 49

2-Methoxyethanol — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	M/4101/08
2.5 ℓ	Coated Glass bottle	M/4101/PB17
25 ℓ	Metal drum	M/4101/25

$C_3H_8O_2$
CAS: 109-86-4
MW: 76.09
Density at 20°C: 0.960
Boiling point: 124°C
Melting point: -85°C
Flash point: 38°C
ADR/RID: 3, III

EINECS: 203-713-7
UN: 1188
GHS: Flam. Liq. 3, Repr. 1B, Acute Tox. 4
H226, H312, H332, H360FD, H302
P280, P201, P308+P313, P302+P352, P304+P340, P210

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0008 meq/g	Magnesium (Mg)	<0.1 ppm
Colour	<10 APHA	Potassium (K)	<1 ppm
Water	<0.1%	Sodium (Na)	<1 ppm
Residue after evaporation	<20 ppm	Total phosphorus (P)	<0.1 ppm
Iodine consuming substances	: <0.005%	Total silicon (Si)	<0.05 ppm
Calcium (Ca)	<0.5 ppm	Total sulphur (S)	<0.2 ppm
Copper (Cu)	<0.5 ppm	Zinc (Zn)	<1 ppm
Iron (Fe)	<1 ppm	Peroxide	<0.001%
Lead (Pb)	<0.5 ppm		

Typical analysis

Aluminium (Al)	<0.2 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.05 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

2-Methoxyethanol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	M/4100/15
2.5 ℓ	Coated Glass bottle	M/4100/PB17

$C_3H_8O_2$
CAS: 109-86-4
MW: 76.09
Density at 20°C: 0.960
Boiling point: 124°C
Melting point: -85°C
Flash point: 38°C
ADR/RID: 3, III

EINECS: 203-713-7
UN: 1188
GHS: Flam. Liq. 3, Repr. 1B, Acute Tox. 4
H226, H312, H332, H360FD, H302
P280, P201, P308+P313, P302+P352, P304+P340, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<20 APHA	Potassium (K)	<2 ppm
Water	<0.3%	Sodium (Na)	<5 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<10 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<5 ppm		

2-Methoxyphenol See Guaiacol, page 137

Methyl acetate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	M/4150/08
2.5 ℓ	Glass bottle	M/4150/17

$C_3H_6O_2$
CAS: 79-20-9
MW: 74.08
Density at 20°C: 0.930
Boiling point: 57.4°C
Melting point: -98°C
Flash point: -10°C
ADR/RID: 3, II

EINECS: 201-185-2
UN: 1231
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240, P304+P340

Assay: >98%

Guaranteed analysis

Acidity	<0.0003 meq/g	Residue after evaporation	<100 ppm

Methylamine solution 25/30 % w/v in water
technical

packaging		Mfr. No
500 mℓ	Glass bottle	M/4200/08

Density at 20°C: 0.900
Boiling point: 48°C
Melting point: -38°C
Flash point: -18°C
ADR/RID: 3, 8, II
UN: 1235
GHS: Flam. Liq. 2, Acute

Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H225, H314, H335, H301, H331
P301+P310, P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P261, P210, P240

4-Methylamino phenol sulphate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	M/5400/50

$C_{14}H_{18}N_2O_2.H_2SO_4$
CAS: 55-55-0
MW: 344.38
Density at 20°C: 1.577
Melting point: 260°C
ADR/RID: 6.1, III
EINECS: 200-237-1

UN: 2811
GHS: Acute Tox. 4, Skin Sens. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H317, H373, H302
P280, P260, P273, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<100 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm

4-Methylaniline See p-Toluidine, page 355

Methylated spirit (IDA 99), 99% v/v
technical, Industrial methylated spirit 74 0.P.

packaging		Mfr. No
1 ℓ	Glass bottle	M/4450/15
1 ℓ	Metal can	M/4450/MC15
2.5 ℓ	Glass bottle	M/4450/17
2.5 ℓ	Coated Glass bottle	M/4450/PB17
18 ℓ	Metal drum	M/4450/30
25 ℓ	Metal drum	M/4450/25
200 ℓ	Metal drum	M/4450/27

Flash point: 12°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2, Acute

Tox. 4, STOT SE 2
H225, H371, H302, H312, H332
P280, P312, P302+P350,
P304+P340, P260, P210, P240

Methylated spirit (IDA 94), 94% v/v
technical, Industrial methylated spirit 64 0.P.

packaging		Mfr. No
2.5 ℓ	Glass bottle	M/4400/17
2.5 ℓ	Coated Glass bottle	M/4400/PB17
2.5 ℓ	HDPE Plastic bottle	M/4400/PC17
25 ℓ	Metal drum	M/4400/25

Flash point: 16.66°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2, Acute

Tox. 4, STOT SE 2
H225, H312, H332, H302, H371
P280, P302+P352, P260,
P304+P340, P210, P240

Methylated spirit mineralised
technical, contains ca. 5% methanol

packaging		Mfr. No
2.5 ℓ	Glass bottle	M/4350/17
18 ℓ	Metal drum	M/4350/30
25 ℓ	Metal drum	M/4350/25

Flash point: 13°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170
GHS: Flam. Liq. 2, Acute

Tox. 4, STOT SE 2
H225, H302, H312, H332, H371
P210, P240, P280,
P301+P310, P302+P350,
P304+P340

Methylbenzene
See Toluene, page 354

Methyl benzoate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	M/4460/PB08
2.5 ℓ	Coated Glass bottle	M/4460/PB17

$C_8H_8O_2$
CAS: 93-58-3
MW: 136.15
Density at 20°C: 1.08
Boiling point: 198 to 199°C
Melting point: -12°C
Flash point: 82°C

EINECS: 202-259-7
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H302, H319, H315
P301+P312, P302+P352,
P280, P305+P351+P338

Assay (CG): >98.5%

Methyl blue C.I. 42780
pure

packaging		Mfr. No
25 g	Glass jar	M/4475/46

Guaranteed analysis
Complies with standard IR spectrum: Pass

2-Methylbutan-2-ol SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	M/4480/PB08

$C_5H_{12}O$
CAS: 75-85-4
MW: 88.15
Density at 20°C: 0.800
Boiling point: 102°C
Melting point: -12°C
Flash point: 20°C
ADR/RID: 3, II
EINECS: 200-908-9

UN: 1105
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H225, H335, H315, H332, H318, H312
P261, P301+P312, P304+P340, P302+P352, P210, P240

Assay (CG): >98%

3-Methylbutyric acid
See iso-Valeric acid 98+ %, page 362

Methyl cyanide
See Acetonitrile, page 21

Methylcyclohexane SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	M/4650/17
25 ℓ	Metal drum	M/4650/25
200 ℓ	Metal drum	M/4650/27

C_7H_{14}
CAS: 108-87-2
MW: 98.19
Density at 20°C: 0.770
Boiling point: 101°C
Melting point: -126°C
Flash point: -3°C
ADR/RID: 3, II

EINECS: 203-624-3
UN: 2296
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H336, H304, H315, H411
P261, P301+P310, P331,
P273, P302+P352, P210, P240

Assay (CG): >98%

Methyldiglycol SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	M/4720/15

$C_5H_{12}O_3$
CAS: 111-77-3
MW: 120.15
Density at 20°C: 1.01
Boiling point: 194°C
Melting point: -70°C

Flash point: 83°C
EINECS: 203-906-6
GHS: Repr. 2
H361
P281

Assay (CG): >98%

Methylene blue C.I. 52015
pure, Biological stain

packaging		Mfr. No
25 g	Glass jar	M/P206/46

$C_{16}H_{18}ClN_3S$
CAS: 7220-79-3
MW: 319.85
Melting point: 100 to 110°C

EINECS: 200-515-2
GHS: Acute Tox. 4
H302
P301+P312

Suitable as a stain in electrophoresis. Especially sensitive for RNA.

Methylene blue solid C.I. 52015
pure, Redox indicator

packaging		Mfr. No
10 g	Glass jar	M/4870/45
25 g	Glass jar	M/4870/46

$C_{16}H_{18}ClN_3S$
CAS: 7220-79-3
MW: 319.85

Melting point: 100 to 110°C
EINECS: 200-515-2

Guaranteed analysis
Complies with standard IR spectrum: Pass

Methylene blue dihydrate SLR
extra pure, C.I. 52015

packaging		Mfr. No
100 g	Glass jar	M/4850/48

$C_{16}H_{18}ClN_3S.2H_2O$
CAS: 7220-79-3
MW: 355.89

Melting point: 100 to 110°C
EINECS: 200-515-2

Guaranteed analysis
Loss on drying ..... 8 to 15%
Lead (Pb) ..... <20 ppm
Iron (Fe) ..... <500 ppm

Methylene blue solution 0.015%
pure, Redox indicator

packaging		Mfr. No
500 mℓ	Glass bottle	M/4870L/08

Methylene iodide
See Di-iodomethane, page 111

Methyl green C.I. 42585
pure, Biological stain

packaging		Mfr. No
25 g	Glass jar	M/P205/46

ADR/RID: 8, III
UN: 3147
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1

H314, H302, H410
P301+P330+P331, P280,
P305+P351+P338, P310,
P273, P301+P312

Guaranteed analysis
Complies with standard IR spectrum: Pass

Methyl hydroxybenzoate
See Methyl salicylate, page 208

N-Methylimidazole
for DNA synthesis

packaging		Mfr. No
100 mℓ	Coated Glass bottle	M/4930/PB05
2.5 ℓ	Coated Glass bottle	M/4930/PB17

$C_4H_6N_2$
CAS: 616-47-7
MW: 82.11
Density at 20°C: 1.03
Boiling point: 198°C
Melting point: -60°C
Flash point: 92°C

ADR/RID: 8, 6.1, II
EINECS: 210-484-7
UN: 2922
GHS: Acute Tox. 4, Skin Corr. 1B
H302, H312, H315
P280, P305+P351+P338,
P302+P352, P301+P310

Assay (CG): >99%

Recommended alternative capping catalyst to DMAP.

Methyl iodide
See Iodomethane, page 162

Methyl isobutyl ketone
See 4-Methylpentan-2-one, page 206

Methyl methacrylate SLR
extra pure, stabilized with quinol

packaging		Mfr. No
500 mℓ	Glass bottle	M/4950/08
2.5 ℓ	Glass bottle	M/4950/17

$C_5H_8O_2$
CAS: 80-62-6
MW: 100.12
Density at 20°C: 0.930
Boiling point: 100°C
Melting point: -48°C
Flash point: 8°C
ADR/RID: 3, II

EINECS: 201-297-1
UN: 1247
GHS: Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3
H225, H335, H315, H317
P310, P280, P304+P340,
P261, P302+P352, P210, P240

Assay (CG): >99.5%

Guaranteed analysis
Water ..... <0.1%

Methyl orange solid C.I. 13025
pure, indicator grade

packaging		Mfr. No
25 g	Glass jar	M/5000/46
100 g	Glass jar	M/5000/48

$C_{14}H_{14}N_3NaO_3S$
CAS: 547-58-0
MW: 327.34
Melting point: >300°C
ADR/RID: 6.1, III

EINECS: 208-925-3
UN: 3143
GHS: Acute Tox. 3
H301
P301+P310, P270, P264

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

pH 2.9-4.6 red-orange to yellow-orange.

Methyl orange solution 0.04%
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	M/5000L/08

Flash point: 37°C
ADR/RID: 3, III
UN: 1170

GHS: Flam. Liq. 3
H226
P210

Guaranteed analysis
pH at 20°C ..... : 6.5 to 8 Sensitivity test (ACS test) ..... : Pass
pH colour change test ..... : Pass

pH 2.9-4.6 red-orange to yellow-orange.

Methyl orange-xylene cyanol FF
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	M/5020L/08

Flash point: 37°C
ADR/RID: 3, III
UN: 1170

GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis
pH colour change test ..... : Pass

pH 2.9-4.6 red to green.
Solution methyl orange 0.2% / xylene cyanol 0.28%

2-Methylpentan-2.4-diol SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	M/5050/08

$C_6H_{14}O_2$
CAS: 107-41-5
MW: 118.18
Density at 20°C: 0.922
Boiling point: 197°C
Melting point: -40°C

Flash point: 93°C
EINECS: 203-489-0
GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P302+P352, P280, P305+P351+P338

Assay (CG): >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Refractive index ..... 1.427 to 1.428

4-Methylpentan-2-one
for AAS

packaging		Mfr. No
500 mℓ	Glass bottle	M/5080/08
2.5 ℓ	Glass bottle	M/5080/17

$C_6H_{12}O$
CAS: 108-10-1
MW: 100.16
Density at 20°C: 0.800
Boiling point: 117.4°C
Melting point: -84°C
Flash point: 14°C
ADR/RID: 3, II

EINECS: 203-550-1
UN: 1245
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2, STOT SE 3
H225, H319, H335, H332, EUH066
P304+P340, P261, P280, P305+P351+P338, P210, P240

Guaranteed analysis

Calcium (Ca)	<0.05 ppm	Magnesium (Mg)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Copper (Cu)	<0.02 ppm	Potassium (K)	<0.05 ppm
Iron (Fe)	<0.05 ppm	Sodium (Na)	<0.1 ppm
Lead (Pb)	<0.02 ppm	Zinc (Zn)	<0.1 ppm

4-Methylpentan-2-one Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	M/5085/15
1 ℓ	Coated Glass bottle	M/5085/PB15
2.5 ℓ	Glass bottle	M/5085/17
2.5 ℓ	Coated Glass bottle	M/5085/PB17
200 ℓ	Metal drum	M/5085/27

$C_6H_{12}O$
CAS: 108-10-1
MW: 100.16
Density at 20°C: 0.800
Boiling point: 117.4°C
Melting point: -84°C
Flash point: 14°C
ADR/RID: 3, II

EINECS: 203-550-1
UN: 1245
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2, STOT SE 3
H225, H319, H335, H332, EUH066
P304+P340, P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Potassium (K)	<0.1 ppm
Colour	<10 APHA	Sodium (Na)	<0.5 ppm
Water	<0.1%	Total phosphorus (P)	<0.05 ppm
Residue after evaporation	<10 ppm	Total silicon (Si)	<0.02 ppm
Butan -one	<0.2%	Total sulphur (S)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Zinc (Zn)	<0.05 ppm
Copper (Cu)	<0.02 ppm	Acetone	<0.1%
Iron (Fe)	<0.1 ppm	2-Hexanol	<0.2%
Lead (Pb)	<0.02 ppm	Pentan--2-one	<0.2<0.05%
Magnesium (Mg)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.

4-Methylpentan-2-one NEW PACK SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	M/5078/08
500 mℓ	Coated Glass bottle	M/5078/PB08
1 ℓ	Glass bottle	M/5078/15
2.5 ℓ	Glass bottle	M/5078/17
2.5 ℓ	Coated Glass bottle	M/5078/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	M/5078/21
25 ℓ	Metal drum	M/5078/25

$C_6H_{12}O$
CAS: 108-10-1
MW: 100.16
Density at 20°C: 0.800
Boiling point: 117.4°C
Melting point: -84°C
Flash point: 14°C
ADR/RID: 3, II

EINECS: 203-550-1
UN: 1245
GHS: Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2, STOT SE 3
H225, H319, H335, H332, EUH066
P304+P340, P261, P280, P305+P351+P338, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<10 APHA	Potassium (K)	<2 ppm
Water	<0.2%	Sodium (Na)	<2 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<1 ppm
Lead (Pb)	<2 ppm		

2-Methylphenol
See o-Cresol 98-100 %, page 98

3-Methylphenol
See m-Cresol, page 98

2-Methyl-2-propanol
See tert-Butyl alcohol, page 69

2-Methylpropyl acetate
See iso-Butyl acetate, page 69

Methyl propyl carbinol
See Pentan-2-ol, page 227

N-Methylpyrrolidone
See 1-Methyl-2-pyrrolidinone, page 208

Methyl red spirit soluble C.I. 13020
pure, indicator grade

packaging		Mfr. No
10 g	Glass jar	M/5150/45
25 g	Glass jar	M/5150/46

$C_{15}H_{15}N_3O_2$
CAS: 493-52-7
MW: 269.30
Melting point: 178 to 182°C

EINECS: 207-776-1
GHS: Acute Tox. 4
H302
P301+P312

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

pH 4.2-6.3 red to yellow.

Methyl red solid water soluble
pure, indicator grade

packaging		Mfr. No
5 g	Glass jar	M/5170/44
100 g	Glass jar	M/5170/48

$C_{15}H_{15}N_3O_2$
CAS: 493-52-7
MW: 269.30
Melting point: 178 to 182°C

EINECS: 207-776-1
GHS: Acute Tox. 4
H302
P301+P312

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

pH 4.2-6.3 red to yellow.

Methyl red solution 0.01% water soluble
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	M/5171L/08

Flash point: 37°C
ADR/RID: 3, III
UN: 1170

GHS: Flam. Liq. 3, STOT SE 2
H226, H371
P260, P210

Guaranteed analysis
pH at 20°C ..... : 6 to 8

pH 4.2-6.3 red to yellow.
In solution in water 81%, ethanol 15% and methanol 4%.

Methyl red solution 0.01% spirit soluble
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	M/5150L/08

Flash point: 16.66°C
ADR/RID: 3, II
UN: 1170

GHS: Flam. Liq. 2
H225
P210, P240

Guaranteed analysis
pH colour change test ..... : Pass

pH 4.2-6.3 red to yellow.
In solution 50% ethanol 45% water and 5% methanol.

Methyl red solution 0.025% water soluble
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	M/5170L/08

Flash point: 37°C
ADR/RID: 3, III
UN: 1170

GHS: Flam. Liq. 3, STOT SE 2
H226, H371
P260, P210

Guaranteed analysis
pH colour change test ..... : Pass

pH 4.2-6.3 red to yellow.
In solution 81% water, 15% ethanol and 4% methanol.

Methyl violet 2B (basic violet) C.I. 42535
pure, indicator grade

packaging		Mfr. No
10 g	Glass jar	M/5345/45

$C_{24}H_{28}ClN_3$
CAS: 8004-87-3
MW: 393.95
Melting point: 137°C
ADR/RID: 6.1, III

UN: 2811
GHS: Acute Tox. 4, Eye Irrit. 2
H302, H319
P301+P312, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Methyl violet (crystal violet) C.I. 42555
pure, indicator grade

packaging		Mfr. No
100 g	Glass jar	M/5350/48

$C_{25}H_{30}ClN_4$
CAS: 548-62-9
MW: 407.97
Melting point: 215°C
ADR/RID: 9, III
EINECS: 208-953-6
UN: 3077

GHS: Carc. 2, Acute Tox. 4, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H410, H302, H318, H351
P280, P305+P351+P338, P310, P201, P308+P313, P273, P301+P312

Methyl violet solid (crystal violet) C.I. 42555
pure, indicator grade

packaging		Mfr. No
10 g	Glass jar	M/5370/45
25 g	Glass jar	M/5370/46

$C_{25}H_{30}ClN_3$
CAS: 90-94-8
MW: 407.97
Melting point: 215°C
ADR/RID: 9, III
EINECS: 208-953-6
UN: 3077

GHS: Carc. 1B, Acute Tox. 4, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H410, H302, H318, H350
P280, P270, P305+P351+P338, P201, P308+P313, P273

Guaranteed analysis
pH colour change test ..... : Pass

pH 0.1-3.2 yellow to purple.

Methyl violet 1% aqueous solution (crystal violet) C.I 42555
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	M/5370L/08

GHS: Carc. 2, Eye Irrit. 2, Aquatic Chronic 3
H351, H412, H319
P281, P308+P313, P305+P351+P338, P273

Guaranteed analysis
pH at 20°C ..... : 3 to 5 pH colour change test ..... : Pass

pH 0.1-3.2 yellow to purple.

1-Methyl-2-pyrrolidinone — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	M/5125/08
25 ℓ	Metal drum	M/5125/25

C_5H_9NO
CAS: 872-50-4
MW: 99.13
Density at 20°C: 1.03
Boiling point: 202°C
Melting point: -24°C
Flash point: 91°C

EINECS: 212-828-1
GHS: Repr. 1B, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335, H360D
P201, P308+P313, P261, P302+P352, P280, P305+P351+P338

Assay (CG): >99.7%

Guaranteed analysis

Water	<0.05%	Sodium (Na)	<5 ppm
Calcium (Ca)	<1 ppm	Total phosphorus (P)	<0.5 ppm
Copper (Cu)	<1 ppm	Total silicon (Si)	<0.1 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<1 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<0.2 ppm
Magnesium (Mg)	<0.5 ppm	Residue after ignition	<0.01%
Potassium (K)	<1 ppm		

Typical analysis

Aluminium (Al)	<0.5 ppm	Manganese (Mn)	<0.1 ppm
Barium (Ba)	<0.1 ppm	Molybdenum (Mo)	<0.1 ppm
Cadmium (Cd)	<0.1 ppm	Nickel (Ni)	<0.1 ppm
Chromium (Cr)	<0.1 ppm	Strontium (Sr)	<0.1 ppm
Cobalt (Co)	<0.1 ppm	Titanium (Ti)	<0.1 ppm
Lithium (Li)	<0.1 ppm	Vanadium (V)	<0.1 ppm

Lot analysis on the label.

1-Methyl-2-pyrrolidinone — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	M/5120/05
500 mℓ	Glass bottle	M/5120/08
25 ℓ	Metal drum	M/5120/25

C_5H_9NO
CAS: 872-50-4
MW: 99.13
Density at 20°C: 1.03
Boiling point: 202°C
Melting point: -24°C
Flash point: 91°C

EINECS: 212-828-1
GHS: Repr. 1B, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335, H360D
P201, P308+P313, P261, P302+P352, P280, P305+P351+P338

Assay (CG): >99%

Guaranteed analysis

Water	<0.2%	Sodium (Na)	<20 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<2 ppm	Residue after ignition	<0.1%
Potassium (K)	<5 ppm		

Methyl salicylate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	M/5200/PB08
2.5 ℓ	Coated Glass bottle	M/5200/PB17

$C_8H_8O_3$
CAS: 119-36-8
MW: 152.15
Density at 20°C: 1.183
Boiling point: 222°C
Melting point: -8--7°C
Flash point: 110°C

EINECS: 204-317-7
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P302+P352, P280, P305+P351+P338

Assay (CG): >99%

Guaranteed analysis
Acidity ..... <0.01 meq/g

MIBK
See 4-Methylpentan-2-one, page 206

Millon's reagent
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	J/5300/PB05

ADR/RID: 6.1, II
UN: 2024
GHS: Acute Tox. 1, Skin Corr. 1B, Eye Dam. 1, Resp. Sens. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H300, H310, H330, H410, H373, H314
P260, P280, P301+P310, P302+P350, P304+P340, P273

Mohr's salt
See Ammonium Iron (II) Sulfate hexahydrated, page 42

Molecular sieve type 13X (10A)
pure, particle size 1.6-2.5mm

packaging		Mfr. No
500 g	Plastic jar	MS/1070/53

CAS: 63231-69-6

Guaranteed analysis
Identity test ..... : Pass

Porosity 10 Angstoms.
Density 0.71 g / mℓ.

Molecular sieve type 4A
pure, particle size 1.6-2.5mm

packaging		Mfr. No
500 g	Plastic jar	MS/1030/53
2.5 kg	Plastic jar	MS/1030/62

CAS: 70955-01-0

Guaranteed analysis
Identity test ..... : Pass

Porosity 4 Angstroms.
Density 0.74 g / mℓ.

Molecular sieve type 4A
pure, particle size 2.5-5.0mm

packaging		Mfr. No
500 g	Plastic jar	MS/1020/53
2.5 kg	Plastic jar	MS/1020/62

CAS: 70955-01-0

Guaranteed analysis
Identity test ..... : Pass

Porosity 4 Angstroms.
Density 0.72 g / mℓ.

Molecular sieve type 3A
pure, particle size 1.6-2.5mm

packaging		Mfr. No
250 g	Plastic jar	MS/1010/50
500 g	Plastic jar	MS/1010/53

CAS: 308080-99-1

Guaranteed analysis
Identity test ..... : Pass

Porosity 3 Angstroms.
Density 0.74 g / mℓ.

Molybdenum standard metal solution 1000 ppm
for AAS, solution HNO_3 0.1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8050/05
500 mℓ	HDPE Plastic bottle	J/8050/08

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Molybdenum standard metal solution 1000 ppm
for ICP, solution NH3 0.1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8296/08

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Molybdenum standard metal solution 10 000 ppm
for ICP, solution NH3 1%

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8294/05

GHS: Carc. 2
H351
P281, P201, P202, P308+P313

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Molybdenum standard metal solution 1000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLMO92Y
250 mℓ	Plastic bottle	SPPLMO92T
500 mℓ	Plastic bottle	SPPLMO92X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Molybdenum standard metal solution 10 000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLMO93Y
500 mℓ	Plastic bottle	SPPLMO93X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Molybdenum standard metal solution 1000 ppm
for ICP-MS solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMO92Y

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

dodeca-Molybdophosphoric acid
pure

packaging		Mfr. No
100 g	Plastic jar	M/5650/48

$H_3Mo_{12}O_{40}P.xH_2O$
CAS: 51429-74-4
MW: 1825.25
ADR/RID: 5.1, 8, III
UN: 3085

GHS: Ox. Sol. 2, Skin Corr. 1B, Eye Dam. 1
H272, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Guaranteed analysis

Iron (Fe)	<200 ppm	Total sulphur (S)	<1000 ppm
Lead (Pb)	<100 ppm		

MonoFax 057 surfactant
pure, (mono and di-phosphate esters)

packaging		Mfr. No
500 mℓ	Coated Glass bottle	M/5715/PB08

ADR/RID: 8/III
UN: 1760

Guaranteed analysis
Neutralisation value ..... : 5 to 6

Mordant Black 11 *See Eriochrome black T, page 119*

Mordant Blue 3 *See Eriochrome cyanine R, page 119*

Mordant Red 11 *See Alizarin, page 27*

Morpholine
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	M/5750/PB08

C_4H_9NO
CAS: 110-91-8
MW: 87.12
Density at 20°C: 0.990
Boiling point: 126 to 130°C
Melting point: -5°C
Flash point: 32°C
ADR/RID: 8, 3, I
EINECS: 203-815-1
UN: 2054
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H226, H332, H302, H312, H314
P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P310, P304+P340, P210

Assay (CG): >99%

2-(N-Morpholino)ethane-sulfonic acid SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	M/5760/48

$C_6H_{13}NO_4S.H_2O$
CAS: 145224-94-8
MW: 213.25
Melting point: 300°C
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H315, H335, H319
P280, P305+P351+P338, P261, P302+P352, P264, P271

Assay: >99%

Guaranteed analysis

Residue after ignition	<0.2%	Lead (Pb)	<10 ppm
Iron (Fe)	<5 ppm	Sulfate (SO_4)	<0.01%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
250 nm (sol. aqu. 10%) ..... : <0.1 A.U.

Naphtha solvent
Technical

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	N/0050/PB17
25 ℓ	Metal drum	N/0050/25

CAS: 8030-30-6
Density at 150°C: 0.85
Boiling point: 158 to 190°C
Flash point: 42°C
ADR/RID: 3, III
EINECS: 232-443-2
UN: 1268
GHS: Flam. Liq. 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H226, H304, H335, H336, H411, EUH066
P210, P261, P273, P301+P310, P331, P305+P351+P338

Naphthalene SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Glass jar	N/0150/53

$C_{10}H_8$
CAS: 91-20-3
MW: 128.17
Density at 20°C: 0.990
Boiling point: 218°C
Melting point: 79 to 82°C
Flash point: 78°C
ADR/RID: 4.1, III
EINECS: 202-049-5
UN: 1334
GHS: Carc. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1
H351, H410, H302
P281, P273, P301+P312, P233

Assay (CG): >99%

Guaranteed analysis
Residue after evaporation ..... <500 ppm

Naphthalene black 10B
Technical

packaging		Mfr. No
10 g	Glass jar	N/0211/45

$C_{22}H_{14}N_6Na_2O_9S_2$
CAS: 1064-48-8
MW: 616.48
EINECS: 213-903-1
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Naphthalene-2-sulfonic acid sodium salt
for Ion pair chromatography

packaging		Mfr. No
25 g	Plastic jar	N/0216/46

$C_{10}H_7NaO_3S$
CAS: 532-02-5
MW: 230.22
EINECS: 208-523-8
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

1-Naphthol Certified AR
for analysis

packaging		Mfr. No
100 g	Glass jar	N/0350/48

$C_{10}H_8O$
CAS: 90-15-3
MW: 144.17
Boiling point: 278 to 280°C
Melting point: 95 to 97°C
Flash point: 125°C
ADR/RID: 6.1, III
EINECS: 201-969-4
UN: 2811
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H315, H335, H302, H318, H312
P280, P302+P350, P305+P351+P338, P310, P261, P301+P312

Assay (CG): >99%

Guaranteed analysis

Insoluble in alcohol	: <0.01%	Manganese (Mn)	<2 ppm
Insoluble matter in alcohol	<3 4	Nickel (Ni)	<2 ppm
Aluminium (Al)	<2 ppm	Potassium (K)	<10 ppm
Barium (Ba)	<2 ppm	Sodium (Na)	<20 ppm
Cadmium (Cd)	<2 ppm	Titanium (Ti)	<2 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.005%
Chromium (Cr)	<2 ppm	Total phosphorus (P)	<5 ppm
Cobalt (Co)	<2 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<10 ppm
Iron (Fe)	<5 ppm	Vanadium (V)	<2 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<5 ppm
Lithium (Li)	<2 ppm	Naphthalene	<0.1%
Magnesium (Mg)	<10 ppm	2-Naphthol	<0.5%

1-Naphthol SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Glass jar	N/0300/50

$C_{10}H_8O$
CAS: 90-15-3
MW: 144.17
Boiling point: 278 to 280°C
Melting point: 95 to 97°C
Flash point: 125°C
ADR/RID: 6.1, III
EINECS: 201-969-4
UN: 2811
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H315, H335, H302, H318, H312
P280, P302+P350, P305+P351+P338, P310, P261, P301+P312

Assay (CG): >97%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm

2-Naphthol SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	N/0400/53

$C_{10}H_8O$
CAS: 135-19-3
MW: 144.17
Boiling point: 285 to 286°C
Melting point: 120 to 124°C
Flash point: 153°C
ADR/RID: 9, III
EINECS: 205-182-7
UN: 3077
GHS: Acute Tox. 4, Aquatic Acute 1
H332, H302, H400
P304+P340, P301+P312, P273

Assay (CG): >97%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm

p-Naphtholbenzein
pure, indicator grade

packaging		Mfr. No
25 g	Glass jar	N/0500/46

$C_{27}H_{18}O_2$
CAS: 145-50-6
MW: 374.44
Melting point: 230 to 235°C
EINECS: 205-656-3
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
pH colour change test ..... : Pass

pH 8.5-9.8 yellow to green.

1-Naphthylamine-7-sulfonic acid SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	N/0910/48

$C_{10}H_6(NH_2).SO_3H$
CAS: 119-28-8
MW: 223.25
ADR/RID: 8, III
EINECS: 204-311-4
UN: 2585
GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P280, P302+P352, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

N-1-Naphthylethylene diamine dihydrochloride Certified AR
for analysis

packaging		Mfr. No
5 g	Glass jar	N/1252/44
10 g	Glass jar	N/1252/45

$C_{12}H_{14}N_2.2HCl$
CAS: 1465-25-4
MW: 259.18
Melting point: 200°C
EINECS: 215-981-2
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H302, H319, H335
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis
Sensitivity test (sulfanilamide) ..... : Pass Residue after ignition ..... <0.05%

Lot analysis on the label.

N-1-Naphthylethylene diamine dihydrochloride SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Glass jar	N/1250/45
100 g	Glass jar	N/1250/48

$C_{12}H_{14}N_2.2HCl$
CAS: 1465-25-4
MW: 259.18
Melting point: 200°C
EINECS: 215-981-2
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H302, H319, H335
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >97%

Guaranteed analysis
Sensitivity test (sulfanilamide) ..... : Pass

Neodymium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLND22Y
500 mℓ	Plastic bottle	SPPLND22X

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Nessler's solution
pure, for detection and determination of ammonia and ammonium salts

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/5500/PB08
1 ℓ	Coated Glass bottle	J/5500/PB15

Density at 20°C: 1.1 to 1.3
ADR/RID: 8, 6.1, II
UN: 2922
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, STOT RE 2, Aquatic Chronic 3
H412, H302, H373, H314
P301+P330+P331, P280, P305+P351+P338, P310, P260, P273, P301+P312

Neutral red C.I 50040
pure, indicator grade

packaging		Mfr. No
5 g	Glass jar	N/1270/44

$C_{15}H_{17}ClN_4$
CAS: 553-24-2
MW: 288.77
Melting point: 290°C

EINECS: 209-035-8
GHS: Muta. 2
H341
P281

Guaranteed analysis

pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

Nickel standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8055/05
500 mℓ	HDPE Plastic bottle	J/8055/08

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Nickel standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8297/08

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Nickel standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8295/05

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Skin Sens. 1, STOT RE 1

H314, H372, H317
P305+P351+P338, P301+P330+P331, P310, P280, P260

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Nickel standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLNI22Y
250 mℓ	Plastic bottle	SPPLNI22T
500 mℓ	Plastic bottle	SPPLNI22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Nickel standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLNI23Y
500 mℓ	Plastic bottle	SPPLNI23X

H314, H317, H351

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Nickel standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLNI22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Nickel metal powder
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
250 g	Plastic jar	N/1300/50

Ni
CAS: 7440-02-0
MW: 58.70
Boiling point: 2730°C
Melting point: 1455°C
ADR/RID: 4.1/II

EINECS: 231-111-4
UN: 3089
GHS: Carc. 2, Skin Sens. 1, STOT RE 1, Aquatic Chronic 3
H351, H372, H412, H317
P280, P260, P273

Guaranteed analysis

Identity test ..... : Pass

Nickel metal sheet
pure, about 0.5 mm

packaging		Mfr. No
100 g	Plastic jar	N/1370/48
250 g	Plastic jar	N/1370/50

Ni
CAS: 7440-02-0
MW: 58.70
Boiling point: 2732 to 2837°C
Melting point: 1455°C

EINECS: 231-111-4
GHS: Carc. 2, Skin Sens. 1, STOT RE 1
H351, H372, H317
P280, P281, P260, P273

Guaranteed analysis

Identity test ..... : Pass

Guaranteed analysis

pH (aqueous solution 5%)	3 to 7	Magnesium (Mg)	<20 ppm
Aluminium (Al)	<0.001%	Potassium (K)	<50 ppm
Barium (Ba)	<0.001%	Propan--1-ol	<0.001%
Cadmium (Cd)	<0.001%	Sodium (Na)	<100 ppm
Calcium (Ca)	<50 ppm	Strontium (Sr)	<0.001%
Chromium (Cr)	<0.001%	Titanium (Ti)	<0.001%
Cobalt (Co)	<50 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<10 ppm	Total silicon (Si)	<10 ppm
Iron (Fe)	<20 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<20 ppm	Vanadium (V)	<0.001%
Lithium (Li)	<0.001%	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Nickel-aluminium alloy
pure, powder for preparing catalytic nickel

packaging		Mfr. No
250 g	Plastic jar	N/1460/50

AlNi
CAS: 12635-29-9
MW: 85.68
Density at 20°C: 3.46
Melting point: 1350°C
ADR/RID: 4.3, III

UN: 3208
GHS: Water-react. 3, Carc. 2, Resp. Sens. 1, Skin Sens. 1
H261, H351, H317, H334
P261, P304+P341, P342+P311, P280, P281

Guaranteed analysis

Identity test ..... : Pass

Nickel(II) carbonate tetrahydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
250 g	Plastic jar	N/1550/50
500 g	Plastic jar	N/1550/53

approx.$CH_4Ni_3O_7.4H_2O$
CAS: 12607-70-4
ADR/RID: 9, III
EINECS: 235-715-9
UN: 3077
GHS: Muta. 2, Repr. 1B, Acute Tox. 4, Skin Irrit. 2, Resp. Sens. 1, Skin Sens. 1,

STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H302, H332, H317, H410, H350i, H341, H360D, H372, H315, H334
P280, P281, P273, P301+P312, P304+P340

Guaranteed analysis

Identity test ..... : Pass

Nickel(II) chloride hexahydrate
for analysis — Certified AR

packaging		Mfr. No
250 g	Plastic jar	N/1650/50
1 kg	Plastic jar	N/1650/60

$NiCl_2.6H_2O$
CAS: 7791-20-0
MW: 237.71
Density at 20°C: 3.55
ADR/RID: 6.1, III
EINECS: 231-743-0
UN: 3288
GHS: Muta. 2, Repr. 1B, Acute Tox. 3, Skin Irrit. 2,

Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H301, H331, H334, H341, H410, H317, H315, H372, H350i, H360D
P301+P310, P308+P313, P304+P340, P280, P260, P273, P302+P352

Assay: 99 to 101%

Nickel(II) chloride hexahydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	N/1600/53

$NiCl_2.6H_2O$
CAS: 7791-20-0
MW: 237.71
Density at 20°C: 3.55
ADR/RID: 6.1, III
EINECS: 231-743-0
UN: 3288
GHS: Muta. 2, Repr. 1B, Acute Tox. 3, Skin Irrit. 2,

Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H301, H331, H334, H341, H410, H317, H315, H372, H350i, H360D
P301+P310, P308+P313, P304+P340, P280, P260, P273, P302+P352

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Potassium (K)	<500 ppm
Cobalt (Co)	<2000 ppm	Sodium (Na)	<2000 ppm
Copper (Cu)	<100 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<200 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<200 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<100 ppm

Nickel(II) nitrate hexahydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
250 g	Plastic jar	N/1750/50
500 g	Plastic jar	N/1750/53

$Ni(NO_3)_2.6H_2O$
CAS: 13478-00-7
MW: 290.79
Boiling point: 137°C
Melting point: 56.7°C
ADR/RID: 5.1, III
EINECS: 236-068-5
UN: 2725
GHS: Ox. Sol. 2, Muta. 2,

Repr. 1B, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H350i, H341, H360D, H372, H332, H302, H318, H315, H317, H410
P281, P210

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Sodium (Na)	<1000 ppm
Cobalt (Co)	<2000 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<100 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<200 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<200 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<500 ppm		

Nickel(II) oxide (black)
pure

packaging		Mfr. No
500 g	Plastic jar	N/1850/53

NiO
CAS: 1313-99-1
MW: 74.71
Density at 20°C: 6.67
Melting point: 1960°C
ADR/RID: 6.1/III

EINECS: 215-215-7
UN: 3288
GHS: Skin Sens. 1, STOT RE 1, Aquatic Chronic 4
H350i, H372, H317, H413
P280, P201, P308+P313, P260

Guaranteed analysis
Identity test ..... : Pass

Nicotinic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	N/2110/50

$C_6H_5NO_2$
CAS: 59-67-6
MW: 123.11
Melting point: 236 to 239°C

EINECS: 200-441-0
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis
Water ..... <1% Melting Point tested ..... 234 to 237°C
Residue after ignition ..... <0.2%

Nickel(II) sulfate hexahydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	N/2051/50

$NiSO_4.6H_2O$
CAS: 10101-97-0
MW: 262.85
Melting point: 53°C
ADR/RID: 6.1, III
UN: 3288
GHS: Muta. 2, Repr. 1B, Acute Tox. 4, Skin Irrit. 2,

Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H350i, H341, H360D, H315, H332, H302, H317, H334, H372, H410
P308+P313, P280, P281, P201, P260, P273

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	4 to 6	Potassium (K)	<50 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Cobalt (Co)	<50 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<10 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<20 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<0.001 %	Silver (Ag)	<0.001 %
Barium (Ba)	<0.001 %	Strontium (Sr)	<0.001 %
Cadmium (Cd)	<0.001 %	Titanium (Ti)	<0.001 %
Chromium (Cr)	<0.001 %	Vanadium (V)	<0.001 %
Lithium (Li)	<0.001 %		

Lot analysis on the label.

Ninhydrin monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	N/2158/48
500 g	Glass jar	N/2158/53

$C_9H_6O_4$
CAS: 485-47-2
MW: 178.15
Melting point: 250°C
EINECS: 207-618-1
GHS: Acute Tox. 4, Skin Irrit.

2, Eye Irrit. 2, STOT SE 3
H319, H315, H302, H335
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis
Residue after ignition ..... <0.05% Pass
Suitability for detection of amino acid ... :

Ninhydrin spray
pure

packaging		Mfr. No
120 mℓ	Aerosol	N/2160/90

CAS: 71-36-3
Density at 20°C: 0.81
Boiling point: 117.4°C
Melting point: -90°C
Flash point: 37°C
ADR/RID: 3, III
EINECS: 207-618-1
UN: 1120

GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H315, H302, H336, H318, H335
P280, P305+P351+P338, P310, P261, P301+P312, P304+P340, P302+P352, P210

Guaranteed analysis
Residue after evaporation ..... 0.4 to 0.6%

Pressurise container carefullyby pumping the removable piston several times.

Nickel(II) sulfate hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	N/2000/50
500 g	Plastic jar	N/2000/53
1 kg	Plastic jar	N/2000/60

$NiSO_4.6H_2O$
CAS: 10101-97-0
MW: 262.85
Melting point: 53°C
ADR/RID: 6.1, III
UN: 3288
GHS: Muta. 2, Repr. 1B, Acute Tox. 4, Skin Irrit. 2,

Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H350i, H341, H360D, H315, H332, H302, H317, H334, H372, H410
P308+P313, P280, P281, P201, P260, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Potassium (K)	<500 ppm
Cobalt (Co)	<2000 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<100 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<200 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<100 ppm

Ninhydrin spray refill
pure, 0.5% ninhydrin in butan-1-ol

packaging		Mfr. No
500 mℓ	Glass bottle	N/2161/90

CAS: 71-36-3
Density at 20°C: 0.81
Boiling point: 117.4°C
Melting point: -90°C
Flash point: 37°C
ADR/RID: 3, III
EINECS: 207-618-1
UN: 1120

GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H226, H315, H302, H336, H318, H335
P280, P305+P351+P338, P310, P261, P301+P312, P304+P340, P302+P352, P210

Guaranteed analysis
Residue after evaporation ..... 0.4 to 0.6%

Niobium standard metal solution 1000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLNB92Y
500 mℓ	Plastic bottle	SPPLNB92X

H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Niobium standard metal solution 10 000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLNB93Y
500 mℓ	Plastic bottle	SPPLNB93X

H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Nitrate standard solution 1000 ppm (1 mg/mℓ)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4556/05

CAS: 7757-79-1
EINECS: 231-818-8

Manufactured to a tolerance of ± 1%.

Nitrate standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASNO392Y
500 mℓ	Plastic bottle	SPASNO392X

CAS: 7757-79-1

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Nitrate-Nitrogen standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASNO3N92Y

CAS: 7757-79-1

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Nitrite standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASNO292Y
500 mℓ	Plastic bottle	SPASNO292X

CAS: 7632-00-0

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Nitrite-Nitrogen standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASNO2N92Y
500 mℓ	Plastic bottle	SPASNO2N92X

CAS: 7632-00-0

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Nitric acid 67-69% — NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
250 mℓ	Pre-cleaned Teflon FEP bottle	A467-250
500 mℓ	Pre-cleaned Teflon FEP bottle	A467-500
1 ℓ	Pre-cleaned Teflon FEP bottle	A467-1

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.42
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H314, H272
P301+P330+P331, P305+P351+P338, P310, P304+P340, P280, P210

Assay: 67-69%

Guaranteed analysis

Zirconium (Zr)	<10 ppt	Manganese (Mn)	<10 ppt
Gallium (Ga)	<10 ppt	Mercury (Hg)	<50 ppt
Terbium (Tb)	<1 ppt	Molybdenum (Mo)	<10 ppt
Indium (In)	<1 ppt	Neodymium (Nd)	<1 ppt
Dysprosium (Dy)	<1 ppt	Nickel (Ni)	<20 ppt
Aluminium (Al)	<20 ppt	Niobium (Nb)	<1 ppt
Antimony (Sb)	<10 ppt	Palladium (Pd)	<20 ppt
Arsenic (As)	<20 ppt	Potassium (K)	<10 ppt
Barium (Ba)	<10 ppt	Praseodymium (Pr)	<1 ppt
Beryllium (Be)	<10 ppt	Rhenium (Re)	<10 ppt
Bismuth (Bi)	<10 ppt	Rhodium (Rh)	<10 ppt
Boron (B)	<10 ppt	Ruthenium (Ru)	<20 ppt
Cadmium (Cd)	<10 ppt	Samarium (Sm)	<1 ppt
Calcium (Ca)	<10 ppt	Scandium (Sc)	<10 ppt
Cerium (Ce)	<10 ppt	Propan--1-ol	<10 ppt
Cesium (Cs)	<10 ppt	Sodium (Na)	<10 ppt
Chromium (Cr)	<10 ppt	Strontium (Sr)	<10 ppt
Cobalt (Co)	<10 ppt	Tantalum (Ta)	<10 ppt
Copper (Cu)	<10 ppt	Tellurium (Te)	<1 ppt
Erbium (Er)	<1 ppt	Thallium (Tl)	<10 ppt
Europium (Eu)	<1 ppt	Thorium (Th)	<1 ppt
Gadolinium (Gd)	<1 ppt	Thulium (Tm)	<1 ppt
Germanium (Ge)	<10 ppt	Tin (Sn)	<20 ppt
Gold (Au)	<20 ppt	Titanium (Ti)	<10 ppt
Hafnium (Hf)	<10 ppt	Uranium (U)	<1 ppt
Holmium (Ho)	<1 ppt	Vanadium (V)	<10 ppt
Iron (Fe)	<10 ppt	Ytterbium (Yb)	<1 ppt
Lanthanum (La)	<1 ppt	Yttrium (Y)	<1 ppt
Lead (Pb)	<10 ppt	Zinc (Zn)	<10 ppt
Lithium (Li)	<10 ppt	Platinum (Pt)	<20 ppt
Lutetium (Lu)	<1 ppt	Rubidium (Rb)	<10 ppt
Magnesium (Mg)	<10 ppt	Tungsten (W)	<10 ppt

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Nitric acid 67-69% NEW — Trace Metal
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE plastic bottle	A509-P500
1 ℓ	HDPE plastic bottle	A509-P1
2.5 ℓ	HDPE plastic bottle	A509-P212

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.42
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H314, H272
P301+P330+P331,
P305+P351+P338, P310,
P304+P340, P280, P210

Assay: 67-69%

Guaranteed analysis

Colour	<10 APHA	Nickel (Ni)	<0.5 ppb
Aluminium (Al)	<1 ppb	Niobium (Nb)	<0.1 ppb
Antimony (Sb)	<0.5 ppb	Palladium (Pd)	<0.5 ppb
Arsenic (As)	<0.5 ppb	Platinum (Pt)	<0.5 ppb
Barium (Ba)	<0.1 ppb	Potassium (K)	<1 ppb
Beryllium (Be)	<0.1 ppb	Praseodymium (Pr)	<0.1 ppb
Bismuth (Bi)	<0.1 ppb	Rhenium (Re)	<0.1 ppb
Boron (B)	<1 ppb	Rhodium (Rh)	<0.5 ppb
Cadmium (Cd)	<0.5 ppb	Rubidium (Rb)	<0.1 ppb
Calcium (Ca)	<1 ppb	Ruthenium (Ru)	<0.5 ppb
Cerium (Ce)	<0.1 ppb	Samarium (Sm)	<0.1 ppb
Cesium (Cs)	<0.1 ppb	Scandium (Sc)	<0.1 ppb
Chromium (Cr)	<1 ppb	Selenium (Se)	<1 ppb
Cobalt (Co)	<0.5 ppb	Silver (Ag)	<0.1 ppb
Copper (Cu)	<0.5 ppb	Sodium (Na)	<1 ppb
Dysprosium (Dy)	<0.1 ppb	Strontium (Sr)	<0.1 ppb
Erbium (Er)	<0.1 ppb	Tantalum (Ta)	<0.1 ppb
Europium (Eu)	<0.1 ppb	Tellurium (Te)	<0.1 ppb
Gadolinium (Gd)	<0.1 ppb	Terbium (Tb)	<0.1 ppb
Gallium (Ga)	<0.1 ppb	Thallium (Tl)	<0.1 ppb
Germanium (Ge)	<0.1 ppb	Thorium (Th)	<0.1 ppb
Gold (Au)	<0.1 ppb	Thulium (Tm)	<0.1 ppb
Hafnium (Hf)	<0.1 ppb	Tin (Sn)	<0.5 ppb
Holmium (Ho)	<0.1 ppb	Titanium (Ti)	<0.5 ppb
Indium (In)	<0.1 ppb	Total chloride (Cl)	<0.2 ppm
Iron (Fe)	<1 ppb	Total phosphorus (P)	<0.01 ppm
Lanthanum (La)	<0.1 ppb	Total sulphur (S)	<0.3 ppm
Lead (Pb)	<0.1 ppb	Tungsten (W)	<0.1 ppb
Lithium (Li)	<0.1 ppb	Uranium (U)	<0.1 ppb
Lutetium (Lu)	<0.1 ppb	Vanadium (V)	<0.5 ppb
Magnesium (Mg)	<1 ppb	Ytterbium (Yb)	<0.1 ppb
Manganese (Mn)	<0.1 ppb	Yttrium (Y)	<0.1 ppb
Mercury (Hg)	<0.1 ppb	Zinc (Zn)	<0.5 ppb
Molybdenum (Mo)	<0.1 ppb	Zirconium (Zr)	<0.1 ppb
Neodymium (Nd)	<0.1 ppb		

Bottled in class 10 cleanroom conditions.
Lot analysis on the label.

Nitric acid 68% d =1.42 NEW PACK. — Primar Plus
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	N/2272/PB08
1 ℓ	HDPE Plastic bottle	N/2272/PB15
2.5 ℓ	HDPE Plastic bottle	N/2272/PB17

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.42
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H314, H272
P301+P330+P331,
P305+P351+P338, P310,
P304+P340, P280, P210

Assay: >68%

Guaranteed analysis

Aluminium (Al)	<0.1 ppm	Calcium (Ca)	<0.05 ppm
Antimony (Sb)	<0.005 ppm	Chromium (Cr)	<0.005 ppm
Arsenic (As)	<0.005 ppm	Copper (Cu)	<0.005 ppm
Barium (Ba)	<0.05 ppm	Gallium (Ga)	<0.005 ppm
Beryllium (Be)	<0.005 ppm	Germanium (Ge)	<0.005 ppm
Bismuth (Bi)	<0.005 ppm	Indium (In)	<0.005 ppm
Boron (B)	<0.005 ppm	Iron (Fe)	<0.05 ppm
Cadmium (Cd)	<0.002 ppm		
Lead (Pb)	<0.002 ppm	Strontium (Sr)	<0.002 ppm
Lithium (Li)	<0.002 ppm	Thallium (Tl)	<0.005 ppm
Magnesium (Mg)	<0.02 ppm	Tin (Sn)	<0.005 ppm
Manganese (Mn)	<0.002 ppm	Titanium (Ti)	<0.002 ppm
Mercury (Hg)	<0.005 ppm	Total chloride (Cl)	<0.00002%
Molybdenum (Mo)	<0.002 ppm	Total phosphorus (P)	<0.05 ppm
Nickel (Ni)	<0.002 ppm	Total sulphur (S)	<0.2 ppm
Potassium (K)	<0.02 ppm	Vanadium (V)	<0.002 ppm
Selenium (Se)	<0.002 ppm	Zinc (Zn)	<0.01 ppm
Silver (Ag)	<0.005 ppm	Zirconium (Zr)	<0.005 ppm
Sodium (Na)	<0.1 ppm		

Nitric acid 70% d=1.42
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	N/2222/PB17

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.42
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H272, H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P221, P210

Assay: 69 to 71%

Guaranteed analysis

Colour	<10 APHA	Molybdenum (Mo)	<0.02 ppm
Aluminium (Al)	<0.1 ppm	Nickel (Ni)	<0.05 ppm
Barium (Ba)	<0.02 ppm	Potassium (K)	<0.2 ppm
Cadmium (Cd)	<0.02 ppm	Sodium (Na)	<2 ppm
Calcium (Ca)	<1 ppm	Strontium (Sr)	<0.02 ppm
Chromium (Cr)	<0.05 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	n-Butyl formate	<0.00005%
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<0.5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<0.5 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<1 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Magnesium (Mg)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Manganese (Mn)	<0.02 ppm		

The concentration of nitric acid solution is 15.8 M (15.8 N).
Filtered to 10 µm.

Nitric acid 69% NEW — Certified AR, Eur.Ph.
for analysis with low Cadmium, Lead & Mercury level

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	N/2320/PB15
2.5 ℓ	HDPE Plastic bottle	N/2320/PB17

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.42
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H272, H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P221, P210

Assay: 68-71%

Guaranteed analysis

Colour	<10 APHA	Lithium (Li)	<0.01 ppm
Zirconium (Zr)	<0.02 ppm	Magnesium (Mg)	<0.05 ppm
Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.01 ppm
Arsenic (As)	<0.01 ppm	Mercury (Hg)	<0.005 ppm
Barium (Ba)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Beryllium (Be)	<0.01 ppm	Nickel (Ni)	<0.02 ppm
Bismuth (Bi)	<0.05 ppm	Phosphate (PO_4)	<0.5 ppm
Cadmium (Cd)	<0.005 ppm	Potassium (K)	<0.1 ppm
Calcium (Ca)	<0.1 ppm	Strontium (Sr)	<0.01 ppm
Chloride (Cl)	<0.2 ppm	Sulfate (SO_4)	<1 ppm
Chromium (Cr)	<0.02 ppm	Thallium (Tl)	<0.02 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.02 ppm
Copper (Cu)	<0.02 ppm	Vanadium (V)	<0.01 ppm
Germanium (Ge)	<0.02 ppm	Zinc (Zn)	<0.02 ppm
Iron (Fe)	<0.2 ppm	Residue after ignition	<5 ppm
Lead (Pb)	<0.01 ppm		

Lot analysis on the label

Nitric acid 68 % d= 1.42 — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	N/2300/PB08
1 ℓ	HDPE Plastic bottle	N/2300/PB15
2.5 ℓ	HDPE Plastic bottle	N/2300/PB17
2.5 ℓ	Coated Glass bottle	N/2300/PC17

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.42
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H272, H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P221, P210

Assay: 68 to 70%

Guaranteed analysis

Colour	<10 APHA	Nickel (Ni)	<0.02 ppm
Residue after ignition	<0.0005%	Potassium (K)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Residue after ignition	<0.0005%
Chromium (Cr)	<0.05 ppm	Total chloride (Cl)	<0.00005%
Copper (Cu)	<0.05 ppm	Total phosphorus (P)	<0.2 ppm
Iron (Fe)	<0.2 ppm	Total sulphur (S)	<1 ppm
Lead (Pb)	<0.05 ppm	Zinc (Zn)	<0.05 ppm
Magnesium (Mg)	<0.2 ppm	Sulfate (SO_4)	<1 ppm
Mercury (Hg)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.05 ppm	Silver (Ag)	<0.01 ppm
Arsenic (As)	<0.01 ppm	Sodium (Na)	<0.5 ppm
Barium (Ba)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Tin (Sn)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Total silicon (Si)	<0.5 ppm
Manganese (Mn)	<0.02 ppm	Vanadium (V)	<0.01 ppm
Molybdenum (Mo)	<0.01 ppm		

Lot analysis on the label.
The concentration of nitric acid solution is 15.8 M (15.8 N).

Nitric acid 70% d=1.42 — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	N/2250/PB15
2.5 ℓ	HDPE Plastic bottle	N/2250/PB17
25 ℓ	Plastic container	N/2250/25

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.42
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H272, H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P221, P210

Assay: 68 to 72%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Potassium (K)	<10 ppm
Chromium (Cr)	<2 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<2 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<20 ppm
Nickel (Ni)	<2 ppm	Zinc (Zn)	<2 ppm

The concentration of nitric acid solution is 15.8 M (15.8 N).

Nitric acid 70% d=1.42
Technical

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	N/2200/PB17

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.42
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H272, H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P221, P210

Assay: >70%

Nitric Acid 65% d = 1.40 — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	N/2185/PB15
2.5 ℓ	HDPE Plastic bottle	N/2185/PB17

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.40
Boiling point: 122°C
Melting point: -41°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H314, H272
P301+P330+P331,
P305+P351+P338, P310,
P304+P340, P280, P210

Assay: <66%

Guaranteed analysis

Colour	<10 APHA	Nickel (Ni)	<0.05 ppm
Calcium (Ca)	<1 ppm	Potassium (K)	<0.2 ppm
Chromium (Cr)	<0.05 ppm	Sodium (Na)	<2 ppm
Copper (Cu)	<0.1 ppm	Total chloride (Cl)	<0.00005%
Iron (Fe)	<0.2 ppm	Total phosphorus (P)	<0.5 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<1 ppm
Magnesium (Mg)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Mercury (Hg)	<0.05 ppm		

Typical analysis

Arsenic (As)	<0.02 ppm	Silver (Ag)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Tin (Sn)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Manganese (Mn)	<0.02 ppm	Total silicon (Si)	<0.5 ppm
Molybdenum (Mo)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

Nitric Acid 65% d = 1.40 — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	N/2180/PB15
2.5 ℓ	HDPE Plastic bottle	N/2180/PB17

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.40
Boiling point: 122°C
Melting point: -41°C
ADR/RID: 8, 5.1, II

EINECS: 231-714-2
UN: 2031
GHS: Ox. Liq. 3, Skin Corr. 1A
H314, H272
P301+P330+P331,
P305+P351+P338, P310,
P304+P340, P280, P210

Assay: <66%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.2 ppm
Calcium (Ca)	<1 ppm	Sodium (Na)	<2 ppm
Chromium (Cr)	<0.05 ppm	n-Butyl formate	<0.00005%
Copper (Cu)	<0.1 ppm	Total phosphorus (P)	<0.5 ppm
Iron (Fe)	<0.2 ppm	Total silicon (Si)	<0.5 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<1 ppm
Magnesium (Mg)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Nickel (Ni)	<0.05 ppm		

Nitric Acid 53% d = 1.33 — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	N/2175/PB15

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.33
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, II
EINECS: 231-714-2

UN: 2031
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P305+P351+P338, P303+P361+P353, P301+P330+P331, P310, P304+P340

Assay: 52.5 to 55%

Guaranteed analysis

Colour	<10 APHA	Mercury (Hg)	<0.05 ppm
Density at 20°C	: 1.325 to 1.335	Nickel (Ni)	<0.05 ppm
Arsenic (As)	<0.05 ppm	Sodium (Na)	<2 ppm
Calcium (Ca)	<1 ppm	Total chloride (Cl)	<0.00005%
Chromium (Cr)	<0.05 ppm	Total phosphorus (P)	<0.5 ppm
Copper (Cu)	<0.1 ppm	Total silicon (Si)	<0.5 ppm
Lead (Pb)	<0.1 ppm	Total sulphur (S)	<1 ppm
Magnesium (Mg)	<0.2 ppm	Zinc (Zn)	<0.1 ppm

Typical analysis

Aluminium (Al)	<0.1 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Potassium (K)	<0.2 ppm
Cadmium (Cd)	<0.02 ppm	Silver (Ag)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Iron (Fe)	<0.2 ppm	Tin (Sn)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Manganese (Mn)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

Nitric Acid

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	N/2170/PB21

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.33
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, II
EINECS: 231-714-2

UN: 2031
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P305+P351+P338, P303+P361+P353, P301+P330+P331, P310, P304+P340

Assay: 52.5 to 55%

Nitric acid solution 2M (2N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/5545/PB17

CAS: 7697-37-2
Density at 20°C: 1.03 to 1.12
Boiling point: 100°C
ADR/RID: 8, II
EINECS: 231-714-2

UN: 2031
GHS: Skin Corr. 1B
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.

Nitric acid solution 1M (1N) — Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/5550/PB15
2.5 ℓ	HDPE Plastic bottle	J/5550/PB17
10 ℓ	Bag in box	J/5550/24

CAS: 7697-37-2
Density at 20°C: 1.03 to 1.12
Boiling point: 100°C
ADR/RID: 8, II
EINECS: 231-714-2

UN: 2031
GHS: Skin Corr. 1B
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Nitric acid solution 1M (1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/5550C/05
6	Ampoule	J/5550C/90

HNO_3
CAS: 7697-37-2
MW: 63.01
Density at 20°C: 1.33
Boiling point: 122°C
Melting point: -42°C
ADR/RID: 8, II
EINECS: 231-714-2

UN: 2031
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P305+P351+P338, P303+P361+P353, P301+P330+P331, P310, P304+P340

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Nitric acid solution 0.1M (0.1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/5600/PB15
2.5 ℓ	HDPE Plastic bottle	J/5600/17
10 ℓ	Bag in box	J/5600/24

CAS: 7697-37-2
Density at 20°C: 1
EINECS: 231-714-2

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

2.2′,2′′-Nitrilotriethanol *See Triethanolamine, page 357*

p-Nitroaniline *See 4-Nitroaniline, page 218*

4-Nitroaniline
pure

packaging		Mfr. No
100 g	Glass jar	N/2600/48

$C_6H_6N_2O_2$
CAS: 100-01-6
MW: 138.13
Boiling point: 332°C
Melting point: 146 to 151°C
Flash point: 199°C
ADR/RID: 6.1, II
EINECS: 202-810-1

UN: 1661
GHS: Acute Tox. 3, STOT RE 2, Aquatic Chronic 3
H412, H311, H373, H331, H301
P301+P310, P310, P304+P340, P280, P302+P350, P260, P273

Nitromethane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	N/3000/PB05
500 mℓ	Coated Glass bottle	N/3000/PB08
200 ℓ	Metal drum	N/3000/27

CH_3NO_2
CAS: 75-52-5
MW: 61.04
Density at 20°C: 1.12
Boiling point: 100 to 102°C
Melting point: -29°C
Flash point: 35°C

ADR/RID: 3, II
EINECS: 200-876-6
UN: 1261
GHS: Flam. Liq. 3, Acute Tox. 4
H226, H302
P301+P312, P304+P340, P210

3-Nitrophenol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	N/3150/46

$C_6H_5NO_3$
CAS: 554-84-7
MW: 139.11
Boiling point: 194°C
Melting point: 94 to 98°C
ADR/RID: 6.1, III
EINECS: 209-073-5
UN: 1663

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2
H373, H319, H315, H335, H302, H312, H332
P280, P302+P352, P261, P260, P301+P312, P304+P340, P305+P351+P338

Guaranteed analysis
Melting Point tested ..... 96 to 98°C

4-Nitrophenol — SLR
extra pure, pH indicator

packaging		Mfr. No
100 g	Glass jar	N/3200/48

$C_6H_5NO_3$
CAS: 100-02-7
MW: 139.11
Boiling point: 279°C
Melting point: >112°C
Flash point: 169°C
ADR/RID: 6.1, III

EINECS: 202-811-7
UN: 1663
GHS: Acute Tox. 4, STOT RE 2
H373, H332, H312, H302
P280, P304+P340, P302+P352, P260

Guaranteed analysis
Melting Point tested ..... 111 to 114°C

For the determination of pH.
pH 5.6-7.6 colorless to yellow.

p-Nitrophenylamine *See 4-Nitroaniline, page 218*

4-Nitrophenyl disodium orthophosphate
pure

packaging		Mfr. No
5 g	Plastic jar	N/3390/44
25 g	Plastic jar	N/3390/46

$C_6H_4NNa_2PO_6.6H_2O$
CAS: 4264-83-9
MW: 371.15

Melting point: >300°C
EINECS: 224-246-5

Guaranteed analysis
Complies with standard IR spectrum: Pass

Nitroso-R-salt — SLR
extra pure, determination of cobalt

packaging		Mfr. No
25 g	Plastic jar	N/3650/46

$C_{10}H_5NNa_2O_8S_2.xH_2O$
CAS: 525-05-3
MW: 377.26
Melting point: 300°C
EINECS: 208-369-1
GHS: Acute Tox. 4, Skin Irrit.

2, Eye Irrit. 2, STOT SE 3
H315, H302, H332, H319, H312, H335
P280, P302+P352, P261, P301+P312, P304+P340, P305+P351+P338

Assay: >90%

UHPLC
Filtered to 0.1 µm, Fisher Chemical UHPLC gradient grade solvents (Acetonitrile, Methanol and Water) are perfect for those working at high pressure.
See page 309 for more information

n-Nonane
pure

packaging		Mfr. No
100 mℓ	Glass bottle	N/3900/05

C_9H_{20}
CAS: 111-84-2
MW: 128.26
Density at 20°C: 0.718
Boiling point: 151°C
Melting point: -53°C
Flash point: 31°C
ADR/RID: 3, III
EINECS: 203-913-4

UN: 1920
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, STOT SE 3, Aquatic Chronic 4
H226, H332, H336, H304, H315, H413
P261, P301+P310, P331, P302+P352, P210, P304+P340

Assay (CG): >99%

1-Nonanol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	N/4020/08

$C_9H_{20}O$
CAS: 143-08-8
MW: 144.26
Density at 20°C: 0.827
Boiling point: 213 to 215°C
Melting point: -5--8°C
Flash point: 74°C
ADR/RID: 9, III

EINECS: 205-583-7
UN: 3082
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 2
H319, H411, H315, H332
P273, P304+P340, P302+P352, P280, P305+P351+P338

Assay (CG): >98%

Nonyl alcohol *See 1-Nonanol, page 219*

n-Octane — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Glass bottle	O/0020/05
500 mℓ	Glass bottle	O/0020/08

C_8H_{18}
CAS: 111-65-9
MW: 114.23
Density at 20°C: 0.708
Boiling point: 125 to 127°C
Melting point: -57°C
Flash point: 13°C
ADR/RID: 3, II
EINECS: 203-892-1

UN: 1262
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H315, H410, H336, H304
P261, P301+P310, P331, P273, P302+P352, P210, P240

Assay (CG): >99%

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1-Octane sulfonic acid sodium salt
for Ion pair chromatography

packaging		Mfr. No
5 g	Glass jar	O/0028/44
25 g	Plastic jar	O/0028/46
100 g	Plastic jar	O/0028/48

$C_8H_{17}NaSO_3$
CAS: 5324-84-5
MW: 216.28
Melting point: >300°C
EINECS: 226-195-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis
Solution (5% in methanol) ..... Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.25 M) ..... : <0.1 A.U.	240 nm (sol. aqu. 0.25 M) ... : <0.02 A.U.
210 nm (sol. aqu. 0.25 M) ... : <0.05 A.U.	250 nm (sol. aqu. 0.25 M) ... : <0.02 A.U.
220 nm (sol. aqu. 0.25 M) ... : <0.03 A.U.	260 nm (sol. aqu. 0.25 M) ... : <0.02 A.U.

Lot analysis on the label.

1-Octane sulfonic acid sodium salt
for Ion pair chromatography in electrochemical detection

packaging		Mfr. No
25 g	Plastic jar	O/0029/46

$C_8H_{17}NaSO_3$
CAS: 5324-84-5
MW: 216.28
Melting point: >300°C
EINECS: 226-195-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis
Electrochemical test ..... Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.25 M) ..... : <0.1 A.U.	240 nm (sol. aqu. 0.25 M) ... : <0.02 A.U.
210 nm (sol. aqu. 0.25 M) ... : <0.05 A.U.	250 nm (sol. aqu. 0.25 M) ... : <0.02 A.U.
220 nm (sol. aqu. 0.25 M) ... : <0.03 A.U.	260 nm (sol. aqu. 0.25 M) ... : <0.02 A.U.

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.

1-Octanesulfonic acid sodium salt solution 0.1M
for Ion pair chromatography

packaging		Mfr. No
250 mℓ	Glass bottle	O/0026/07

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.005 M) : <0.04 A.U.	240 nm (sol. aqu. 0.005 M) : <0.008 A.U.
210 nm (sol. aqu. 0.005 M) : <0.02 A.U.	250 nm (sol. aqu. 0.005 M) : <0.008 A.U.
220 nm (sol. aqu. 0.005 M) : <0.016 A.U.	260 nm (sol. aqu. 0.005 M) : <0.008 A.U.
230 nm (sol. aqu. 0.005 M) : <0.012 A.U.	

Lot analysis on the label.

n-Octanoic acid SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	O/0030/08
2.5 ℓ	HDPE Plastic bottle	O/0030/PB17
25 ℓ	HDPE Plastic container	O/0030/25

$C_8H_{16}O_2$
CAS: 124-07-2
MW: 144.21
Density at 20°C: 0.910
Boiling point: 237°C
Melting point: 16 to 16.5°C
Flash point: 130°C

ADR/RID: 8, III
EINECS: 204-677-5
UN: 3265
GHS: Skin Corr. 1B
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >98%

Octan-1-ol
pure

packaging		Mfr. No
500 mℓ	Glass bottle	O/0050/08
2.5 ℓ	Glass bottle	O/0050/17
2.5 ℓ	Coated Glass bottle	O/0050/PB17

$C_8H_{18}O$
CAS: 111-87-5
MW: 130.23
Density at 20°C: 0.824
Boiling point: 195°C
Melting point: -16°C

Flash point: 81°C
EINECS: 203-917-6
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay (CG): >98%

Octan-2-ol
pure

packaging		Mfr. No
500 mℓ	Glass bottle	O/0100/08
2.5 ℓ	Glass bottle	O/0100/17

$C_8H_{18}O$
CAS: 123-96-6
MW: 130.23
Density at 20°C: 0.810
Boiling point: 174 to 181°C
Melting point: -38°C
Flash point: 72°C
ADR/RID: 6.1, III

EINECS: 204-667-0
UN: 2810
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335, H301
P261, P302+P352, P280, P305+P351+P338

Assay (CG): >98%

Oct-1-ene
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	O/0105/PB05

C_8H_{16}
CAS: 111-66-0
MW: 112.21
Density at 20°C: 0.715
Boiling point: 121 to 123°C
Melting point: -102°C
Flash point: 13°C
ADR/RID: 3, II
EINECS: 203-893-7
UN: 1993

GHS: Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H335, H319, H315, H304, H411
P261, P301+P310, P331, P273, P302+P352, P280, P305+P351+P338, P210, P240, P304+P340

Assay (CG): >95%

Oleic acid SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	O/0200/15
2.5 ℓ	Glass bottle	O/0200/17

$C_{18}H_{34}O_2$
CAS: 112-80-1
MW: 282.47
Density at 20°C: 0.890
Boiling point: 360°C
Melting point: 13°C
Flash point: 189°C

EINECS: 204-007-1
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315
P261, P280, P302+P352, P305+P351+P338

Guaranteed analysis
Residue after ignition ..... <0.1% Iodine value ..... 85 to 92
Acid value (Mg KOH/g) .. : 197 to 202 mg

Oleic acid
pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	O/0150/17
25 ℓ	HDPE Plastic container	O/0150/25
200 ℓ	Metal drum	O/0150/27

$C_{18}H_{34}O_2$
CAS: 112-80-1
MW: 282.46
Density at 20°C: 0.890
Boiling point: 360°C
Melting point: 13°C
Flash point: 189°C

EINECS: 204-007-1
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315
P261, P280, P302+P352, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Oleum *See Sulfuric acid, page 339*

Olive oil
pure

packaging		Mfr. No
500 mℓ	Glass bottle	O/0250/08
2.5 ℓ	Glass bottle	O/0250/17

CAS: 8001-25-0
Density at 20°C: 0.914
Melting point: 0°C

Flash point: 225°C
EINECS: 232-277-0

Guaranteed analysis
Identity test ..... : Pass

Orange G sodium salt
pure

packaging		Mfr. No
25 g	Glass jar	O/0275/46

$C_{16}H_{10}N_2Na_2O_7S_2$
CAS: 1936-15-8
MW: 452.37
Melting point: 141°C
EINECS: 217-705-6

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Orcein staining
pure

packaging		Mfr. No
5 g	Glass jar	O/0300/44

$C_{28}H_{24}N_{2O_7}$
CAS: 1400-62-0
MW: 500.51
ADR/RID: 6.1, III
EINECS: 215-750-6
UN: 3143

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H302, H319, H315
P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Orcinol monohydrate
pure

packaging		Mfr. No
25 g	Plastic jar	O/0351/46

$C_7H_8O_2.H_2O$
CAS: 6153-39-5
MW: 142.15
Boiling point: 290°C
Melting point: 56 to 61°C
EINECS: 207-984-2

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H302, H315, H335
P261, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Orthophosphoric acid 85% Certified
HPLC for electrochemical detection

packaging		Mfr. No
500 mℓ	Coated Glass bottle	O/0515/PB08

H_3PO_4
CAS: 7664-38-2
MW: 98.00
Density at 20°C: 1.68
Boiling point: 158°C
Melting point: 21°C
ADR/RID: 8, III

EINECS: 231-633-2
UN: 1805
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Assay: >85%

Guaranteed analysis
Electrochemical test ..... Pass Lead (Pb) ..... <5 ppm
Iron (Fe) ..... <10 ppm n-Butyl formate ..... <0.001%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) ..... : <0.02 A.U.

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Orthophosphoric acid 85% is equivalent to a strength of 15.2 M (45.6 N).
Lot analysis on the label.
Filtered to 0.2 µm.

Orthophosphoric acid solution 1M Certified
for HPLC

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/5655/PB08

H_3PO_4
CAS: 7664-38-2
MW: 98.00
ADR/RID: 8, III
EINECS: 231-633-2

UN: 1805
GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P280, P302+P350, P305+P351+P338

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Drift in gradient baseline ..... <40 mA.U.

Absorbance of the largest eluted peak: <1.5 mA.U.

Orthophosphoric acid 85%
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	O/0505/PB17
200 ℓ	Metal drum	O/0505/27

H_3PO_4
CAS: 7664-38-2
MW: 98.00
Density at 20°C: 1.68
Boiling point: 158°C
Melting point: 21°C
ADR/RID: 8, III

EINECS: 231-633-2
UN: 1805
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Assay: >85%

Guaranteed analysis

Colour	<10 APHA	Molybdenum (Mo)	<1 ppm
Aluminium (Al)	<2 ppm	Nickel (Ni)	<5 ppm
Barium (Ba)	<1 ppm	Potassium (K)	<20 ppm
Cadmium (Cd)	<1 ppm	Sodium (Na)	<200 ppm
Calcium (Ca)	<50 ppm	Strontium (Sr)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<10 ppm	Total nitrogen (N)	<5 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<10 ppm
Lithium (Li)	<1 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Vanadium (V)	<20 ppm
Manganese (Mn)	<1 ppm	Zinc (Zn)	<5 ppm

Orthophosphoric acid 85% is equivalent to a strength of 15.2 M (45.6 N).
Filtered to 10 µm.

Orthophosphoric acid 85+%
for analysis — Certified AR

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	O/0500/PB08
1 ℓ	HDPE Plastic bottle	O/0500/PB15
2.5 ℓ	HDPE Plastic bottle	O/0500/PB17
2.5 ℓ	Coated Glass bottle	O/0500/PC17
25 ℓ	HDPE Plastic container	O/0500/25
200 ℓ	HDPE Plastic container	O/0500/27

H_3PO_4
CAS: 7664-38-2
MW: 98.00
Density at 20°C: 1.68
Boiling point: 158°C
Melting point: 21°C
ADR/RID: 8, III

EINECS: 231-633-2
UN: 1805
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Assay: >85%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<20 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.001%
Iron (Fe)	<10 ppm	Total nitrogen (N)	<5 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<20 ppm
Nickel (Ni)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Silver (Ag)	<2 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Orthophosphoric acid is equivalent to a strength of 15.2 M or 45.6 N.
Lot analysis on the label.

Orthophosphoric acid 85+%
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	O/0450/PB08
1 ℓ	HDPE Plastic bottle	O/0450/PB15
2.5 ℓ	HDPE Plastic bottle	O/0450/PB17
5 ℓ	HDPE Plastic bottle	O/0450/PB21
25 ℓ	HDPE Plastic container	O/0450/25

H_3PO_4
CAS: 7664-38-2
MW: 98.00
Density at 20°C: 1.68
Boiling point: 158°C
Melting point: 21°C
ADR/RID: 8, III

EINECS: 231-633-2
UN: 1805
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Assay: >85%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<100 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<1000 ppm
Iron (Fe)	<50 ppm	n-Butyl formate	<0.005%
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<100 ppm
Nickel (Ni)	<20 ppm	Zinc (Zn)	<20 ppm

Orthophosphoric acid is equivalent to a strength of 15.2 M or 45.6 N.

Orthophosphoric acid
pure, about 100% H3PO4 (contains some H4P2O7)

packaging		Mfr. No
500 g	Plastic jar	O/0510/53

H_3PO_4
CAS: 7664-38-2
MW: 98.00
Density at 20°C: 1.68
Boiling point: 158°C
Melting point: 21°C
ADR/RID: 8, III

EINECS: 231-633-2
UN: 1805
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Guaranteed analysis
Identity test ..... : Pass

Oxalic acid anhydrous
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	O/0580/53

$C_2H_2O_4$
CAS: 144-62-7
MW: 90.04
Density at 20°C: 1.9
Boiling point: DC°C
Melting point: 189 to 191°C
Flash point: >93.4°C

ADR/RID: 8, 6.1, II
EINECS: 205-634-3
UN: 2923
GHS: Acute Tox. 4
H312, H302
P280, P301+P330+P331,
P302+P352, P301+P312

Guaranteed analysis
Complies with standard IR spectrum: Pass

Oxalic acid dihydrate
for analysis — Certified AR

packaging		Mfr. No
500 g	Plastic jar	O/0650/53
1 kg	Plastic jar	O/0650/60
5 kg	Plastic keg	O/0650/65
25 kg	Plastic keg	O/0650/70

$C_2H_4O_4.2H_2O$
CAS: 6153-56-6
MW: 126.07
Melting point: 98 to 102°C
ADR/RID: 8, 6.1, II
EINECS: 205-634-3

UN: 2923
GHS: Acute Tox. 4
H302, H312
P280, P305+P351+P338,
P302+P352, P301+P312

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<2 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<2 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<20 ppm	Zinc (Zn)	<2 ppm
Sodium (Na)	<50 ppm		

Typical analysis

Aluminium (Al)	<1 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm
Manganese (Mn)	<1 ppm		

Lot analysis on the label.

Oxalic acid dihydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	O/0600/53
1 kg	Plastic jar	O/0600/60
2.5 kg	Plastic jar	O/0600/62
5 kg	Plastic keg	O/0600/65

$C_2H_4O_4.2H_2O$
CAS: 6153-56-6
MW: 126.07
Melting point: 98 to 102°C
ADR/RID: 8, 6.1, II
EINECS: 205-634-3

UN: 2923
GHS: Acute Tox. 4
H302, H312
P280, P305+P351+P338,
P302+P352, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<10 ppm

Oxalic acid solution 0.05M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/5650C/05
6	Ampoule	J/5650C/90

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Oxalic acid, sodium salt
See Sodium oxalate, page 301

Oxygen mixture
pure, (Potassium(V)chlorate & Manganèse(IV)oxide)

packaging		Mfr. No
500 g	Glass jar	O/0850/53

ADR/RID: 5.1, II
UN: 1479
GHS: Ox. Sol. 1, Acute Tox. 4, Aquatic Chronic 2

H271, H332, H302, H411
P261, P280, P301+P312,
P306+P360,
P371+P380+P375, P273

Guaranteed analysis
Identity test ..... : Pass

Palladium standard metal solution 1000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLPD32Y
500 mℓ	Plastic bottle	SPPLPD32X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Palladium chloride(II)
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
1 g	Vial	P/0120/43

$PdCl_2$
CAS: 7647-10-1
MW: 177.31
Density at 180°C: 4.0
Melting point: 678 to 680°C
ADR/RID: 6.1, 8, II
EINECS: 231-596-2
UN: 3290

GHS: Carc. 2, Acute Tox. 1, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1
H300, H314, H317, H351
P301+P310,
P301+P330+P331,
P305+P351+P338, P310,
P280, P281

Guaranteed analysis
Identity test ..... : Pass

The palladium prices vary depending on the course of the raw material.

Palmitic acid
pure, 98+%

packaging		Mfr. No
500 g	Plastic jar	P/0280/53

$C_{16}H_{32}O_2$
CAS: 57-10-3
MW: 256.42
Density at 20°C: 0.850
Boiling point: 351.5°C
Melting point: 59 to 63°C

Flash point: 206°C
EINECS: 200-312-9
GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P280, P302+P352,
P305+P351+P338

Assay (CG): >98%

(+)-Pantothenic acid calcium salt
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	P/0295/48

$C_8H_{32}Ca(NO_5)_2$
CAS: 137-08-6
MW: 476.54

Melting point: 190°C
EINECS: 205-278-9

Guaranteed analysis

Loss on drying	<5%	Calcium (Ca)	82000 to 86000 ppm
Specific rotation	25° to 27°	Lead (Pb)	<30 ppm

Paraffin liquid d=0.86
For IR Spectroscopy

packaging		Mfr. No
500 mℓ	Glass bottle	P/0405/08

CAS: 8012-95-1
Density at 20°C: 0.880
Boiling point: 300°C
Melting point: -24°C
Flash point: 218°C

EINECS: 232-384-2
GHS: Asp. Tox. 1
H304
P301+P310, P331

Guaranteed analysis
Density at 15.5°C ..... : 0.83 to 0.86 IR Analysis ..... Conform

Paraffin soft white
pure

packaging		Mfr. No
500 g	Plastic jar	P/0480/53

CAS: 64771-71-7
EINECS: 265-232-9

Guaranteed analysis
Complies with standard IR spectrum: Pass

Paraffin soft yellow
pure

packaging		Mfr. No
500 g	Plastic jar	P/0440/53

CAS: 64771-71-7
EINECS: 265-232-9

Guaranteed analysis
Complies with standard IR spectrum: Pass

Paraffin liquid water white
pure, d=0.86-0.89

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/0400/17
25 ℓ	HDPE Plastic container	P/0400/25

CAS: 8012-95-1
Density at 20°C: 0.880
Boiling point: 300°C
Melting point: -24°C
Flash point: 218°C
EINECS: 232-384-2

Guaranteed analysis
Density 15.5°C ..... 0.86 to 0.89

Paraffin liquid water white
pure, d=0.83-0.86

packaging		Mfr. No
500 mℓ	Glass bottle	P/0360/08
2.5 ℓ	Glass bottle	P/0360/17
25 ℓ	HDPE Plastic container	P/0360/25
200 ℓ	HDPE Plastic container	P/0360/27

CAS: 8012-95-1
Density at 20°C: 0.880
Boiling point: 300°C
Melting point: -24°C
Flash point: 218°C
EINECS: 232-384-2
GHS: Asp. Tox. 1
H304
P301+P310, P331

Guaranteed analysis
Density at 15.5°C ..... : 0.83 to 0.86

Paraffin liquid
Technical, d=0.88 for oil baths

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/0320/17
25 ℓ	HDPE Plastic container	P/0320/25

CAS: 8012-95-1
Density at 20°C: 0.880
Boiling point: 300°C
Melting point: -24°C
Flash point: 218°C
EINECS: 232-384-2

Guaranteed analysis
Density at 15.5°C ..... : 0.86 to 0.89

Paraffin wax pastillated
pure, melting point about 60°C

packaging		Mfr. No
450 g	Plastic jar	P/0680/90

CAS: 8002-74-2
Boiling point: 322°C
Melting point: 58 to 62°C
Flash point: 198°C
EINECS: 232-315-6

Paraffin wax pastillated
pure, melting point about 57°C

packaging		Mfr. No
450 g	Plastic jar	P/0650/90

CAS: 8002-74-2
Boiling point: 322°C
Melting point: 56 to 58°C
Flash point: 198°C
EINECS: 232-315-6

Paraffin wax pastillated
pure, melting point about 52°C

packaging		Mfr. No
450 g	Plastic jar	P/0600/90

CAS: 8002-74-2
Boiling point: 322°C
Melting point: 51 to 53°C
Flash point: 198°C
EINECS: 232-315-6

Paraffin wax
pure, clearing point about 65-71°C

packaging		Mfr. No
450 g	Plastic jar	P/0720/90

CAS: 8002-74-2
Boiling point: 322°C
Melting point: 58 to 62°C
Flash point: 198°C
EINECS: 232-315-6

Guaranteed analysis
Clearing point ..... : 65 to 71°C

Paraformaldehyde — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/0840/53

$(CH2\ O)_n$
CAS: 30525-89-4
Density at 20°C: 1.46
Melting point: 120 to 170°C
Flash point: 71°C
ADR/RID: 4.1, III
EINECS: 200-001-8
UN: 2213
GHS: Flam. Sol. 2, Carc. 2,
Acute Tox. 4, Skin Irrit. 2,
Eye Irrit. 2, Skin Sens. 1,
STOT SE 3
H228, H302, H315, H335,
H319, H351, H317, H332
P280, P281, P261,
P301+P312, P302+P352,
P305+P351+P338, P233, P210

Guaranteed analysis
Complies with standard IR spectrum: Pass

Pectin
pure, citrus - 121 grade slow setting 121

packaging		Mfr. No
100 g	Plastic jar	P/0920/48

CAS: 9000-69-5
EINECS: 232-553-0

Guaranteed analysis
Identity test ..... : Pass

Pelargonic alcohol *See 1-Nonanol, page 219*

iso-Pentane NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	P/1031/08
2.5 ℓ	Glass bottle	P/1031/17
5 ℓ	Mild steel drum	P/1031/MS21

C_5H_{12}
CAS: 78-78-4
MW: 72.15
Density at 20°C: 0.620
Boiling point: 30°C
Melting point: -160°C
Flash point: -51°C
ADR/RID: 3, I
EINECS: 201-142-8
UN: 1265
GHS: Flam. Liq. 1, STOT SE
3, Asp. Tox. 1, Aquatic Chronic 2
H224, H336, H411, H304,
EUH066
P261, P301+P310, P331,
P273, P210, P243

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Magnesium (Mg)	<0.1 ppm
Colour	<10 APHA	Manganese (Mn)	<0.02 ppm
Water	<0.01%	Molybdenum (Mo)	<0.02 ppm
Residue after evaporation	<50 ppm	Nickel (Ni)	<0.02 ppm
Aluminium (Al)	<0.1 ppm	Potassium (K)	<0.2 ppm
Barium (Ba)	<0.02 ppm	Sodium (Na)	<1 ppm
Cadmium (Cd)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Calcium (Ca)	<0.5 ppm	Titanium (Ti)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Total phosphorus (P)	<0.5 ppm
Cobalt (Co)	<0.02 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<0.2 ppm	Vanadium (V)	<0.02 ppm
Lead (Pb)	<0.05 ppm	Zinc (Zn)	<0.1 ppm
Lithium (Li)	<0.02 ppm	Pentane (mixed isomers)	<1%

Lot analysis on the label.

iso-Pentane NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/1030/08
2.5 ℓ	Glass bottle	P/1030/17
5 ℓ	Mild steel drum	P/1030/MS21

C_5H_{12}
CAS: 78-78-4
MW: 72.15
Density at 20°C: 0.620
Boiling point: 30°C
Melting point: -160°C
Flash point: -51°C
ADR/RID: 3, I
EINECS: 201-142-8
UN: 1265
GHS: Flam. Liq. 1, STOT SE
3, Asp. Tox. 1, Aquatic Chronic 2
H224, H336, H411, H304,
EUH066
P261, P301+P310, P331,
P273, P210, P243

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.002 meq/g	Magnesium (Mg)	<2 ppm
Colour	<10 APHA	Potassium (K)	<2 ppm
Water	<0.05%	Sodium (Na)	<10 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<20 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm		

Pentane (mixed isomers) NEW PACK.
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	P/1006/15
2.5 ℓ	Glass bottle	P/1006/17
10 ℓ	Returnable Drum	P/1006/10RSS
25 ℓ	Returnable Drum	P/1006/25RSS
30 ℓ	Returnable Drum	P/1006/30RSS

C_5H_{12}
CAS: 109-66-0
MW: 72.15
Density at 20°C: 0.626
Boiling point: 36°C
Melting point: -130°C
Flash point: -49°C
ADR/RID: 3, II
EINECS: 203-692-4
UN: 1265
GHS: Flam. Liq. 2, STOT SE
3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H336, H411,
EUH066
P261, P301+P310, P331,
P273, P210, P240

Assay (CG): >95%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Residue after evaporation	<2 ppm
Water	<0.01%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.25 A.U.	230 nm	<0.01 A.U.
210 nm	<0.2 A.U.	240 nm	<0.005 A.U.
220 nm	<0.05 A.U.	250 nm	<0.005 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Pentane, (95% n-Pentane approx.) — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	P/1024/15
2.5 ℓ	Glass bottle	P/1024/17

C_5H_{12}
CAS: 109-66-0
MW: 72.15
Density at 20°C: 0.626
Boiling point: 36°C
Melting point: -130°C
Flash point: -49°C
ADR/RID: 3, II
EINECS: 203-692-4
UN: 1265
GHS: Flam. Liq. 2, STOT SE
3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H336, H411,
EUH066
P261, P301+P310, P331,
P273, P210, P240

Assay (CG): >95%

Guaranteed analysis

Water	<0.02%	GC (ECD) Analysis	Pass
Residue after evaporation	<2 ppm	GC (FID) Analysis	Pass
GC (NPD) analysis	Pass		

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachlo-réoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile: (1) 50°C, 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

n-Pentane — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	P/1021/15
2.5 ℓ	Glass bottle	P/1021/17
2.5 ℓ	Coated Glass bottle	P/1021/PB17

C_5H_{12}
CAS: 109-66-0
MW: 72.15
Density at 20°C: 0.626
Boiling point: 36°C
Melting point: -130°C
Flash point: -49°C
ADR/RID: 3, II

EINECS: 203-692-4
UN: 1265
GHS: Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H336, H411, EUH066
P261, P301+P310, P331, P273, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Magnesium (Mg)	<0.1 ppm
Colour	<10 APHA	Potassium (K)	<0.2 ppm
Water	<0.01%	Sodium (Na)	<1 ppm
Residue after evaporation	<20 ppm	Total phosphorus (P)	<0.5 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.02 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Lead (Pb)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

n-Pentane NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/1020/08
2.5 ℓ	Glass bottle	P/1020/17
2.5 ℓ	Coated Glass bottle	P/1020/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	P/1020/21
25 ℓ	Metal drum	P/1020/25

C_5H_{12}
CAS: 109-66-0
MW: 72.15
Density at 20°C: 0.626
Boiling point: 36°C
Melting point: -130°C
Flash point: -49°C
ADR/RID: 3, II

EINECS: 203-692-4
UN: 1265
GHS: Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H304, H336, H411, EUH066
P261, P301+P310, P331, P273, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Magnesium (Mg)	<2 ppm
Colour	<10 APHA	Potassium (K)	<2 ppm
Water	<0.05%	Sodium (Na)	<10 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<20 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm		

Pentanedial *See Glutaraldehyde 50% solution, page 136*

1-Pentanesulfonic acid sodium salt — Certified
for Ion pair chromatography in electrochemical detection

packaging		Mfr. No
25 g	Plastic jar	P/1039/46

$C_5H_{11}NaO_3S$
CAS: 22767-49-3
MW: 174.21
Melting point: 300°C
EINECS: 245-208-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H315
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Electrochemical test ..... Pass

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.25 M)	: <0.1 A.U.	240 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
210 nm (sol. aqu. 0.25 M)	: <0.05 A.U.	250 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
220 nm (sol. aqu. 0.25 M)	: <0.03 A.U.	260 nm (sol. aqu. 0.25 M)	: <0.02 A.U.

tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.

1-Pentanesulfonic acid sodium salt
for Ion pair chromatography

packaging		Mfr. No
25 g	Plastic jar	P/1038/46
100 g	Plastic jar	P/1038/48

$C_5H_{11}NaO_3S$
CAS: 22767-49-3
MW: 174.21
Melting point: 300°C
EINECS: 245-208-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H315
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm (sol. aqu. 0.25 M)	: <0.1 A.U.	240 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
210 nm (sol. aqu. 0.25 M)	: <0.05 A.U.	250 nm (sol. aqu. 0.25 M)	: <0.02 A.U.
220 nm (sol. aqu. 0.25 M)	: <0.03 A.U.	260 nm (sol. aqu. 0.25 M)	: <0.02 A.U.

Lot analysis on the label.

1-Pentanesulfonic acid sodium salt solution 0.1M
for Ion pair chromatography

packaging		Mfr. No
250 mℓ	Glass bottle	P/1036/07

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.04 A.U.	240 nm	<0.008 A.U.
210 nm	<0.02 A.U.	250 nm	<0.008 A.U.
220 nm	<0.016 A.U.	260 nm	<0.008 A.U.
230 nm	<0.012 A.U.		

Lot analysis on the label.

Pentan-1-ol — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/1041/PB08
2.5 ℓ	Coated Glass bottle	P/1041/PB17

$C_5H_{12}O$
CAS: 71-41-0
MW: 88.15
Density at 20°C: 0.811
Boiling point: 137 to 139°C
Melting point: -78°C
Flash point: 49°C
ADR/RID: 3, III

EINECS: 200-752-1
UN: 1105
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, STOT SE 3
H226, H315, H335, H332
P261, P304+P340, P302+P352, P210

Assay (CG): >98.5%

Guaranteed analysis

Acidity / Alkalinity	<0.002 meq/g	Manganese (Mn)	<0.02 ppm
Colour	<10 APHA	Molybdenum (Mo)	<0.02 ppm
Water	<0.2%	Nickel (Ni)	<0.05 ppm
Residue after evaporation	<10 ppm	Potassium (K)	<0.1 ppm
Aluminium (Al)	<0.05 ppm	Sodium (Na)	<1 ppm
Barium (Ba)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Calcium (Ca)	<0.5 ppm	Total phosphorus (P)	<0.2 ppm
Chromium (Cr)	<0.05 ppm	Total silicon (Si)	<0.05 ppm
Cobalt (Co)	<0.02 ppm	Total sulphur (S)	<0.5 ppm
Copper (Cu)	<0.05 ppm	Vanadium (V)	<0.02 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.5 ppm
Lead (Pb)	<0.05 ppm	iso-Amyl acetate	<0.1%
Lithium (Li)	<0.02 ppm	iso-Amyl alcohol	<0.5%
Magnesium (Mg)	<0.1 ppm		

Lot analysis on the label.

1-Pentyl acetate *See n-Amyl acetate, page 47*

Pentyl alcohol *See Pentan-1-ol, page 226*

Pentan-1-ol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/1040/PB08
2.5 ℓ	Coated Glass bottle	P/1040/PB17

$C_5H_{12}O$
CAS: 71-41-0
MW: 88.15
Density at 20°C: 0.811
Boiling point: 137 to 139°C
Melting point: -78°C
Flash point: 49°C
ADR/RID: 3, III

EINECS: 200-752-1
UN: 1105
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, STOT SE 3
H226, H315, H335, H332
P261, P304+P340, P302+P352, P210

Assay (CG): >98%

Guaranteed analysis

Acidity / Alkalinity	<0.005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<10 APHA	Potassium (K)	<2 ppm
Water	<0.3%	Sodium (Na)	<10 ppm
Residue after evaporation	<100 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm		

Pentan-2-ol (sec-Amyl alcohol) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/1080/PB08

$C_5H_{12}O$
CAS: 6032-29-7
MW: 88.15
Density at 20°C: 0.812
Boiling point: 118 to 119°C
Melting point: -50°C
Flash point: 34°C
ADR/RID: 3, III

EINECS: 227-907-6
UN: 1105
GHS: Flam. Liq. 3, Acute Tox. 4, STOT SE 3
H226, H332, H335, H302, EUH066
P261, P301+P312, P304+P340, P210

Assay (CG): >98%

Pentan-3-one
technical

packaging		Mfr. No
250 mℓ	Glass bottle	P/1100/07

$C_5H_{10}O$
CAS: 96-22-0
MW: 86.13
Density at 20°C: 0.815
Boiling point: 100 to 102°C
Melting point: -40°C
Flash point: 7°C

ADR/RID: 3, II
EINECS: 202-490-3
UN: 1156
GHS: Flam. Liq. 2, STOT SE 3
H225, H336, H335, EUH066
P261, P210, P240

Guaranteed analysis
Complies with standard IR spectrum: Pass

Diethyl ketone

Pepsin powder — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	P/1120/46
100 g	Plastic jar	P/1120/48
500 g	Plastic jar	P/1120/53

CAS: 9001-75-6
EINECS: 232-629-3
GHS: Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, STOT SE 3

H315, H319, H335, H334
P304+P341, P342+P311, P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Peptone
pure, For bacteriological work

packaging		Mfr. No
100 g	Plastic jar	P/1160/48
250 g	Plastic jar	P/1160/50

CAS: 73049-73-7

Guaranteed analysis
Complies with standard IR spectrum: Pass

Perchloric acid 65-71% NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
250 mℓ	Pre-cleaned Teflon FEP bottle	A469-250
500 mℓ	Pre-cleaned Teflon FEP bottle	A469-500
1 ℓ	Pre-cleaned Teflon FEP bottle	A469-1

$HClO_4$
CAS: 7601-90-3
MW: 100.46
Density at 20°C: 1.66
Boiling point: 203°C
Melting point: -18°C
Flash point: 113°C
ADR/RID: 5.1, 8, I

EINECS: 231-512-4
UN: 1873
GHS: Ox. Liq. 1, Skin Corr. 1A, Eye Dam. 1
H271, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: 65-71%

Guaranteed analysis

Aluminium (Al)	<100 ppt	Nickel (Ni)	<100 ppt
Antimony (Sb)	<100 ppt	Niobium (Nb)	<10 ppt
Arsenic (As)	<100 ppt	Palladium (Pd)	<10 ppt
Barium (Ba)	<100 ppt	Platinum (Pt)	<100 ppt
Beryllium (Be)	<100 ppt	Potassium (K)	<100 ppt
Bismuth (Bi)	<10 ppt	Praseodymium (Pr)	<10 ppt
Cadmium (Cd)	<10 ppt	Rhodium (Rh)	<10 ppt
Calcium (Ca)	<100 ppt	Rubidium (Rb)	<10 ppt
Cerium (Ce)	<10 ppt	Samarium (Sm)	<10 ppt
Cesium (Cs)	<10 ppt	Scandium (Sc)	<100 ppt
Cobalt (Co)	<100 ppt	Silver (Ag)	<100 ppt
Copper (Cu)	<100 ppt	Sodium (Na)	<100 ppt
Dysprosium (Dy)	<10 ppt	Strontium (Sr)	<100 ppt
Erbium (Er)	<10 ppt	Tantalum (Ta)	<30 ppt
Europium (Eu)	<10 ppt	Tellurium (Te)	<10 ppt
Gadolinium (Gd)	<10 ppt	Terbium (Tb)	<10 ppt
Gallium (Ga)	<10 ppt	Thallium (Tl)	<100 ppt
Hafnium (Hf)	<10 ppt	Thorium (Th)	<10 ppt
Holmium (Ho)	<10 ppt	Thulium (Tm)	<10 ppt
Indium (In)	<10 ppt	Tin (Sn)	<100 ppt
Iron (Fe)	<100 ppt	Titanium (Ti)	<100 ppt
Lanthanum (La)	<10 ppt	Tungsten (W)	<20 ppt
Lead (Pb)	<10 ppt	Uranium (U)	<10 ppt
Lithium (Li)	<100 ppt	Vanadium (V)	<100 ppt
Lutetium (Lu)	<10 ppt	Ytterbium (Yb)	<10 ppt
Magnesium (Mg)	<100 ppt	Yttrium (Y)	<10 ppt
Manganese (Mn)	<100 ppt	Zinc (Zn)	<100 ppt
Molybdenum (Mo)	<100 ppt	Zirconium (Zr)	<100 ppt
Neodymium (Nd)	<10 ppt		

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Perchloric acid 65-71% NEW — Trace Metal
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE plastic bottle	A511-P500
500 mℓ	Coated Glass bottle	P/1292/PB08
1 ℓ	HDPE plastic bottle	A511-P1
1 ℓ	Coated Glass bottle	P/1292/PB15
2.5 ℓ	HDPE plastic bottle	A511-P212

$HClO_4$
CAS: 7601-90-3
MW: 100.46 g/mol
Density at 20°C: 1.66°C
Boiling point: 203°C
Melting point: -18°C
Flash point: 113°C
ADR/RID: 5.1, 8, I

EINECS: 231-512-4
UN: 1873
GHS: Ox. Liq. 1, Skin Corr. 1A, Eye Dam. 1
H271, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: 65-71%

Guaranteed analysis

Colour	<10 APHA	Cerium (Ce)	<0.5 ppb
Aluminium (Al)	<1 ppb	Cesium (Cs)	<0.5 ppb
Antimony (Sb)	<0.5 ppb	Cobalt (Co)	<0.5 ppb
Arsenic (As)	<0.5 ppb	Copper (Cu)	<0.5 ppb
Barium (Ba)	<1 ppb	Dysprosium (Dy)	<0.5 ppb
Beryllium (Be)	<0.5 ppb	Erbium (Er)	<0.5 ppb
Bismuth (Bi)	<0.5 ppb	Europium (Eu)	<0.5 ppb
Cadmium (Cd)	<1 ppb	Gadolinium (Gd)	<0.5 ppb
Calcium (Ca)	<1 ppb		
Gallium (Ga)	<0.5 ppb	Rubidium (Rb)	<0.5 ppb
Hafnium (Hf)	<0.5 ppb	Samarium (Sm)	<0.5 ppb
Holmium (Ho)	<0.5 ppb	Scandium (Sc)	<0.5 ppb
Indium (In)	<0.5 ppb	Silver (Ag)	<1 ppb
Iron (Fe)	<1 ppb	Sodium (Na)	<1 ppb
Lanthanum (La)	<0.5 ppb	Strontium (Sr)	<0.5 ppb
Lead (Pb)	<1 ppb	Tantalum (Ta)	<1 ppb
Lithium (Li)	<0.5 ppb	Tellurium (Te)	<0.5 ppb
Lutetium (Lu)	<0.5 ppb	Terbium (Tb)	<0.5 ppb
Magnesium (Mg)	<1 ppb	Thallium (Tl)	<0.5 ppb
Manganese (Mn)	<1 ppb	Thorium (Th)	<1 ppb
Molybdenum (Mo)	<0.5 ppb	Thulium (Tm)	<0.5 ppb
Neodymium (Nd)	<0.5 ppb	Tin (Sn)	<1 ppb
Nickel (Ni)	<1 ppb	Titanium (Ti)	<1 ppb
Niobium (Nb)	<10 ppb	Tungsten (W)	<0.5 ppb
Palladium (Pd)	<0.5 ppb	Uranium (U)	<0.5 ppb
Platinum (Pt)	<0.5 ppb	Vanadium (V)	<0.5 ppb
Potassium (K)	<1 ppb	Ytterbium (Yb)	<0.5 ppb
Praseodymium (Pr)	<0.5 ppb	Yttrium (Y)	<0.5 ppb
Rhodium (Rh)	<0.5 ppb	Zinc (Zn)	<0.5 ppb

Bottled in class 10 cleanroom conditions.
Lot analysis on the label.

Perchloric acid 70% d=1.67 — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/1280/PB08
1 ℓ	Coated Glass bottle	P/1280/PB15
2.5 ℓ	Coated Glass bottle	P/1280/PB17

$HClO_4$
CAS: 7601-90-3
MW: 100.46
Density at 20°C: 1.66
Boiling point: 203°C
Melting point: -18°C
Flash point: 113°C
ADR/RID: 5.1, 8, I

EINECS: 231-512-4
UN: 1873
GHS: Ox. Liq. 1, Skin Corr. 1A, Eye Dam. 1
H271, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: 68 to 72%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.2 ppm
Calcium (Ca)	<1 ppm	Sodium (Na)	<2 ppm
Chlorate	<0.001%	Total chloride (Cl)	<0.0001%
Chromium (Cr)	<0.5 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<0.2 ppm	Total phosphorus (P)	<2 ppm
Iron (Fe)	<1 ppm	Total silicon (Si)	<1 ppm
Lead (Pb)	<0.2 ppm	Total sulphur (S)	<5 ppm
Magnesium (Mg)	<0.5 ppm	Zinc (Zn)	<0.5 ppm
Nickel (Ni)	<0.1 ppm		

Typical analysis

Aluminium (Al)	<0.5 ppm	Manganese (Mn)	<0.02 ppm
Arsenic (As)	<0.2 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.05 ppm	Silver (Ag)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Perchloric acid 70% is equivalent to a strength of 11.6 M (11.6 N).
Lot analysis on the label.

Perchloric acid 60% — Certified
for HPLC

packaging		Mfr. No
100 mℓ	Coated Glass bottle	P/1290/PB05

$HClO_4$
CAS: 7601-90-3
MW: 100.46
Density at 20°C: 1.66
Boiling point: 203°C
Melting point: -18°C
Flash point: 113°C
ADR/RID: 5.1, 8, I

EINECS: 231-512-4
UN: 1873
GHS: Ox. Liq. 1, Skin Corr. 1A, Eye Dam. 1
H271, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: 60 to 62%

Guaranteed analysis

Residue after evaporation	<30 ppm	Lead (Pb)	<0.5 ppm
Iron (Fe)	<1 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.01 A.U.

Perchloric acid 60% is equivalent to a strength of 9.2 M (9.2 N).
Lot analysis on the label.
Filtered to 0.2 µm.

Perchloric acid 60% d=1.53 — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/1240/PB08
2.5 ℓ	Coated Glass bottle	P/1240/PB17
25 ℓ	Glass bottle	P/1240/25

$HClO_4$
CAS: 7601-90-3
MW: 100.46
Density at 20°C: 1.66
Boiling point: 203°C
Melting point: -18°C
Flash point: 113°C
ADR/RID: 5.1, 8, I

EINECS: 231-512-4
UN: 1873
GHS: Ox. Liq. 1, Skin Corr. 1A, Eye Dam. 1
H271, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: 60 to 62%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.5 ppm
Calcium (Ca)	<1 ppm	Sodium (Na)	<5 ppm
Chlorate	<0.002%	Total chloride (Cl)	<0.0005%
Chromium (Cr)	<0.2 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<0.2 ppm	Total phosphorus (P)	<2 ppm
Iron (Fe)	<1 ppm	Total silicon (Si)	<1 ppm
Lead (Pb)	<0.2 ppm	Total sulphur (S)	<5 ppm
Magnesium (Mg)	<0.5 ppm	Zinc (Zn)	<0.1 ppm
Nickel (Ni)	<0.1 ppm		

Typical analysis

Aluminium (Al)	<0.5 ppm	Manganese (Mn)	<0.02 ppm
Arsenic (As)	<0.1 ppm	Molybdenum (Mo)	<0.05 ppm
Barium (Ba)	<0.05 ppm	Silver (Ag)	<0.02 ppm
Cadmium (Cd)	<0.05 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Perchloric acid 60% is equivalent to a strength of 9.2 M (9.2 N).
Lot analysis on the label.

Perchloric acid 60% — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/1200/PB08
2.5 ℓ	Coated Glass bottle	P/1200/PB17

$HClO_4$
CAS: 7601-90-3
MW: 100.46
Density at 20°C: 1.66
Boiling point: 203°C
Melting point: -18°C
Flash point: 113°C
ADR/RID: 5.1, 8, I

EINECS: 231-512-4
UN: 1873
GHS: Ox. Liq. 1, Skin Corr. 1A, Eye Dam. 1
H271, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: >60%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Potassium (K)	<5 ppm
Chromium (Cr)	<2 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<5 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<50 ppm
Nickel (Ni)	<2 ppm	Zinc (Zn)	<5 ppm

Perchloric acid 60% is equivalent to a strength of 9.2 M (9.2 N).

Perchloric acid solution 0.1M (0.1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/5820/PB15
2.5 ℓ	HDPE Plastic bottle	J/5820/PB17

CAS: 7601-90-3
Flash point: -40°C
ADR/RID: 8, 3, II
EINECS: 231-512-4
UN: 2920
GHS: Flam. Liq. 3, Skin Corr.

1A, Eye Dam. 1
H226, H314
P280, P301+P330+P331, P305+P351+P338, P310, P302+P352, P304+P340, P210

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Perchloroethylene
See Tetrachloroethylene, page 344

Periodic acid — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	P/1322/48

H_5IO_6
CAS: 10450-60-9
MW: 227.94
Density at 20°C: 1.4
Melting point: 122°C
ADR/RID: 5.1, 8, II

EINECS: 233-937-0
UN: 3085
GHS: Ox. Sol. 2, Skin Corr. 1B
H272, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: >99.5%

Guaranteed analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<2 ppm	Potassium (K)	<20 ppm
Calcium (Ca)	<10 ppm	Propan--1-ol	<1 ppm
Chromium (Cr)	<5 ppm	Sodium (Na)	<50 ppm
Cobalt (Co)	<2 ppm	Strontium (Sr)	<2 ppm
Copper (Cu)	<5 ppm	Titanium (Ti)	<1 ppm
Iodide (I)	<0.001%	Total nitrogen (N)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<10 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

Petroleum ether 30-40°C NEW PACK. — Certified AR
for analysis, n-hexane <0.1%

packaging		Mfr. No
1 ℓ	Glass bottle	P/1720/15
2.5 ℓ	Glass bottle	P/1720/17
5 ℓ	Mild steel drum	P/1720/MS21

CAS: 64742-49-0
Density at 20°C: 0.62
Boiling point: 30 to 40°C
Melting point: -130°C
Flash point: -49°C
ADR/RID: 3, I
EINECS: 265-151-9

UN: 1268
GHS: Flam. Liq. 1, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H224, H304, H336, H411, EUH066
P210, P273, P301+P310, P331, P261, P271

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Lead (Pb)	<0.05 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.05 ppm
Water	<0.01%	Potassium (K)	<0.2 ppm
Residue after evaporation	<10 ppm	Sodium (Na)	<0.5 ppm
Bromine number	<2	Total phosphorus (P)	<0.5 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<10 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.1 ppm

Typical analysis

Aluminium (Al)	<0.1 ppm	Molybdenum (Mo)	<0.05 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Selenium (Se)	<0.05 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Tin (Sn)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Titanium (Ti)	<0.01 ppm
Manganese (Mn)	<0.02 ppm	Vanadium (V)	<0.01 ppm

Petroleum ether 30-40°C NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/1400/08
2.5 ℓ	Glass bottle	P/1400/17
5 ℓ	Mild steel drum	P/1400/MS21
25 ℓ	Metal drum	P/1400/25

CAS: 64742-49-0
Density at 20°C: 0.62
Boiling point: 30 to 40°C
Melting point: -130°C
Flash point: -49°C
ADR/RID: 3, I
EINECS: 265-151-9

UN: 1268
GHS: Flam. Liq. 1, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H224, H304, H336, H411, EUH066
P210, P273, P301+P310, P331, P261, P271

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.03%	Potassium (K)	<2 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<5 ppm
Bromine number	<5	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Petroleum ether 40-60°C — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	P/2092/15
2.5 ℓ	Glass bottle	P/2092/17

CAS: 64742-49-0
Density at 20°C: 0.648
Boiling point: 36 to 70°C
Melting point: -40°C
Flash point: -45°C
ADR/RID: 3, II
EINECS: 265-151-9

UN: 1268
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H315, H411, H304, H336
P210, P240, P260, P262, P273, P301+P330+P331

Guaranteed analysis

Water	<0.02%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

Petroleum ether 40-60°C
extra dry, for synthesis

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/2082/17

CAS: 64742-49-0
Density at 20°C: 0.648
Boiling point: 36 to 70°C
Melting point: -40°C
Flash point: -45°C
ADR/RID: 3, II
EINECS: 265-151-9

UN: 1268
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H315, H411, H304, H336
P210, P240, P260, P262, P273, P301+P330+P331

Guaranteed analysis

Water	<0.01%	Residue after evaporation	<2 ppm

Petroleum ether 40-60°C NEW PACK. — Certified AR
for analysis, n-hexane <2%

packaging		Mfr. No
1 ℓ	Glass bottle	P/1760/15
2.5 ℓ	Glass bottle	P/1760/17
2.5 ℓ	Coated Glass bottle	P/1760/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	P/1760/21
25 ℓ	Metal drum	P/1760/25
200 ℓ	Metal drum	P/1760/27

CAS: 64742-49-0
Density at 20°C: 0.648
Boiling point: 36 to 36 to 70°C
Melting point: -40°C
Flash point: -45°C
ADR/RID: 3, II
EINECS: 265-151-9

UN: 1268
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H315, H411, H304, H336
P210, P240, P260, P262, P273, P301+P330+P331

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Magnesium (Mg)	<0.05 ppm
Colour	<10 APHA	Potassium (K)	<0.2 ppm
Water	<0.01%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<10 ppm	Tin (Sn)	<0.02 ppm
Bromine number	<2	Total phosphorus (P)	<0.5 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<10 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Lead (Pb)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Selenium (Se)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.01 ppm
Manganese (Mn)	<0.05 ppm		

Petroleum ether 40-60°C — Certified AR
for analysis, low in aromatic

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/2000/17

CAS: 64742-49-0
Density at 20°C: 0.648
Boiling point: 36 to 70°C
Melting point: -40°C
Flash point: -45°C
ADR/RID: 3, II
EINECS: 265-151-9

UN: 1268
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H315, H411, H304, H336
P210, P240, P260, P262, P273, P301+P330+P331

Guaranteed analysis

Acidity / Alkalinity	<0.00003 meq/g	Residue after evaporation	<10 ppm
Water	<0.02%	Total sulphur (S)	<5 ppm

Petroleum ether 40-60°C NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/1440/08
1 ℓ	Glass bottle	P/1440/15
2.5 ℓ	Glass bottle	P/1440/17
2.5 ℓ	Coated Glass bottle	P/1440/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	P/1440/21
25 ℓ	Metal drum	P/1440/25
200 ℓ	Metal drum	P/1440/27

CAS: 64742-49-0
Density at 20°C: 0.648
Boiling point: 36 to 70°C
Melting point: -40°C
Flash point: -45°C
ADR/RID: 3, II
EINECS: 265-151-9

UN: 1268
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2
H225, H315, H411, H304, H336
P210, P240, P260, P262, P273, P301+P330+P331

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.03%	Potassium (K)	<2 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<5 ppm
Bromine number	<5	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Petroleum ether 60-80°C — Distol
for residue and pesticide analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/2094/17

CAS: 64742-49-0
Density at 20°C: 0.670
Boiling point: 60 to 80°C
Melting point: -40°C
Flash point: -30°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H336, H315, H411, H304, H373, H361f
P201, P308+P313, P281, P260, P273, P210

Guaranteed analysis

Water	<0.02%	GC (FID) Analysis	Conform
Residue after evaporation	<2 ppm	GC (NPD) analysis	Conform
GC (ECD) Analysis	Conform		

Petroleum ether 60-80°C — Certified AR
for analysis, n-hexane <50%

packaging		Mfr. No
1 ℓ	Glass bottle	P/1800/15
2.5 ℓ	Glass bottle	P/1800/17
2.5 ℓ	Coated Glass bottle	P/1800/PB17
25 ℓ	Metal drum	P/1800/25
200 ℓ	Metal drum	P/1800/27

CAS: 64742-49-0
Density at 20°C: 0.670
Boiling point: 60 to 80°C
Melting point: -40°C
Flash point: -30°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H336, H315, H411, H304, H373, H361f
P201, P308+P313, P281, P260, P273, P210

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Magnesium (Mg)	<0.05 ppm
Colour	<10 APHA	Potassium (K)	<0.2 ppm
Water	<0.01%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<10 ppm	Tin (Sn)	<0.02 ppm
Bromine number	<2	Total phosphorus (P)	<0.5 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<10 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Lead (Pb)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Selenium (Se)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.01 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.01 ppm
Manganese (Mn)	<0.05 ppm		

Petroleum ether 60-80°C — Certified AR
for analysis, low in aromatic

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/2040/17

CAS: 64742-49-0
Density at 20°C: 0.670
Boiling point: 60 to 80°C
Melting point: -40°C
Flash point: -30°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H336, H315, H411, H304, H373, H361f
P201, P308+P313, P281, P260, P273, P210

Guaranteed analysis

Acidity / Alkalinity	<0.00003 meq/g	Total sulphur (S)	<5 ppm
Water	<0.02%	Aromatic Hydrocarbons	<0.05%
Residue after evaporation	<10 ppm		

Petroleum ether 60-80°C
Extra Dry, for synthesis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/2084/PB08
2.5 ℓ	Glass bottle	P/2084/17

CAS: 64742-49-0
Density at 20°C: 0.670
Boiling point: 60 to 80°C
Melting point: -40°C
Flash point: -30°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H336, H315, H411, H304, H373, H361f
P201, P308+P313, P281, P260, P273, P210

Guaranteed analysis

Water	<0.01%	Residue after evaporation	<2 ppm

Petroleum ether 60-80°C NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/1480/08
1 ℓ	Glass bottle	P/1480/15
2.5 ℓ	Glass bottle	P/1480/17
5 ℓ	Fluorinated HDPE Plastic bottle	P/1480/21
25 ℓ	Metal drum	P/1480/25
200 ℓ	Metal drum	P/1480/27

CAS: 64742-49-0
Density at 20°C: 0.670
Boiling point: 60 to 80°C
Melting point: -40°C
Flash point: -30°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H336, H315, H411, H304, H373, H361f
P201, P308+P313, P281, P260, P273, P210

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.03%	Potassium (K)	<2 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<5 ppm
Bromine number	<5	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Petroleum ether 80-100°C — Certified AR
for analysis, n-hexane <20%

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/1840/17
25 ℓ	Metal drum	P/1840/25
200 ℓ	Metal drum	P/1840/27

CAS: 64742-49-0
Density at 20°C: 0.700
Boiling point: 80 to 100°C
Melting point: -40°C
Flash point: -20°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H336, H315, H410
P201, P308+P313, P301+P310, P331, P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Magnesium (Mg)	<0.05 ppm
Colour	<10 APHA	Potassium (K)	<0.2 ppm
Water	<0.01%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<10 ppm	Total phosphorus (P)	<0.5 ppm
Bromine number	<2	Total silicon (Si)	<0.05 ppm
Calcium (Ca)	<0.5 ppm	Total sulphur (S)	<10 ppm
Copper (Cu)	<0.05 ppm	Vanadium (V)	<0.01 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Lead (Pb)	<0.05 ppm		

Typical analysis

Aluminium (Al)	<0.1 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Selenium (Se)	<0.05 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Tin (Sn)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Titanium (Ti)	<0.01 ppm
Manganese (Mn)	<0.05 ppm		

Lot analysis on the label.

Petroleum ether 80-100°C NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/1520/08
2.5 ℓ	Glass bottle	P/1520/17
5 ℓ	Fluorinated HDPE Plastic bottle	P/1520/21
25 ℓ	Metal drum	P/1520/25

CAS: 64742-49-0
Density at 20°C: 0.700
Boiling point: 80 to 100°C
Melting point: -40°C
Flash point: -20°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H336, H315, H410
P201, P308+P313, P301+P310, P331, P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.03%	Potassium (K)	<2 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<5 ppm
Bromine number	<5	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Petroleum ether 100-120°C — Certified AR
for analysis, n-hexane <2%

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/1880/17
25 ℓ	Metal drum	P/1880/25
200 ℓ	Metal drum	P/1880/27

CAS: 64742-49-0
Density at 20°C: 0.735
Boiling point: 100 to 120°C
Melting point: -30°C
Flash point: 2°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H336, H315, H410
P201, P308+P313, P301+P310, P331, P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Lead (Pb)	<0.05 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.05 ppm
Water	<0.01%	Potassium (K)	<0.2 ppm
Residue after evaporation	<10 ppm	Sodium (Na)	<0.5 ppm
Bromine number	<2	Total phosphorus (P)	<0.5 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<10 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.1 ppm

Typical analysis

Aluminium (Al)	<0.1 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Selenium (Se)	<0.05 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.02 ppm	Tin (Sn)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Titanium (Ti)	<0.01 ppm
Manganese (Mn)	<0.05 ppm	Vanadium (V)	<0.01 ppm

Lot analysis on the label.

Petroleum ether 100-120°C — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/1560/08
1 ℓ	Glass bottle	P/1560/15
2.5 ℓ	Glass bottle	P/1560/17
25 ℓ	Metal drum	P/1560/25

CAS: 64742-49-0
Density at 20°C: 0.735
Boiling point: 100 to 120°C
Melting point: -30°C
Flash point: 2°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H336, H315, H410
P201, P308+P313, P301+P310, P331, P210, P240

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.03%	Potassium (K)	<2 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<5 ppm
Bromine number	<5	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Petroleum ether 100-120°C
technical, water determination in petroleum products

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	P/2100/PB17

CAS: 64742-49-0
Density at 20°C: 0.735
Boiling point: 100 to 120°C
Flash point: 2°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H336, H315, H410
P201, P308+P313, P301+P310, P331, P210, P240

Guaranteed analysis

Residue after evaporation	<20 ppm

Petroleum ether > 120°C — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/1600/17

CAS: 64742-49-0
Density at 20°C: 0.755
Boiling point: 120°C
Melting point: -40°C
Flash point: 8°C
ADR/RID: 3, II
EINECS: 265-151-9
UN: 1268

GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H336, H315, H410
P210, P240, P260, P262, P273, P301+P330+P331

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.03%	Potassium (K)	<2 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<5 ppm
Bromine number	<5	Total phosphorus (P)	<1 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<1 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Petroleum ether (petroleum spirit with <15% n-hexane)
pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	P/1360/17
25 ℓ	Metal drum	P/1360/25

CAS: 8032-32-4
Density at 20°C: 0.702
Boiling point: 80 to 110°C
Melting point: -40°C
Flash point: -20°C
ADR/RID: 3, II
EINECS: 232-453-7
UN: 1268

GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 2
H225, H315, H411, H304, H336, H373, H361f
P201, P308+P313, P281, P210, P273, P260

Reagents, Solvents & Volumetric solutions conform to the European Pharmacopeia (Eur.Ph), British (BP) & US (USP) NEW PACK. NEW

designation	EP	BP	USP	packsize	package type		Mfr. No	page
Acetic add glacial	●	●	●	500 mℓ	HDPE Plastic bottle		A/0400/PB08	15
	●	●	●	1 L	Coated Glass bottle		A/0400/PC15	15
	●	●	●	2.5 L	HDPE Plastic bottle		A/0400/PB17	15
	●	●	●		Coated Glass bottle		A/0400/PC17	15
	●	●	●	25 L	HDPE Plastic container		A/0400/25	15
	●	●	●	45 L	Plastic container		A/0400/26	15
Acetic acid glacial 99-100%	●	●	●	1 L	HDPE Plastic bottle		A/0360/PB15	15
	●	●	●	2.5 L	HDPE Plastic bottle		A/0360/PB17	15
	●	●	●	25 L	HDPE Plastic container		A/0360/25	15
Acetone	●			1 L	Glass bottle		A/0600/15	17
	●			2.5 L	Glass bottle		A/0600/17	17
	●				HDPE Plastic bottle		A/0600/PC17	17
	●			5 L	Fluorinated HDPE Plastic bottle		A/0600/21	17
	●				HDPE Plastic bottle		A/0600/PC21	17
	●			25 L	Metal drum		A/0600/25	17
	●			200 L	Metal drum		A/0600/27	17
Acetonitrile HPLC gradient grade	●			1 L	Glass bottle		A/0627/15	19
	●			2.5 L	Glass bottle		A/0627/17	19
	●				Coated Glass bottle		A/0627/PB17	19
	●			5 L	Aluminium can		A/0627/21	19
	●			10 L	Returnable Drum		A/0627/10RSS	19
	●			25 L	Returnable Drum		A/0627/25RSS	19
	●			30 L	Returnable Drum		A/0627/30RSS	19
Aluminium chloride hexahydrate	●	●	●	500 g	Plastic jar		A/1960/53	29
Ammonium chloride	●	●		500 g	Plastic jar		A/3920/53	39
	●	●		1 kg	Plastic jar		A/3920/60	39
	●	●		2 kg	Plastic jar		A/3920/61	39
	●	●		5 kg	Plastic keg		A/3920/65	39
	●	●		25 kg	Fibre Keg		A/3920/70	39
Ammonium thiocyanate solution 0.1M (0.1N)	●	●	●	1 L	HDPE Plastic bottle		J/1500/PB15	46
	●	●	●	2.5 L	HDPE Plastic bottle		J/1500/PB17	46
Benzyl alcohol	●	●	●	500 mℓ	Glass bottle		B/2550/08	57
	●	●	●	2.5 L	Coated Glass bottle		B/2550/PB17	57
Boric acid	●			500 g	Plastic jar		B/3750/53	59
	●			1 kg	Plastic jar		B/3750/60	59
	●			5 kg	Plastic keg		B/3750/65	59
Boric acid	●			500 g	Plastic jar		B/3760/53	59
	●			1 kg	Plastic jar		B/3760/60	59
	●			5 kg	Plastic keg		B/3760/65	59
	●			25 kg	Fibre Keg		B/3760/70	59
Calcium carbonate	●	●		1 kg	Plastic jar		C/1040/60	75
	●	●		3 kg	Plastic jar		C/1040/63	75
	●	●		5 kg	Plastic keg		C/1040/65	75
Calcium gluconate	●		●	500 g	Plastic jar		C/1610/53	75
Calcium lactate pentahydrate	●	●	●	500 g	Plastic jar		C/1820/53	76
	●	●	●	5 kg	Plastic keg		C/1820/65	76
Cerium(IV) sulfate solution 0.1M (0.1N)	●	●		1 L	Glass bottle		J/3000/15	81
	●	●		2.5 L	Glass bottle		J/3000/17	81
Chloral hydrate	●	●		500 g	Plastic jar		C/4280/53	83
	●	●		10 kg	Plastic keg		C/4280/68	83
Chloramine-T Sodium salt	●	●	●	250 g	Plastic jar		C/4320/50	83
	●	●	●	500 g	Plastic jar		C/4320/53	83
Citric acid, anhydrous	●	●	●	500 g	Plastic jar		C/6240/53	90
Citric acid monohydrate	●		●	500 g	Plastic jar		C/6200/53	90
	●		●		Plastic jar		C/6200/53	90
	●		●	1 kg	Plastic jar		C/6200/60	90
	●		●		Plastic jar		C/6200/60	90
	●		●	2.5 kg	Plastic jar		C/6200/62	90
	●		●		Plastic jar		C/6200/62	90
	●		●	5 kg	Plastic keg		C/6200/65	90
	●		●		Plastic keg		C/6200/65	90
	●		●	25 kg	Fibre Keg		C/6200/70	90
	●		●		Fibre Keg		C/6200/70	90

Reagents, Solvents & Volumetric solutions conform to the European Pharmacopeia (Eur.Ph), British (BP) & US (USP) NEW PACK. NEW

designation	EP	BP	USP	packsize	package type		Mfr. No	page
Diethyl ether stabilized with BHT	●			500 mℓ	Coated Glass bottle		D/2450/PB08	110
	●				Coated Glass bottle		D/2450/PB08	110
	●			1 L	Glass bottle		D/2450/15	110
	●			2.5 L	Glass bottle		D/2450/17	110
	●			5 L	Mild steel drum		D/2450/MS21	110
	●			25 L	Metal drum		D/2450/25	110
	●			200 L	Metal drum		D/2450/27	110
Ethanol absolute	●	●	●	500 mℓ	Glass bottle		E/0650DF/08	121
	●	●	●	1 L	Glass bottle		E/0650DF/15	121
	●	●	●	205 L	Metal drum		E/0650DF/28	121
	●	●	●	2.5 L	Glass bottle		E/0650DF/17	121
	●	●	●		HDPE Plastic bottle		E/0650DF/C17	121
	●	●	●	5 L	Fluorinated HDPE Plastic bottle		E/0650DF/21	121
	●	●	●	10 L	HDPE Plastic container		E/0650DF/24	121
	●	●	●	25 L	Metal drum		E/0650DF/25	121
Ethanol			●	500 mℓ	Glass bottle		E/0550/08	121
			●	1 L	Glass bottle		E/0550DF/15	121
			●	2.5 L	Glass bottle		E/0550DF/17	121
			●		Glass bottle		E/0550DF/17	121
			●	5 L	Fluorinated HDPE Plastic bottle		E/0550DF/21	121
			●	25 L	Metal drum		E/0550DF/25	121
Ethanol 96% v/v	●	●	●	2.5 L	HDPE Plastic bottle		E/0555/PC17	122
	●	●	●		Glass bottle		E/0555DF/17	122
	●	●	●	5 L	Fluorinated HDPE Plastic bottle		E/0555DF/21	122
	●	●	●	25 L	Metal drum		E/0555DF/25	122
Ethylenediaminetetraacetic acid	●	●		100 g	Plastic jar		D/0700/48	126
	●	●		250 g	Plastic jar		D/0700/50	126
	●	●		500 g	Plastic jar		D/0700/53	126
	●	●		1 kg	Plastic jar		D/0700/60	126
	●	●		10 kg	Plastic keg		D/0700/68	126
	●	●		25 kg	Fibre Keg		D/0700/70	126
Ethylenediaminetetraacetic acid disodium salt solution 0.2N	●	●		1 L	HDPE Plastic bottle		J/3700/15	127
	●	●		2.5 L	HDPE Plastic bottle		J/3700/17	127
	●	●		10 L	Bag in box		J/3700/24	127
Gelatine	●			500 g	Plastic jar		G/0150/53	134
D(+)-Glucose anhydrous	●	●	●	500 g	Plastic jar		G/0500/53	135
	●	●	●	1 kg	Plastic jar		G/0500/60	135
	●	●	●	2 kg	Plastic jar		G/0500/61	135
	●	●	●	5 kg	Plastic keg		G/0500/65	135
	●	●	●	25 kg	Fibre Keg		G/0500/70	135
D(+)-Glucose monohydrate	●	●		1 kg	Plastic jar		G/0400/60	135
	●	●		5 kg	Plastic keg		G/0400/65	135
Hydrochloric acid solution 0.1M (0.1N)	●	●		1 L	HDPE Plastic bottle		J/4350/15	150
	●	●		2.5 L	HDPE Plastic bottle		J/4350/17	150
	●	●		5 L	HDPE Plastic bottle		J/4350/21	150
	●	●		10 L	Bag in box		J/4350/24	150
Hydrochloric acid solution 1M (1N)	●	●	●	1 L	HDPE Plastic bottle		J/4320/15	151
	●	●	●	2.5 L	HDPE Plastic bottle		J/4320/17	151
	●	●	●	5 L	HDPE Plastic bottle		J/4320/21	151
	●	●	●	10 L	Bag in box		J/4320/24	151
Hydrochloric acid solution 2M (2N)	●	●		1 L	HDPE Plastic bottle		J/4315/15	151
	●	●		2.5 L	HDPE Plastic bottle		J/4315/17	151
	●	●		10 L	Bag in box		J/4315/24	151
Iodine solution 0.05M (0.1N)	●	●	●	1 L	Glass bottle		J/4410/15	161
	●	●	●	2.5 L	Glass bottle		J/4410/17	161
Iodine solution 0.5M (1N)	●	●		500 mℓ	Coated Glass bottle		J/4400/PB08	161
	●	●		1 L	Coated Glass bottle		J/4400/PB15	161
	●	●		2.5 L	Coated Glass bottle		J/4400/PB17	161
Lactic acid	●			500 mℓ	HDPE Plastic bottle		L/0150/PB08	176
	●			2.5 L	HDPE Plastic bottle		L/0150/PB17	176
Magnesium carbonate pentahydrate	●	●		500 g	Plastic jar		M/0500/53	188
	●	●		25 kg	Plastic keg		M/0500/70	188
Magnesium carbonate pentahydrate	●	●		500 g	Plastic jar		M/0450/53	188

Reagents, Solvents & Volumetric solutions conform to the European Pharmacopeia (Eur.Ph), British (BP) & US (USP) NEW PACK. NEW

designation	EP	BP	USP	packsize	package type		Mfr. No	page
Magnesium chloride hexahydrate	●	●		500 g	Plastic jar		M/0600/53	188
	●	●		1 kg	Plastic jar		M/0600/60	188
	●	●		2 kg	Plastic jar		M/0600/61	188
	●	●		5 kg	Plastic keg		M/0600/65	188
Magnesium oxide	●	●		500 g	Plastic jar		M/0850/53	189
	●	●		1 kg	Plastic keg		M/0850/60	189
Magnesium oxide	●	●	●	500 g	Plastic jar		M/0800/53	189
Magnesium stearate	●	●	●	500 g	Plastic jar		M/0955/53	189
Magnesium sulfate heptahydrate	●	●	●	1 kg	Plastic jar		M/1000/60	190
	●	●	●	2.5 kg	Plastic jar		M/1000/62	190
	●	●	●	5 kg	Plastic keg		M/1000/65	190
Mannitol	●	●		500 g	Plastic jar		M/2405/53	193
Nitric acid solution 1M (1N)	●	●	●	1 L	HDPE Plastic bottle		J/5550/PB15	218
	●	●	●	2.5 L	HDPE Plastic bottle		J/5550/PB17	218
	●	●	●	10 L	Bag in box		J/5550/24	218
Phenol detached crystals	●	●	●	500 g	Plastic jar		P/2360/53	240
	●	●	●	1 kg	Plastic jar		P/2360/60	240
	●	●	●	2 kg	Plastic jar		P/2360/61	240
	●	●	●	25 kg	Fibre Keg		P/2360/70	240
Potassium carbonate anhydrous	●			250 g	Plastic jar		P/4120/50	248
	●			500 g	Plastic jar		P/4120/53	248
	●			1 kg	Plastic jar		P/4120/60	248
	●			2.5 kg	Plastic jar		P/4120/62	248
Potassium chloride	●			500 g	Plastic jar		P/4240/53	249
	●			1 kg	Plastic jar		P/4240/60	249
	●			2.5 kg	Plastic jar		P/4240/62	249
	●			5 kg	Plastic jar		P/4240/65	249
tri-Potassium citrate	●	●	●	500 g	Plastic jar		P/4442/53	250
	●	●	●	3 kg	Plastic jar		P/4442/63	250
Potassium dichromate solution 0.0167M (0.1N)	●	●	●	1 L	Glass bottle		J/6212/15	251
	●	●	●	2.5 L	Glass bottle		J/6212/17	251
Potassium hydrogen carbonate	●	●	●	500 g	Plastic jar		P/5080/53	254
	●	●	●	2.5 kg	Plastic jar		P/5080/62	254
Potassium hydroxide	●	●		500 g	Plastic jar		P/5640/53	256
	●	●		1 kg	Plastic jar		P/5640/60	256
	●	●		5 kg	Plastic jar		P/5640/65	256
	●	●		10 kg	Plastic keg		P/5640/68	256
	●	●		25 kg	Plastic keg		P/5640/70	256
Potassium hydroxide solution 0.1M (0.1N), (in methanol)	●	●		1 L	HDPE Plastic bottle		J/6625/15	256
Potassium hydroxide solution 1M (1N)	●	●		1 L	HDPE Plastic bottle		J/6630/PB15	257
	●	●		2.5 L	HDPE Plastic bottle		J/6630/17	257
Potassium iodate 0.05M solution stabilised with 10 ppm mercury(II) chloride	●	●	●	1 L	Glass bottle		J/6690/15	258
	●	●	●	2.5 L	Glass bottle		J/6690/17	258
Potassium nitrate	●	●		250 g	Plastic jar		P/6120/50	259
	●	●		500 g	Plastic jar		P/6120/53	259
	●	●		1 kg	Plastic jar		P/6120/60	259
	●	●		5 kg	Plastic jar		P/6120/65	259
Potassium permanganate	●	●	●	250 g	Glass jar		P/6560/50	261
	●	●	●	500 g	Glass jar		P/6560/53	261
	●	●	●	5 kg	Plastic keg		P/6560/65	261
	●	●	●	25 kg	Plastic keg		P/6560/70	261
Propane-1.2-diol	●	●	●	500 mℓ	Glass bottle		P/7440/08	264
	●	●	●	2.5 L	Glass bottle		P/7440/17	264
	●	●	●	25 L	Metal drum		P/7440/25	264
	●	●	●	200 L	Metal drum		P/7440/27	264
Silver nitrate solution 0.1M (0.1N)	●	●	●	1 L	HDPE Plastic bottle		J/7330/15	277
	●	●	●	2.5 L	HDPE Plastic bottle		J/7330/17	277
	●	●	●	10 L	Bag in box		J/7330/24	277
Sodium benzoate	●	●		500 g	Plastic jar		S/2440/53	283
	●	●		1 kg	Plastic jar		S/2440/60	283
	●	●		25 kg	Plastic keg		S/2440/70	283

Reagents, Solvents & Volumetric solutions conform to the European Pharmacopeia (Eur.Ph), British (BP) & US (USP) NEW PACK. NEW

designation	EP	BP	USP	packsize	package type		Mfr. No	page
Sodium chloride 99.5%	●			500 g	Plastic jar		S/3161/53	285
	●			1 kg	Plastic jar		S/3161/60	285
	●			3 kg	Plastic jar		S/3161/63	285
	●			5 kg	Plastic jar		S/3161/65	285
	●			10 kg	Plastic keg		S/3161/68	285
	●			25 kg	Plastic keg		S/3161/70	285
Sodium chloride	●			500 g	Plastic jar		S/3160/53	286
	●			1 kg	Plastic jar		S/3160/60	286
	●			3 kg	Plastic jar		S/3160/63	286
	●			5 kg	Plastic jar		S/3160/65	286
	●			10 kg	Plastic keg		S/3160/68	286
	●			25 kg	Plastic keg		S/3160/70	286
tri-Sodium citrate dihydrate	●	●	●	500 g	Plastic jar		S/3320/53	287
	●	●	●	1 kg	Plastic jar		S/3320/60	287
	●	●	●	5 kg	Plastic keg		S/3320/65	287
	●	●	●	25 kg	Fibre Keg		S/3320/70	287
Sodium dihydrogen orthophosphate dihydrate	●	●		500 g	Plastic jar		S/3760/53	289
	●	●		1 kg	Plastic jar		S/3760/60	289
	●	●		5 kg	Plastic keg		S/3760/65	289
	●	●		25 kg	Plastic keg		S/3760/70	289
Sodium hydrogen carbonate	●			500 g	Plastic jar		S/4240/53	291
	●			1 kg	Plastic jar		S/4240/60	291
	●			3 kg	Plastic jar		S/4240/63	291
	●			5 kg	Plastic keg		S/4240/65	291
di-Sodium hydrogen orthophosphate anhydrous	●	●		500 g	Plastic jar		S/4520/53	292
	●	●		1 kg	Plastic jar		S/4520/60	292
	●	●		3 kg	Plastic jar		S/4520/63	292
	●	●		5 kg	Plastic keg		S/4520/65	292
	●	●		25 kg	Fibre Keg		S/4520/70	292
di-Sodium hydrogen orthophosphate dodecahydrate	●	●		500 g	Plastic jar		S/4400/53	293
	●	●		1 kg	Plastic jar		S/4400/60	293
	●	●		10 kg	Plastic keg		S/4400/68	293
Sodium hydroxide pellets	●	●		500 g	Plastic jar		S/4920/53	294
	●	●		1 kg	Plastic jar		S/4920/60	294
	●	●		3 kg	Plastic jar		S/4920/63	294
	●	●		5 kg	Plastic jar		S/4920/65	294
	●	●		10 kg	Plastic keg		S/4920/68	294
	●	●		25 kg	Plastic keg		S/4920/70	294
Sodium hydroxide solution 2M (2N)		●		1 L	HDPE Plastic bottle		J/7610/PB15	296
		●		2.5 L	HDPE Plastic bottle		J/7610/17	296
		●		5 L	HDPE Plastic bottle		J/7610/21	296
Sodium hydroxide solution 1M (1N)	●	●	●	1 L	HDPE Plastic bottle		J/7620/15	296
	●	●	●	2.5 L	HDPE Plastic bottle		J/7620/17	296
	●	●	●	5 L	HDPE Plastic bottle		J/7620/21	296
	●	●	●	10 L	Bag in box		J/7620/24	296
Sodium hydroxide solution 0.1M (0.1N)	●	●		1 L	HDPE Plastic bottle		J/7660/15	297
	●	●		2.5 L	HDPE Plastic bottle		J/7660/17	297
	●	●		5 L	HDPE Plastic bottle		J/7660/21	297
	●	●		10 L	Bag in box		J/7660/24	297
Sodium metabisulfite	●	●		500 g	Plastic jar		S/5240/53	298
	●	●		1 kg	Plastic jar		S/5240/60	298
	●	●		2.5 kg	Plastic jar		S/5240/62	298
di-Sodium tetraborate decahydrate	●			1 kg	Plastic jar		S/7010/60	305
	●			3 kg	Plastic jar		S/7010/63	305
	●			25 kg	Plastic keg		S/7010/70	305
Sodium thiosulfate solution 0.1M (0.1N)	●	●	●	1 L	HDPE Plastic bottle		J/7950/15	306
	●	●	●	2.5 L	HDPE Plastic bottle		J/7950/17	306
	●	●	●	5 L	HDPE Plastic bottle		J/7950/21	306
	●	●	●	10 L	Bag in box		J/7950/24	306
Sorbitol	●		●	500 g	Plastic jar		S/7400/53	313
	●		●	3 kg	Plastic jar		S/7400/63	313
	●		●	25 kg	Plastic keg		S/7400/70	313
Sucrose	●	●		500 g	Plastic jar		S/8600/53	334
	●	●		1 kg	Plastic jar		S/8600/60	334
	●	●		3 kg	Plastic jar		S/8600/63	334

Reagents, Solvents & Volumetric solutions conform to the European Pharmacopeia (Eur.Ph), British (BP) & US (USP) NEW PACK. NEW

designation	EP	BP	USP	packsize	package type		Mfr. No	page
Sucrose	●	●		5 kg	Plastic keg		S/8600/65	334
	●	●		10 kg	Plastic keg		S/8600/68	334
	●	●		25 kg	Fibre Keg		S/8600/70	334
Sulfuric acid solution 0.5M (1N)	●	●	●	1 L	HDPE Plastic bottle		J/8430/15	339
	●	●	●	2.5 L	HDPE Plastic bottle		J/8430/17	339
	●	●	●	10 L	Bag in box		J/8430/24	339
Sulfuric acid solution 0.05M (0.1N)	●	●		1 L	HDPE Plastic bottle		J/8460/15	340
	●	●			HDPE Plastic bottle		J/8460/15	340
	●	●		2.5 L	HDPE Plastic bottle		J/8460/17	340
	●	●			HDPE Plastic bottle		J/8460/17	340
	●	●		10 L	Bag in box		J/8460/24	340
	●	●			Bag in box		J/8460/24	340
	●	●		25 L	HDPE Drum		J/8460/25	340
(+)-Tartaric acid	●			500 g	Plastic jar		T/0250/53	340
	●			1 kg	Plastic jar		T/0250/60	340
Zinc oxide	●	●	●	500 g	Plastic jar		Z/1300/53	376
	●	●	●	1 kg	Plastic jar		Z/1300/60	376

1.10-Phenanthroline monohydrate — Certified AR
for analysis

packaging		Mfr. No
1 g	Vial	P/2200/43
5 g	Glass bottle	P/2200/44
100 g	Plastic jar	P/2200/48

$C_{12}H_8N_2.H_2O$
CAS: 5144-89-8
MW: 198.23
Melting point: 97 to 101°C
ADR/RID: 6.1, III

UN: 2811
GHS: Acute Tox. 3, Aquatic Acute 1, Aquatic Chronic 1
H301, H410
P301+P310, P273

Assay: >99.5%

Guaranteed analysis
Residue after ignition ..... <0.05% Sensitivity test (iron) ..... : Pass

Indicator Redox
Lot analysis on the label.

1.10-Phenanthroline monohydrate
pure

packaging		Mfr. No
5 g	Plastic jar	P/2190/44

$C_{12}H_8N_2.H_2O$
CAS: 5144-89-8
MW: 198.23
Melting point: 97 to 101°C
ADR/RID: 6.1, III

UN: 2811
GHS: Acute Tox. 3, Aquatic Acute 1, Aquatic Chronic 1
H301, H410
P301+P310, P273

Assay: >98%

1.10-Phenanthroline ferrous solution 0.025M
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	P/2220/PB05

$C_{36}H_{24}FeNSO_4$
CAS: 14634-91-4
MW: 692.53

Density at 20°C: 0.9999
Melting point: 0°C
EINECS: 238-676-6

Guaranteed analysis
Identity test ..... : Pass

Suitable for use in the Chemical Oxygen Demand test (DCO).

2-Phenylethanol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/2526/08

$C_8H_{10}O$
CAS: 60-12-8
MW: 122.17
Density at 20°C: 1.02
Boiling point: 219°C
Melting point: -27°C
Flash point: 102°C
ADR/RID: 6.1, III

EINECS: 200-456-2
UN: 2810
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2
H302, H311, H319, H315
P280, P302+P352,
P301+P312, P305+P351+P338

Assay (CG): >99%

2-Phenylethylamine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	P/2530/PB05

$C_8H_{11}N$
CAS: 64-04-0
MW: 121.18
Density at 20°C: 0.962
Boiling point: 194 to 195°C
Melting point: -60°C
Flash point: 90°C
ADR/RID: 8, I

EINECS: 200-574-4
UN: 2735
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H302, H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P301+P312

Assay: >98.5%

Phenol liquified 80% w/w in water — Certified AR
for analysis

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	P/2316/PB17

C_6H_6O
CAS: 108-95-2
MW: 94.11
Density at 20°C: 1.06
Boiling point: 182°C
Melting point: 40.5°C
Flash point: 79°C
ADR/RID: 6.1, II
EINECS: 203-632-7
UN: 2821

GHS: Muta. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT RE 2
H341, H311, H314, H373, H331, H301
P280, P312, P302+P350, P301+P330+P331,
P305+P351+P338, P310,
P281, P260, P304+P340

Assay: 77 to 81.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Sodium (Na)	<10 ppm
Other organic impurities test	: Pass	Total chloride (Cl)	<0.0005%
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<0.5 ppm	Total silicon (Si)	<5 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<0.5 ppm	Zinc (Zn)	<0.5 ppm
Magnesium (Mg)	<0.5 ppm	Others organic impurities	No reaction
Potassium (K)	<5 ppm		

Lot analysis on the label.

Phenol liquified 80% w/w in water
pure

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	P/2315/PB17

C_6H_6O
CAS: 108-95-2
MW: 94.11
Density at 20°C: 1.06
Boiling point: 182°C
Melting point: 40.5°C
Flash point: 79°C
ADR/RID: 6.1, II
EINECS: 203-632-7
UN: 2821

GHS: Muta. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT RE 2
H341, H311, H314, H373, H331, H301
P280, P312, P302+P350, P301+P330+P331,
P305+P351+P338, P310,
P281, P260, P304+P340

Phenol detached crystals
for analysis
Certified AR, Eur.Ph.,BP,USP

packaging		Mfr. No
500 g	Plastic jar	P/2360/53
1 kg	Plastic jar	P/2360/60
2 kg	Plastic jar	P/2360/61
25 kg	Fibre Keg	P/2360/70

C_6H_6O
CAS: 108-95-2
MW: 94.11
Density at 20°C: 1.07
Boiling point: 182°C
Melting point: 39 to 42°C
Flash point: 79°C
ADR/RID: 6.1, II
EINECS: 203-632-7
UN: 1671
GHS: Muta. 2, Acute Tox. 3, Skin Corr. 1B, STOT RE 2
H311, H331, H341, H314, H373, H301
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P301+P310, P260

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Sodium (Na)	<10 ppm
Water insoluble matter	<0.005%	Total chloride (Cl)	<0.0005%
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<0.5 ppm	Total silicon (Si)	<5 ppm
Iron (Fe)	<1 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<0.5 ppm	Zinc (Zn)	<0.5 ppm
Magnesium (Mg)	<0.5 ppm	Others organic impurities	No reaction
Potassium (K)	<5 ppm		

Lot analysis on the label.

Phenol detached crystals
specified reagents for general laboratory work- extra pure
SLR

packaging		Mfr. No
500 g	Plastic jar	P/2320/53
1 kg	Plastic jar	P/2320/60

C_6H_6O
CAS: 108-95-2
MW: 94.11
Density at 20°C: 1.07
Boiling point: 182°C
Melting point: 39 to 42°C
Flash point: 79°C
ADR/RID: 6.1, II
EINECS: 203-632-7
UN: 1671
GHS: Muta. 2, Acute Tox. 3, Skin Corr. 1B, STOT RE 2
H311, H331, H341, H314, H373, H301
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P301+P310, P260

Assay (CG): >98%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<2 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<2 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<20 ppm	Zinc (Zn)	<2 ppm

Phenol red
pure, indicator grade

packaging		Mfr. No
5 g	Glass jar	P/2420/44
25 g	Glass jar	P/2420/46
500 g	Metal can	P/2420/53

$C_{19}H_{14}O_5S$
CAS: 143-74-8
MW: 354.38
Melting point: >300°C
EINECS: 205-609-7
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis

pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

pH 6.8-8.4 yellow to red.

Phenol red solution 0.02% in water
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	P/2420L/08

CAS: 34487-61-1
Flash point: 32°C
ADR/RID: 3, III
EINECS: 252-057-8
UN: 1170
GHS: Flam. Liq. 3
H226
P280, P210, P240

Guaranteed analysis

pH colour change test ..... : Pass

pH 6.8-8.4 yellow to red.
In solution 75% water and 25% ethanol.

Phenol disulfonic acid solution 25%w/v in sulfuric acid
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/5900/PB08

Density at 20°C: 1.82
ADR/RID: 8, II
EINECS: 231-639-5
UN: 1803
GHS: Skin Corr. 1A
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Phenol-indo-2.6-dichlorophenol sodium salt
pure

packaging		Mfr. No
1 g	Glass jar	P/2390/43
5 g	Glass jar	P/2390/44

$C_{12}H_6Cl_2NNaO_2$
CAS: 620-45-1
MW: 290.08
EINECS: 210-640-4
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H302, H315, H319, H335
P280, P305+P351+P338, P301+P312, P302+P350, P304+P341

Guaranteed analysis

Complies with standard IR spectrum: Pass

Phenol-indo-2.6-dichlorophenol sodium salt
pure, tablets

packaging		Mfr. No
20 PC	Glass bottle	P/2392/82

$C_{12}H_6Cl_2NNaO_2$
CAS: 620-45-1
MW: 290.07
EINECS: 210-640-4
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H302, H315, H319, H335
P280, P305+P351+P338, P301+P312, P302+P350, P304+P341

Guaranteed analysis

Identity test ..... : Pass

Phenolphthalein solid
pure, indicator grade

packaging		Mfr. No
100 g	Plastic jar	P/2400/48
500 g	Plastic jar	P/2400/53
10 kg	Plastic keg	P/2400/68

$C_{20}H_{14}O_4$
CAS: 77-09-8
MW: 318.33
Melting point: 258 to 263°C
EINECS: 201-004-7
GHS: Carc. 1B, Muta. 2, Repr. 2
H350, H341, H361f
P201, P308+P313, P281

Guaranteed analysis

pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

pH 8.3-10.0 colourless to red.

Phenolphthalein solution 0.2% in water
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	P/2400L/08
2.5 ℓ	Glass bottle	P/2400L/17

CAS: 77-09-8
Flash point: 13°C
ADR/RID: 3, 6.1, II
EINECS: 201-004-7
UN: 1992
GHS: Flam. Liq. 2, Acute Tox. 4, STOT SE 2
H225, H302, H312, H332, H371
P210, P240, P280, P301+P312, P304+P340, P303+P361+P353, P308+P313

Guaranteed analysis

pH colour change test ..... : Pass

For non-aqueous titration.

Phenolphthalein solution 1% in water
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	P/2401L/08

CAS: 77-09-8
Density at 20°C: 0.79
Flash point: 13°C
ADR/RID: 3, 6.1, II
EINECS: 201-004-7
UN: 1992
GHS: Flam. Liq. 2, Muta. 2, Acute Tox. 4, STOT SE 2
H225, H371, H350, H341, H332, H312, H302
P280, P312, P302+P350, P308+P313, P260, P210

Guaranteed analysis

pH colour change test ..... : Pass

For non-aqueous titration.

Phenosafranine C.I. 50200
pure

packaging		Mfr. No
5 g	Glass jar	P/2450/44

$C_{18}H_{15}ClN_4$
CAS: 81-93-6
MW: 322.80
Melting point: 300°C
EINECS: 201-387-0
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H315
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Complies with standard IR spectrum: Pass

DL-beta-Phenylalanine
specified reagents for general laboratory work- extra pure
SLR

packaging		Mfr. No
100 g	Plastic jar	P/2461/48

$C_9H_{11}NO_2$
CAS: 150-30-1
MW: 165.19
Melting point: 266°C
EINECS: 205-756-7

Assay: >98.5%

Guaranteed analysis

Loss on drying	<0.5%	Iron (Fe)	<10 ppm
Residue after ignition	<0.1%	Lead (Pb)	<10 ppm
Melting Point tested	265 to 275°C		

Phenylamine See Aniline, page 48

N-Phenylanthranilic acid
pure

packaging		Mfr. No
5 g	Plastic jar	P/2460/44

$C_{13}H_{11}NO_2$
CAS: 91-40-7
EINECS: 202-066-8
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H315
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Complies with standard IR spectrum: Pass

Phenylbromide See Bromobenzene 99+ %, page 60

p-Phenylenediamine
specified reagents for general laboratory work- extra pure
SLR

packaging		Mfr. No
100 g	Glass jar	P/2520/48

$C_6H_8N_2$
CAS: 106-50-3
MW: 108.14
Boiling point: 267°C
Melting point: 139 to 141°C
Flash point: 156°C
ADR/RID: 6.1, III
EINECS: 203-404-7
UN: 1673
GHS: Acute Tox. 3, Eye Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H410, H311, H317, H331, H319, H301
P280, P312, P302+P350, P304+P340, P273, P305+P351+P338

Assay: >97%

Phenylhydrazine
specified reagents for general laboratory work- extra pure
SLR

packaging		Mfr. No
250 mℓ	Coated Glass bottle	P/2560/PB07

$C_6H_8N_2$
CAS: 100-63-0
MW: 108.15
Density at 20°C: 1.09
Boiling point: 238 to 241°C
Freezing point: >18°C
Melting point: 19°C
Flash point: 89°C
ADR/RID: 6.1, II
EINECS: 202-873-5
UN: 2572
GHS: Carc. 1B, Muta. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 1, Aquatic Acute 1
H372, H319, H341, H350, H331, H311, H315, H317, H400, H301
P280, P302+P350, P304+P340, P301+P312, P260, P273, P305+P351+P338

Phenylhydrazinium chloride
specified reagents for general laboratory work- extra pure
SLR

packaging		Mfr. No
250 g	Glass jar	P/2600/50

$C_6H_8N_2.HCl$
CAS: 59-88-1
MW: 144.61
Melting point: 250 to 254°C
ADR/RID: 6.1, II
EINECS: 200-444-7
UN: 2811
GHS: Carc. 1B, Muta. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 1, Aquatic Acute 1
H331, H301, H311, H341, H350, H317, H315, H319, H372, H400
P280, P301+P310, P302+P350, P304+P340, P305+P351+P338, P308+P313, P273

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<50 ppm	Total phosphorus (P)	<500 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<200 ppm
Potassium (K)	<500 ppm		

Phenylmethylsulphonyl fluoride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
5 g	Glass jar	P/2805/44

$C_7H_7FO_2S$
CAS: 329-98-6
MW: 174.19
Melting point: 90 to 94°C
ADR/RID: 8, 6.1, II
EINECS: 206-350-2
UN: 2923

GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H301, H314
P301+P310, P301+P330+P331, P280, P305+P351+P338, P310

Assay: >99%

Guaranteed analysis
IR Analysis ..... Conform

3-Phenyl-2-propenal
See Cinnamaldehyde, page 90

Phenyl salicylate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	P/2840/50

$C_{13}H_{10}O_3$
CAS: 118-55-8
MW: 214.22
Density at 20°C: 1.25

Boiling point: 172 to 173°C
Melting point: 40 to 44°C
Flash point: >110°C
EINECS: 204-259-2

Guaranteed analysis
Complies with standard IR spectrum: Pass

Phloroglucinol dihydrate — Certified AR
for analysis

packaging		Mfr. No
25 g	Plastic jar	P/2922/46

$C_6H_6O_3.2H_2O$
CAS: 6099-90-7
MW: 162.14
Melting point: 218 to 221°C
EINECS: 203-611-2

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Acidity / Alkalinity	<0.01 meq/g	Potassium (K)	<10 ppm
Calcium (Ca)	<5 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Phloroglucinol dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Plastic jar	P/2920/45
25 g	Plastic jar	P/2920/46

$C_6H_6O_3.2H_2O$
CAS: 6099-90-7
MW: 162.14
Melting point: 218 to 221°C
EINECS: 203-611-2

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<50 ppm		

Phosphate standard solution 1000 ppm (1 mg/mℓ)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4558/05

Manufactured to a tolerance of ± 1%.

Phosphate standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASPO492Y
500 mℓ	Plastic bottle	SPASPO492X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Phosphate-phosphorus standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASPO4P92Y
500 mℓ	Plastic bottle	SPASPO4P92X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Phosphorous acid — SLR
extra pure, crystalline

packaging		Mfr. No
500 g	Plastic jar	P/3040/53

H_3PO_3
CAS: 13598-36-2
MW: 82.00
Density at 20°C: 1.65
Boiling point: 200°C
Melting point: 73°C
Flash point: >100°C

ADR/RID: 8, III
EINECS: 237-066-7
UN: 2834
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >98%

Guaranteed analysis

Iron (Fe)	<50 ppm	n-Butyl formate	<0.005%
Sulfate (SO_4)	<0.03%		

Phosphorus standard metal solution 1000 ppm
for ICP, solution aqueous

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8299/08

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Phosphorus standard metal solution 10 000 ppm
for ICP, aqueous solution

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8298/05

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Phosphorus standard metal solution 1000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLP92Y
250 mℓ	Plastic bottle	SPPLP92T

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Phosphorus standard metal solution 10 000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLP93Y
500 mℓ	Plastic bottle	SPPLP93X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Phosphorus pentachloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Coated Glass bottle	P/3160/50

PCl_5
CAS: 10026-13-8
MW: 208.24
Density at 20°C: 1.6
Boiling point: 160°C
Melting point: 167°C
ADR/RID: 8, II
EINECS: 233-060-3

UN: 1806
GHS: Acute Tox. 2, Skin Corr. 1B, STOT RE 2
H330, H302, H373, H314, EUH029, EUH014
P280, P301+P330+P331, P305+P351+P338, P304+P340, P310, P402+P404

Assay: >98%

Guaranteed analysis
Residue after ignition ..... <0.1%

Phosphorus pentoxide — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/3000/50
500 g	Plastic jar	P/3000/53

P_2O_5
CAS: 1314-56-3
MW: 141.94
Melting point: 340 to 360°C
ADR/RID: 8, II
EINECS: 215-236-1

UN: 1807
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >99%

Guaranteed analysis

Lower oxides	<0.01%	Potassium (K)	<20 ppm
Calcium (Ca)	<20 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<10 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<10 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Cobalt (Co)	<2 ppm	Strontium (Sr)	<2 ppm
Lithium (Li)	<2 ppm	Titanium (Ti)	<2 ppm
Manganese (Mn)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Phosphorus pentoxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	P/2960/48
250 g	Plastic jar	P/2960/50
500 g	Plastic jar	P/2960/53

P_2O_5
CAS: 1314-56-3
MW: 141.94
Melting point: 340 to 360°C
ADR/RID: 8, II
EINECS: 215-236-1

UN: 1807
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >98%

Guaranteed analysis

Lower oxides	<0.05%	Potassium (K)	<100 ppm
Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	Total silicon (Si)	<100 ppm
Iron (Fe)	<50 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<20 ppm
Magnesium (Mg)	<50 ppm		

Phosphorus tribromide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	P/3200/PB05

PBr_3
CAS: 7789-60-8
MW: 270.69
Density at 20°C: 2.88
Boiling point: 175°C
Melting point: -40°C
ADR/RID: 8, II
EINECS: 232-178-2

UN: 1808
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H314, H335, EUH014
P301+P330+P331, P280, P305+P351+P338, P310, P261, P402+P404

Assay: >99%

o-Phthalaldehyde — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
5 g	Glass jar	P/3298/44

$C_8H_6O_2$
CAS: 643-79-8
MW: 134.14
Density at 20°C: 1.13
Boiling point: 83 to 84°C
Melting point: 54 to 57°C
Flash point: 132°C
ADR/RID: 6.1, 8, II
EINECS: 211-402-2

UN: 2928
GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1
H314, H317, H301
P301+P310, P301+P330+P331, P305+P351+P338, P310, P280

Guaranteed analysis
Complies with standard IR spectrum: Pass

For the automated fluorescence analysis of amino acids and peptides.

Phthalein Complexon
See o-Cresolphthaleindi-(methyliminodi-acetic acid) metal indicator, page 99

Phthalic anhydride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/3360/53
1 kg	Plastic jar	P/3360/60

$C_8H_4O_3$
CAS: 85-44-9
MW: 148.12
Density at 20°C: 15.3
Boiling point: 284°C
Melting point: 129 to 132°C
Flash point: 152°C
ADR/RID: 8, III
EINECS: 201-607-5

UN: 2214
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H317, H302, H334, H335, H318, H315
P280, P305+P351+P338, P260, P309+P311

Assay: >99%

Guaranteed analysis
Residue after ignition ..... <0.005%

Piperazine hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	P/3500/50

$C_4H_{10}N_2.6H_2O$
CAS: 142-63-2
MW: 194.24
Boiling point: 145 to 156°C
Melting point: 41 to 45°C
Flash point: 87°C
ADR/RID: 8, III
EINECS: 203-808-3
UN: 2579

GHS: Skin Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, Aquatic Chronic 3
H412, H314, H317, H334
P301+P330+P331, P305+P351+P338, P310, P261, P304+P341, P342+P311, P280, P273

Assay: >98%

Piperidine
pure, 99+%

packaging		Mfr. No
100 mℓ	Coated Glass bottle	P/3520/PB05
250 mℓ	Coated Glass bottle	P/3520/PB07

$C_5H_{11}N$
CAS: 110-89-4
MW: 85.15
Density at 20°C: 0.862
Boiling point: 106°C
Melting point: -11°C
Flash point: 16°C
ADR/RID: 8, 3, I
EINECS: 203-813-0

UN: 2401
GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H225, H311, H331, H314
P280, P302+P350, P301+P330+P331, P305+P351+P338, P310, P304+P340, P210, P240

Assay (CG): >99%

Platinum standard metal solution 1000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLPT32Y
500 mℓ	Plastic bottle	SPPLPT32X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Platinum — SLR
extra pure, metal wire 0.127mm

packaging		Mfr. No
50 cm	Plastic jar	P/3610/88

Pt
CAS: 7440-06-4
MW: 195.09

Boiling point: 3827°C
Melting point: 1772°C
EINECS: 231-116-1

Assay: 99.9%

Guaranteed analysis
Identity test ..... : Pass

The prices applied to platinum and derivatives vary with the price of the raw material.

Platinum
pure, metal wire 0.3 mm

packaging		Mfr. No
50 cm	Plastic jar	P/3600/88
100 cm	Plastic jar	P/3600/89
1 M	Plastic jar	P/3600/87

Pt
CAS: 7440-06-4
MW: 195.09

Boiling point: 3827°C
Melting point: 1772°C
EINECS: 231-116-1

Assay: 99.9%

Guaranteed analysis
Identity test ..... : Pass

Platinum — SLR
extra pure, metal wire 0.5mm

packaging		Mfr. No
50 cm	Plastic jar	P/3640/88
100 cm	Plastic jar	P/3640/89
1 M	Plastic jar	P/3640/87

Pt
CAS: 7440-06-4
MW: 195.09

Boiling point: 3827°C
Melting point: 1772°C
EINECS: 231-116-1

Assay: 99.9%

Guaranteed analysis
Identity test ..... : Pass

The prices applied to platinum and derivatives vary with the price of the raw material.

Platinum(IV) dioxide
pure

packaging		Mfr. No
1 g	Vial	P/3652/43

PtO_2
CAS: 1314-15-4
MW: 227.09
Melting point: 450°C
ADR/RID: 5.1, II
EINECS: 215-223-0

UN: 1479
GHS: Ox. Sol. 2, Eye Irrit. 2
H272, H319
P280, P305+P351+P338, P310, P210

Guaranteed analysis
Identity test ..... : Pass

Polyethylene glycol 6000 grade — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/3681/53
25 kg	Fibre Keg	P/3681/70

$HO(C_2H_4O)nH$
CAS: 25322-68-3
MW: 6000.00

Melting point: 55 to 60°C
Flash point: 270°C
EINECS: 500-038-2

Guaranteed analysis
Identity test ..... : Pass

Grade number indicates approximate molecular weight.

Polyethylene glycol 4000 grade — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/3680/53

$HO(C_2H_4O)nH$
CAS: 25322-68-3
MW: 4000.00
Density at 20°C: 1.15

Melting point: 54 to 58°C
Flash point: 270°C
EINECS: 500-038-2

Guaranteed analysis
Acidity ..... <0.008 meq/g

Grade number indicates approximate molecular weight

Polypropylene glycol 2000 grade — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Glass bottle	P/3694/15

CAS: 25322-69-4
Melting point: -40°C
Flash point: 230°C
EINECS: 500-039-8

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Refractive index ..... 1.450 to 1.452

Grade number indicates approximate weight.

Polyethylene glycol 1500 grade — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/3679/53
25 kg	Fibre Keg	P/3679/70

$HO(C_2H_4O)nH$
CAS: 25322-68-3
MW: 1500.00

Melting point: -65°C
Flash point: >250°C
EINECS: 500-038-2

Guaranteed analysis
Acidity ..... <0.008 meq/g

Grade number indicates approximate molecular weight

Polyethylene glycol 1000 grade — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/3678/53
25 kg	Metal drum	P/3678/70

$HO(C_2H_4O)nH$
CAS: 25322-68-3
MW: 1000.00

Melting point: 35 to 40°C
Flash point: >260°C
EINECS: 500-038-2

Guaranteed analysis
Acidity ..... <0.008 meq/g

Grade number indicates approximate molecular weight

Polyethylene glycol 600 grade — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/3677/08

$HO(C_2H_4O)nH$
CAS: 25322-68-3
MW: 600.00
Density at 20°C: 1.127

Melting point: 17 to 22°C
Flash point: 252°C
EINECS: 500-038-2

Guaranteed analysis
Acidity ..... <0.008 meq/g

Grade number indicates approximate molecular weight.

Polyethylene glycol 400 grade — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/3676/08
25 ℓ	HDPE Plastic container	P/3676/25

$HO(C_2H_4O)nH$
CAS: 25322-68-3
MW: 400.00
Density at 20°C: 1.128

Boiling point: >200°C
Melting point: 4 to 8°C
Flash point: 235°C
EINECS: 500-038-2

Guaranteed analysis
Acidity ..... <0.008 meq/g

Grade number indicates approximate molecular weight

Polyethylene glycol 200 grade — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/3675/08
25 ℓ	HDPE Plastic container	P/3675/25

$HO(C_2H_4O)nH$
CAS: 25322-68-3
MW: 200.00
Density at 20°C: 1.125

Melting point: -65°C
Flash point: 171°C
EINECS: 500-038-2

Guaranteed analysis
Acidity ..... <0.008 meq/g

Grade number indicates approximate molecular weight

Polyvinyl pyrrolidone
pure

packaging		Mfr. No
100 g	Plastic jar	P/3700/48

$(C_6H_9NO)n$
CAS: 9003-39-8
MW: approx. 44.000

Density at 20°C: 1.1
Melting point: 100°C
Flash point: >215°C

Guaranteed analysis
Complies with standard IR spectrum: Pass

Potassium standard solution 1000 ppm (1 mg/mℓ)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4560/05

Density at 20°C: 1.0
Boiling point: 100°C
Melting point: 0°C

Manufactured to a tolerance of ± 1%.

Potassium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8060/05
500 mℓ	HDPE Plastic bottle	J/8060/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Potassium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8301/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Potassium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8300/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Potassium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLK22Y
250 mℓ	Plastic bottle	SPPLK22T
500 mℓ	Plastic bottle	SPPLK22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Potassium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLK12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Potassium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLK23Y
500 mℓ	Plastic bottle	SPPLK23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Potassium standard metal solution 10 000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLK13X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Potassium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLK22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Potassium metal in liquid paraffin
pure

packaging		Mfr. No
10 g	Aluminium jar	P/3720/45
100 g	Aluminium jar	P/3720/48

K
CAS: 7440-09-7
MW: 39.10
Boiling point: 770°C
Melting point: 63°C
ADR/RID: 4.3, I
EINECS: 231-119-8
UN: 2257
GHS: Water-react. 1, Skin Corr. 1B, Eye Dam. 1
H260, H314, EUH014
P301+P330+P331, P280, P305+P351+P338, P310, P402+P404

Guaranteed analysis
Identity test ..... : Pass

Potassium acetate
for analysis — Certified AR

packaging		Mfr. No
500 g	Plastic jar	P/3761/53
1 kg	Plastic jar	P/3761/60
2.5 kg	Plastic keg	P/3761/62

$KC_2H_3O_2$
CAS: 127-08-2
MW: 98.14
Melting point: 292°C
Flash point: >250°C
EINECS: 204-822-2

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	7 to 9	Total chloride (Cl)	<0.001%
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<5 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<2 ppm
Sodium (Na)	<500 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Molybdenum (Mo)	<1 ppm
Cadmium (Cd)	<1 ppm	Nickel (Ni)	<1 ppm
Chromium (Cr)	<1 ppm	Silver (Ag)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Potassium acetate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	P/3760/53
1 kg	Plastic jar	P/3760/60
2.5 kg	Plastic keg	P/3760/62
5 kg	Plastic keg	P/3760/65

$KC_2H_3O_2$
CAS: 127-08-2
MW: 98.14
Melting point: 292°C
Flash point: >250°C
EINECS: 204-822-2

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	7 to 9	Sodium (Na)	<2000 ppm
Calcium (Ca)	<100 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<10 ppm

Potassium bicarbonate
See Potassium hydrogen carbonate, page 254

Potassium biphthalate
See Potassium hydrogen phthalate, page 255

Potassium bitartrate
See Potassium hydrogen tartrate, page 255

Potassium bromate
for analysis — Certified AR

packaging		Mfr. No
250 g	Plastic jar	P/3920/50
500 g	Plastic jar	P/3920/53
1 kg	Plastic jar	P/3920/60

$KBrO_3$
CAS: 7758-01-2
MW: 167.01
Density at 20°C: 3.27
Melting point: 350°C
ADR/RID: 5.1, II
EINECS: 231-829-8
UN: 1484
GHS: Ox. Sol. 1, Carc. 1B, Acute Tox. 3
H271, H301, H350
P301+P310, P201, P308+P313, P210

Assay: >99.9%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 9	Lead (Pb)	<5 ppm
Loss on drying	<0.05%	Magnesium (Mg)	<5 ppm
Bromide	: <0.01%	Sodium (Na)	<100 ppm
Bromide (Br)	<0.01 %	Total phosphorus (P)	<20 ppm
Calcium (Ca)	<20 ppm	Total silicon (Si)	<10 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<20 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

Potassium bromate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
250 g	Plastic jar	P/3880/50
500 g	Plastic jar	P/3880/53

$KBrO_3$
CAS: 7758-01-2
MW: 167.01
Density at 20°C: 3.27
Melting point: 350°C
ADR/RID: 5.1, II
EINECS: 231-829-8
UN: 1484
GHS: Ox. Sol. 1, Carc. 1B, Acute Tox. 3
H271, H301, H350
P301+P310, P201, P308+P313, P210

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 9	Magnesium (Mg)	<20 ppm
Bromide	: <0.05%	Sodium (Na)	<500 ppm
Bromide (Br)	<0.05%	Total phosphorus (P)	<100 ppm
Calcium (Ca)	<100 ppm	Total silicon (Si)	<50 ppm
Copper (Cu)	<20 ppm	Total sulphur (S)	<100 ppm
Iron (Fe)	<20 ppm	Zinc (Zn)	<20 ppm
Lead (Pb)	<20 ppm		

Potassium bromate-bromide solution 0.0167 M (0.1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/6100/15
2.5 ℓ	Glass bottle	J/6100/17

GHS: Carc. 1B, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H350, H315, H319, H335
P261, P280, P308+P313, P302+P352, P305+P351+P338

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Potassium bromate-bromide solution 0.0167 M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/6100C/05
6	Ampoule	J/6100C/90

GHS: Carc. 1B, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H350, H315, H319, H335
P261, P280, P308+P313, P302+P352, P305+P351+P338

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Potassium bromide
For IR Spectroscopy

packaging		Mfr. No
100 g	Plastic jar	P/4020/48

KBr
CAS: 7758-02-3
MW: 119.01
Boiling point: 1435°C
Melting point: 734°C
EINECS: 231-830-3
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
IR Analysis ..... Pass

Lot analysis on the label.

Potassium bromide — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/4000/50
500 g	Plastic jar	P/4000/53
1 kg	Plastic jar	P/4000/60

KBr
CAS: 7758-02-3
MW: 119.01
Boiling point: 1435°C
Melting point: 734°C

EINECS: 231-830-3
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 8	Sodium (Na)	<1000 ppm
Loss on drying	<0.5%	Total chloride (Cl)	<0.2%
Bromate (BrO_3)	<0.0005%	Total nitrogen (N)	<10 ppm
Calcium (Ca)	<10 ppm	Total phosphorus (P)	<10 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<5 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm
Manganese (Mn)	<1 ppm		

Lot analysis on the label.

Potassium bromide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	P/3960/50
500 g	Plastic jar	P/3960/53
1 kg	Plastic jar	P/3960/60
25 kg	Plastic keg	P/3960/70

KBr
CAS: 7758-02-3
MW: 119.01
Boiling point: 1435°C
Melting point: 734°C

EINECS: 231-830-3
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 8	Sodium (Na)	<5000 ppm
Calcium (Ca)	<50 ppm	n-Butyl formate	<0.5%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm

Potassium carbonate anhydrous — Certified AR, Eur.Ph.
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/4120/50
500 g	Plastic jar	P/4120/53
1 kg	Plastic jar	P/4120/60
2.5 kg	Plastic jar	P/4120/62

K_2CO_3
CAS: 584-08-7
MW: 138.21
Density at 190°C: 2.43
Melting point: 891°C
EINECS: 209-529-3
GHS: Acute Tox. 4, Skin Irrit.

2, Eye Irrit. 2, STOT SE 3
H302, H335, H315, H319
P280, P261,
P305+P351+P338,
P301+P312, P302+P352,
P304+P341

Assay: 99.5 to 101%

Guaranteed analysis

Loss at 300°C	<2%	Sodium (Na)	<5000 ppm
Calcium (Ca)	<50 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm

Potassium chlorate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/4160/53

$KClO_3$
CAS: 3811-04-9
MW: 122.55
Density at 20°C: 2.52
Melting point: 356 to 368°C
ADR/RID: 5.1, II
EINECS: 223-289-7

UN: 1485
GHS: Ox. Sol. 1, Acute Tox. 4, Aquatic Chronic 2
H271, H411, H302, H332
P210, P273,
P301+P312, P304+P340

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm
Sodium (Na)	<500 ppm		

Potassium chloride — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/4280/53
1 kg	Plastic jar	P/4280/60
5 kg	Plastic keg	P/4280/65
10 kg	Plastic keg	P/4280/68
25 kg	Plastic keg	P/4280/70

KCl
CAS: 7447-40-7
MW: 74.54
Density at 20°C: 1.987

Boiling point: 1420°C
Melting point: 770°C
EINECS: 231-211-8

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 8	Manganese (Mn)	<1 ppm
Loss on drying	<0.5%	Sodium (Na)	<500 ppm
Calcium (Ca)	<10 ppm	Total nitrogen (N)	<10 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<10 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<2 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Potassium chloride — SLR, Eur. Ph.
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/4240/53
1 kg	Plastic jar	P/4240/60
2.5 kg	Plastic jar	P/4240/62
5 kg	Plastic jar	P/4240/65
25 kg	Plastic keg	P/4240/70

KCl
CAS: 7447-40-7
MW: 74.54
Density at 20°C: 1.987

Boiling point: 1420°C
Melting point: 770°C
EINECS: 231-211-8

Assay: 99 to 100.5%

Guaranteed analysis

Acidity / Alkalinity	Pass	Iron (Fe)	<20 ppm
pH (aqueous solution 5%)	5 to 8	Lead (Pb)	<10 ppm
Loss on drying	<1%	Magnesium (Mg)	<20 ppm
Bromide	: <0.1%	Sodium (Na)	<1000 ppm
Heavy metals	<10 ppm	Sulfate (SO_4)	<300 ppm
Mg and alkaline earth metals	: <200 ppm	Total phosphorus (P)	<20 ppm
Aluminium (Al)	<1 ppm	Total silicon (Si)	<50 ppm
Calcium (Ca)	<50 ppm	Total sulphur (S)	<50 ppm
Copper (Cu)	<10 ppm	Zinc (Zn)	<10 ppm
Iodide (I)	Pass		

Potassium chloride solution 4M
pure, Electrode filling solution

packaging		Mfr. No
100 mℓ	Glass bottle	J/2986/05

KCl
CAS: 7447-40-7
MW: 74.54
EINECS: 231-211-8

Potassium chloride solution 4M
pure, Electrode filling solution with silver chloride

packaging		Mfr. No
100 mℓ	Glass bottle	J/2984/05

KCl
CAS: 7447-40-7
MW: 74.54
EINECS: 231-211-8

Potassium chloride satured solution
pure, Electrode filling solution

packaging		Mfr. No
100 mℓ	Glass bottle	J/2983/05

CAS: 7447-40-7
EINECS: 231-211-8

Potassium Chloride solution 3M
pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/2892/15

CAS: 7447-40-7
EINECS: 231-211-8

Guaranteed analysis

Value between ..... 2.99 to 3.01

Potassium chromate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/4400/50
500 g	Plastic jar	P/4400/53
1 kg	Plastic jar	P/4400/60
25 kg	Fibre Keg	P/4400/70

K_2CrO_4
CAS: 7789-00-6
MW: 194.20
Melting point: 975°C
ADR/RID: 6.1, 5.1, II
EINECS: 232-140-5
UN: 3086
GHS: Carc. 1B, Muta. 1B,

Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H317, H315, H335, H340, H319, H350i, H400, H410
P308+P313, P280, P261, P273, P302+P352, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	9 to 10	Sodium (Na)	<2000 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<0.002 %	Manganese (Mn)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm
Lithium (Li)	<2 ppm		

Lot analysis on the label.

Potassium chromate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	P/4360/50
500 g	Plastic jar	P/4360/53
1 kg	Plastic jar	P/4360/60

K_2CrO_4
CAS: 7789-00-6
MW: 194.20
Melting point: 975°C
ADR/RID: 6.1, 5.1, II
EINECS: 232-140-5
UN: 3086
GHS: Carc. 1B, Muta. 1B, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H317, H315, H335, H340, H319, H350i, H400, H410
P308+P313, P280, P261, P273, P302+P352, P305+P351+P338

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	9 to 10	Sodium (Na)	<5000 ppm
Calcium (Ca)	<200 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<500 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<100 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm

tri-Potassium citrate — Certified AR, Eur.Ph.,BP,USP
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/4442/53
3 kg	Plastic jar	P/4442/63

$C_6H_5K_3O_7.H_2O$
CAS: 6100-05-6
MW: 324.42
Density at 20°C: 1.98
Melting point: 230°C
EINECS: 212-755-5

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	8 to 9	Sodium (Na)	<1500 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<2 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<20 ppm
Oxalate (C_2O_4)	<0.01%	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

tri-Potassium citrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/4440/53

$C_6H_5K_3O_7.H_2O$
CAS: 6100-05-6
MW: 324.42
Density at 20°C: 1.98
Melting point: 230°C
EINECS: 212-755-5

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	>8	Sodium (Na)	<2000 ppm
Calcium (Ca)	<100 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm

Potassium cyanate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/4520/53

KOCN
CAS: 590-28-3
MW: 81.12
Melting point: 315°C
EINECS: 209-676-3
GHS: Acute Tox. 4
H302
P301+P312, P280

Assay: >98%

Guaranteed analysis

Loss on drying	<2%	Potassium cyanide (KCN)	<0.5%

Potassium cyanide — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/4600/50
25 kg	Metal drum	P/4600/70

KCN
CAS: 151-50-8
MW: 65.12
Density at 160°C: 1.52
Boiling point: 1625°C
Melting point: 634°C
ADR/RID: 6.1, I
EINECS: 205-792-3
UN: 1680
GHS: Met. Corr. 1, Acute Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H310, H410, H330, H300, H290, EUH032
P301+P310, P280, P302+P350, P305+P351+P338, P304+P340, P273

Assay: >99%

Guaranteed analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Propan--1-ol	<2 ppm
Calcium (Ca)	<20 ppm	Sodium (Na)	<5000 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Lithium (Li)	<1 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<10 ppm	Vanadium (V)	<1 ppm
Manganese (Mn)	<1 ppm	Zinc (Zn)	<20 ppm

Lot analysis on the label.

Potassium cyanide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	P/4560/50

KCN
CAS: 151-50-8
MW: 65.12
Density at 160°C: 1.52
Boiling point: 1625°C
Melting point: 634°C
ADR/RID: 6.1, I
EINECS: 205-792-3
UN: 1680
GHS: Met. Corr. 1, Acute Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H310, H410, H330, H300, H290, EUH032
P301+P310, P280, P302+P350, P305+P351+P338, P304+P340, P273

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<10000 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<500 ppm
Iron (Fe)	<200 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Potassium dichromate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/4720/50
500 g	Plastic jar	P/4720/53
1 kg	Plastic jar	P/4720/60
25 kg	Plastic keg	P/4720/70

$K_2Cr_2O_7$
CAS: 7778-50-9
MW: 294.19
Density at 20°C: 2.676
Boiling point: 500°C
Melting point: 398°C
ADR/RID: 5.1, 6.1, II
EINECS: 231-906-6
UN: 3086
GHS: Ox. Sol. 2, Carc. 1B, Muta. 1B, Acute Tox. 2, Skin
Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H301, H312, H314, H317, H330, H334, H335, H340, H350, H360FD, H372, H410
P221, P280, P301+P310, P302+P350, P304+P341, P305+P351+P338, P273

Assay: >99.9%

Guaranteed analysis

Loss on drying	<0.05%	Sodium (Na)	<100 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Potassium dichromate — SLR
extra pure, powder

packaging		Mfr. No
500 g	Plastic jar	P/4690/53

$K_2Cr_2O_7$
CAS: 7778-50-9
MW: 294.19
Density at 20°C: 2.676
Boiling point: 500°C
Melting point: 398°C
ADR/RID: 5.1, 6.1, II
EINECS: 231-906-6
UN: 3086
GHS: Ox. Sol. 2, Carc. 1B, Muta. 1B, Acute Tox. 2, Skin
Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H301, H312, H314, H317, H330, H334, H335, H340, H350, H360FD, H372, H410
P221, P280, P301+P310, P302+P350, P304+P341, P305+P351+P338, P273

Assay: >99.5%

Guaranteed analysis

Loss on drying	<0.1%	Sodium (Na)	<500 ppm
Calcium (Ca)	<100 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<500 ppm
Iron (Fe)	<100 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<100 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Potassium dichromate — SLR
extra pure, crystals

packaging		Mfr. No
250 g	Plastic jar	P/4680/50
500 g	Plastic jar	P/4680/53
1 kg	Plastic jar	P/4680/60
5 kg	Plastic jar	P/4680/65

$K_2Cr_2O_7$
CAS: 7778-50-9
MW: 294.19
Density at 20°C: 2.676
Boiling point: 500°C
Melting point: 398°C
ADR/RID: 5.1, 6.1, II
EINECS: 231-906-6
UN: 3086
GHS: Ox. Sol. 2, Carc. 1B, Muta. 1B, Acute Tox. 2, Skin
Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H301, H312, H314, H317, H330, H334, H335, H340, H350, H360FD, H372, H410
P221, P280, P301+P310, P302+P350, P304+P341, P305+P351+P338, P273

Assay: >99.5%

Guaranteed analysis

Loss on drying	<0.1%	Sodium (Na)	<500 ppm
Calcium (Ca)	<100 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<500 ppm
Iron (Fe)	<100 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<100 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Potassium dichromate
pure

packaging		Mfr. No
1 kg	Plastic jar	P/4640/60
3 kg	Plastic jar	P/4640/63

$K_2Cr_2O_7$
CAS: 7778-50-9
MW: 294.19
Density at 20°C: 2.676
Boiling point: 500°C
Melting point: 398°C
ADR/RID: 5.1, 6.1, II
EINECS: 231-906-6
UN: 3086
GHS: Ox. Sol. 2, Carc. 1B, Muta. 1B, Acute Tox. 2, Skin
Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H301, H312, H314, H317, H330, H334, H335, H340, H350, H360FD, H372, H410
P221, P280, P301+P310, P302+P350, P304+P341, P305+P351+P338, P273

Guaranteed analysis

Identity test ..... : Pass

Potassium dichromate solution 0.0167M (0.1N) — Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/6212/15
2.5 ℓ	Glass bottle	J/6212/17

CAS: 7778-50-9
Density at 20°C: 1
ADR/RID: /II
EINECS: 231-906-6
GHS: Carc. 1B, Muta. 1B, Repr. 1B, Aquatic Chronic 3
H340, H350, H412, H360FD
P201, P308+P313, P273

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Potassium dichromate solution 0.0167M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/6212C/05
6	Ampoule	J/6212C/90

CAS: 7778-50-9
ADR/RID: 6.1, III
EINECS: 231-906-6
UN: 3287
GHS: Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT RE 2, Aquatic Chronic 2
H350, H340, H360FD, H331, H373, H315, H319, H334, H317, H411
P280, P305+P351+P338, P201, P308+P313, P260, P273

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Potassium dichromate solution 0.021 M (0.125N)
NIST For COD and volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/6220/15
2.5 ℓ	Glass bottle	J/6220/17

CAS: 7778-50-9
EINECS: 231-906-6
GHS: Carc. 1B, Muta. 1B,
Repr. 1B
H350, H340, H360FD, EUH203
P201, P281, P308+P313

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Potassium dihydrogen orthophosphate — Certified
for HPLC

packaging		Mfr. No
250 g	Plastic jar	P/4806/50
1 kg	Plastic jar	P/4806/60
25 kg	Plastic keg	P/4806/70

KH_2PO_4
CAS: 7778-77-0
MW: 136.09
Melting point: 253°C
EINECS: 231-913-4

Assay: >99%

Guaranteed analysis

Reaction (5% solution) at 25°C	: 4.1 to 4.5	Lead (Pb)	<5 ppm
Iron (Fe)	<5 ppm	n-Butyl formate	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.05 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Potassium dihydrogen orthophosphate — Certified
HPLC for electrochemical detection

packaging		Mfr. No
250 g	Plastic jar	P/4810/50

KH_2PO_4
CAS: 7778-77-0
MW: 136.09
Melting point: 253°C
EINECS: 231-913-4

Assay: >99%

Guaranteed analysis

Electrochemical test	Pass	Iron (Fe)	<5 ppm
Reaction (5% solution) at 25°C	: 4.1 to 4.5	Lead (Pb)	<5 ppm
		n-Butyl formate	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.05 A.U.

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

Potassium dihydrogen orthophosphate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/4800/50
500 g	Plastic jar	P/4800/53
1 kg	Plastic jar	P/4800/60
3 kg	Plastic jar	P/4800/63
25 kg	Plastic keg	P/4800/70

KH_2PO_4
CAS: 7778-77-0
MW: 136.09
Melting point: 253°C
EINECS: 231-913-4

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	4.3 to 4.4	Magnesium (Mg)	<20 ppm
Loss on drying	<0.05%	Sodium (Na)	<50 ppm
Heavy metals	<10 ppm	Total chloride (Cl)	<0.0005%
Insoluble matter	<0.01%	Total nitrogen (N)	<10 ppm
Calcium (Ca)	<50 ppm	Total silicon (Si)	<50 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<100 ppm
Iron (Fe)	<10 ppm	Zinc (Zn)	<10 ppm
Lead (Pb)	<5 ppm	Sulfate (SO_4)	<0.003%

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

Potassium dihydrogen orthophosphate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/4760/53
1 kg	Plastic jar	P/4760/60
3 kg	Plastic jar	P/4760/63
5 kg	Plastic jar	P/4760/65
25 kg	Plastic keg	P/4760/70

KH_2PO_4
CAS: 7778-77-0
MW: 136.09
Melting point: 253°C
EINECS: 231-913-4

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	4.2 to 4.5	Magnesium (Mg)	<100 ppm
Loss on drying	<0.1%	Sodium (Na)	<1000 ppm
Calcium (Ca)	<200 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<20 ppm	Total silicon (Si)	<200 ppm
Iron (Fe)	<50 ppm	Total sulphur (S)	<500 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<50 ppm

Potassium dihydrogen phosphate
See Potassium dihydrogen orthophosphate, page 252

Potassium fluoride anhydrous — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/5010/53

KF
CAS: 7789-23-3
MW: 58.09
Boiling point: 1505°C
Melting point: 860°C
ADR/RID: 6.1, III
EINECS: 232-151-5
UN: 1812
GHS: Acute Tox. 3
H331, H311, H301
P301+P310, P280, P312, P304+P340, P302+P352, P261

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<10 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<300 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<20 ppm
Sodium (Na)	<2000 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label

Potassium fluoride anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/5000/53

KF
CAS: 7789-23-3
MW: 58.09
Boiling point: 1505°C
Melting point: 860°C
ADR/RID: 6.1, III
EINECS: 232-151-5
UN: 1812
GHS: Acute Tox. 3
H331, H311, H301
P301+P310, P280, P312, P304+P340, P302+P352, P261

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<200 ppm	Total phosphorus (P)	<500 ppm
Iron (Fe)	<100 ppm	Total silicon (Si)	<5000 ppm
Lead (Pb)	<100 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<200 ppm
Sodium (Na)	<5000 ppm		

Potassium fluoride dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/4980/53

$KF.2H_2O$
CAS: 13455-21-5
MW: 94.13
Boiling point: 156°C
Melting point: 41°C
ADR/RID: 6.1, III
UN: 1812
GHS: Acute Tox. 3
H301, H331, H311
P304+P340, P301+P310, P280, P312, P302+P350

Assay: 99 to 102%

Guaranteed analysis

Iron (Fe)	<200 ppm	Sulfate (SO_4)	<0.2%
Lead (Pb)	<50 ppm	n-Butyl formate	<0.02%
Sodium (Na)	<5000 ppm		

Potassium hexachloroplatinate(IV) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 g	Vial	P/4320/43

K_2PtCl_6
CAS: 16921-30-5
MW: 486.01
Melting point: 250°C
ADR/RID: 8, 6.1, III
EINECS: 240-979-3
UN: 2923
GHS: Acute Tox. 3, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1
H334, H301, H318, H317
P301+P310, P305+P351+P338, P261, P304+P341, P342+P311, P280

Guaranteed analysis
Identity test : Pass

Potassium hexacyanoferrate(II) — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/4960/53
1 kg	Plastic jar	P/4960/60
25 kg	Plastic keg	P/4960/70

$K_4Fe(CN)_6.3H_2O$
CAS: 14459-95-1
MW: 422.41
Density at 20°C: 1.85
Melting point: 70°C
EINECS: 237-722-2
GHS: Aquatic Chronic 3
H412
P273

Assay: 99 to 101%

Guaranteed analysis

Aluminium (Al)	<5 ppm	Nickel (Ni)	<5 ppm
Barium (Ba)	<5 ppm	Propan--1-ol	<5 ppm
Cadmium (Cd)	<5 ppm	Sodium (Na)	<200 ppm
Calcium (Ca)	<50 ppm	Strontium (Sr)	<5 ppm
Chromium (Cr)	<5 ppm	Titanium (Ti)	<5 ppm
Cobalt (Co)	<5 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Lithium (Li)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm	Zinc (Zn)	<20 ppm
Molybdenum (Mo)	<5 ppm		

Potassium hexacyanoferrate(II) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/4920/53
25 kg	Plastic keg	P/4920/70

$C_6FeK_4N_6.3H_2O$
CAS: 14459-95-1
MW: 422.41
Density at 20°C: 1.85
Melting point: 70°C
EINECS: 237-722-2
GHS: Aquatic Chronic 3
H412
P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<500 ppm	n-Butyl formate	<0.2%
Copper (Cu)	<200 ppm	Total phosphorus (P)	<500 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<500 ppm
Magnesium (Mg)	<200 ppm	Total sulphur (S)	<500 ppm
Sodium (Na)	<2000 ppm	Zinc (Zn)	<200 ppm

Potassium hexacyanoferrate(III) — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/4880/50
500 g	Plastic jar	P/4880/53
1 kg	Plastic jar	P/4880/60
25 kg	Plastic keg	P/4880/70

$K_3Fe(CN)_6$
CAS: 13746-66-2
MW: 329.26
EINECS: 237-323-3
EUH032
P233

Assay: >99%

Guaranteed analysis

Insoluble matter	Pass	Nickel (Ni)	<5 ppm
Aluminium (Al)	<5 ppm	Propan--1-ol	<5 ppm
Barium (Ba)	<5 ppm	Sodium (Na)	<200 ppm
Cadmium (Cd)	<5 ppm	Strontium (Sr)	<5 ppm
Calcium (Ca)	<50 ppm	Sulfate (SO_4)	<0.01%
Chromium (Cr)	<5 ppm	Titanium (Ti)	<5 ppm
Cobalt (Co)	<5 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<50 ppm
Iron cyanide	<0.02%	Total silicon (Si)	<50 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<50 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm
Manganese (Mn)	<5 ppm	Ferrocyanide	<0.02%
Molybdenum (Mo)	<5 ppm		

Lot analysis on the label.

Potassium hexacyanoferrate(III) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	P/4840/50
500 g	Plastic jar	P/4840/53

$C_6FeK_3N_6$
CAS: 13746-66-2
MW: 329.26
EINECS: 237-323-3
EUH032
P233

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<500 ppm	n-Butyl formate	<0.2%
Copper (Cu)	<200 ppm	Total phosphorus (P)	<500 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<500 ppm
Magnesium (Mg)	<200 ppm	Total sulphur (S)	<500 ppm
Sodium (Na)	<2000 ppm	Zinc (Zn)	<200 ppm

Potassium hydrogen carbonate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/5120/53
1 kg	Plastic jar	P/5120/60

$KHCO_3$
CAS: 298-14-6
MW: 100.12
Melting point: 292°C
EINECS: 206-059-0

Assay: >99.8%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<2 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<50 ppm
Sodium (Na)	<200 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label.

Potassium hydrogen carbonate — SLR, Eur.Ph., BP, USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/5080/53
2.5 kg	Plastic jar	P/5080/62

$KHCO_3$
CAS: 298-14-6
MW: 100.12
Melting point: 292°C
EINECS: 206-059-0

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<100 ppm
Sodium (Na)	<2000 ppm		

di-Potassium hydrogen orthophosphate anhydrous — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/5245/53
1 kg	Plastic jar	P/5245/60
25 kg	Fibre Keg	P/5245/70

K_2HPO_4
CAS: 7758-11-4
MW: 174.18
Melting point: 340°C
EINECS: 231-834-5

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	9 to 9.2	Sodium (Na)	<500 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

di-Potassium hydrogen orthophosphate anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/5240/53
1 kg	Plastic jar	P/5240/60
5 kg	Plastic keg	P/5240/65
10 kg	Plastic keg	P/5240/68

K_2HPO_4
CAS: 7758-11-4
MW: 174.18
Melting point: 340°C
EINECS: 231-834-5

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Magnesium (Mg)	<200 ppm
Calcium (Ca)	<200 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<20 ppm	Total silicon (Si)	<200 ppm
Iron (Fe)	<20 ppm	Total sulphur (S)	<200 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<100 ppm

di-Potassium hydrogen orthophosphate trihydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/5250/53
1 kg	Plastic jar	P/5250/60
25 kg	Plastic keg	P/5250/70

$K_2HPO_4.3H_2O$
CAS: 16788-57-1
MW: 228.22
EINECS: 231-834-5

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	9 to 9.2	Sodium (Na)	<500 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

di-Potassium hydrogen orthophosphate trihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/5248/53
1 kg	Plastic jar	P/5248/60

$K_2HPO_4.3H_2O$
CAS: 16788-57-1
MW: 228.22
EINECS: 231-834-5

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<20 ppm	Total silicon (Si)	<200 ppm
Iron (Fe)	<20 ppm	Total sulphur (S)	<200 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<100 ppm
Magnesium (Mg)	<200 ppm		

Potassium hydrogen phthalate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	P/5320/48
250 g	Plastic jar	P/5320/50
500 g	Plastic jar	P/5320/53
1 kg	Plastic jar	P/5320/60
25 kg	Fibre Keg	P/5320/70

$C_8H_5KO_4$
CAS: 877-24-7
MW: 204.22
Melting point: 295 to 300°C
EINECS: 212-889-4

Assay: 99.9 to 100.1%

Guaranteed analysis

Loss on drying	<0.1%	Sodium (Na)	<200 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.002%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

Potassium hydrogen sulfate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/5440/50
500 g	Plastic jar	P/5440/53
1 kg	Plastic jar	P/5440/60

$KHSO_4$
CAS: 7646-93-7
MW: 136.17
Density at 20°C: 2.24
Melting point: 214°C
ADR/RID: 8, II
EINECS: 231-594-1
UN: 2509
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P301+P330+P331, P280,
P305+P351+P338, P310, P261

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm
Sodium (Na)	<100 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label.

Potassium hydrogen sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/5420/53

$KHSO_4$
CAS: 7646-93-7
MW: 136.17
Density at 20°C: 2.24
Melting point: 214°C
ADR/RID: 8, II
EINECS: 231-594-1
UN: 2509
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P301+P330+P331, P280,
P305+P351+P338, P310, P261

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<5000 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm

Potassium hydrogen tartrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	P/5480/60

$C_4H_5KO_6$
CAS: 868-14-4
MW: 188.18
Density at 20°C: 1.95
EINECS: 212-769-1

Assay: > 97%

Guaranteed analysis
Complies with standard IR spectrum: Pass

Potassium hydroxide pellets — Certified AR, Eur.Ph., BP
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/5640/53
1 kg	Plastic jar	P/5640/60
5 kg	Plastic jar	P/5640/65
10 kg	Plastic keg	P/5640/68
25 kg	Plastic keg	P/5640/70

KOH
CAS: 1310-58-3
MW: 56.11
Boiling point: 1320°C
Melting point: 360°C
ADR/RID: 8, II
EINECS: 215-181-3
UN: 1813
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H314, H302
P301+P330+P331, P280, P305+P351+P338, P301+P312

Assay: >86%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.002%
Carbonate (Na_2CO_3)	<1%	Total nitrogen (N)	<10 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<10 ppm
Sodium (Na)	<5000 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<5 ppm
Arsenic (As)	<0.5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm

Lot analysis on the label.

Potassium hydroxide pellets — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/5600/53
1 kg	Plastic jar	P/5600/60
2 kg	Plastic jar	P/5600/61
5 kg	Plastic jar	P/5600/65
10 kg	Plastic keg	P/5600/68

KOH
CAS: 1310-58-3
MW: 56.11
Boiling point: 1320°C
Melting point: 360°C
ADR/RID: 8, II
EINECS: 215-181-3
UN: 1813
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H314, H302
P301+P330+P331, P280, P305+P351+P338, P301+P312

Assay: >85%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<10000 ppm
Carbonate (Na_2CO_3)	<2%	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm

Potassium hydroxide flake — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	P/5560/60

KOH
CAS: 1310-58-3
MW: 56.11
Boiling point: 1320°C
Melting point: 360°C
ADR/RID: 8, II
EINECS: 215-181-3
UN: 1813
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H314, H302
P301+P330+P331, P280, P305+P351+P338, P301+P312

Assay: >85%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<10000 ppm
Carbonate (Na_2CO_3)	<2%	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm

Potassium hydroxide solution 48-50 % liquor
pure

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	P/5645/17

KOH
CAS: 1310-58-3
MW: 56.11
Density at 20°C: 1.51
Melting point: -28.8°C
ADR/RID: 8, II
EINECS: 215-181-3
UN: 1814
GHS: Acute Tox. 4, Skin Corr. 1A
H318, H302
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Assay: 48 to 50%

Potassium hydroxide solution 0.1M (0.1N), (in methanol) — Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/6625/15

CAS: 1310-58-3
Density at 20°C: .7910
Flash point: 12°C
ADR/RID: 3, 6.1, II
EINECS: 215-181-3
UN: 1992
GHS: Flam. Liq. 2, Acute Tox. 3, STOT SE 1
H225, H311, H370, H301, H331
P301+P310, P280, P312, P302+P350, P307+P311, P304+P340, P305+P351+P338, P210, P240

Manufactured to a tolerance of ± 0.5%.
See the full range of Standard Volumetric solution page 323.

Potassium hydroxide solution 0.1M (0.1N), (in ethanol)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/6620/15
2.5 ℓ	HDPE Plastic bottle	J/6620/17

Density at 20°C: 0.8
Flash point: 16.66°C
ADR/RID: 3, 8, II
EINECS: 200-578-6
UN: 2924
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 2
H225, H302, H312, H315, H319, H332, H371
P280, P301+P312, P305+P351+P338, P304+P341, P261, P210

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Potassium hydroxide solution 0.1M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/6640C/05
6	Ampoule	J/6640C/90

CAS: 1310-58-3
ADR/RID: 8, II
EINECS: 215-181-3
UN: 1814
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331, P305+P351+P338, P310

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Potassium hydroxide solution 0.5M (0.5N), (in ethanol)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/6612/15
2.5 ℓ	HDPE Plastic bottle	J/6612/17

Flash point: 16.66°C
ADR/RID: 3, 8, II
EINECS: 200-578-6
UN: 2924
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Corr. 1B, STOT SE 2
H225, H314, H371, H332, H312, H302
P301+P330+P331, P280, P305+P351+P338, P310, P260, P304+P340, P210, P240

Manufactured to a tolerance of ± 0.2%.
see also the full range of "Standard solution" in the Standard solution section.
See the full range of Standard Volumetric solution page 323.

Potassium hydroxide solution 1M (1N) — Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/6630/PB15
2.5 ℓ	HDPE Plastic bottle	J/6630/17

CAS: 1310-58-3
Density at 20°C: 1.05
ADR/RID: 8, II
EINECS: 215-181-3
UN: 1814
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331, P305+P351+P338, P310

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Potassium hydroxide solution 1M (1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/6630C/05
6	Ampoule	J/6630C/90

ADR/RID: 8, II
EINECS: 215-181-3
UN: 1814
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Potassium hydroxide solution 1M (1N), (alcoholic)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/6610/15
2.5 ℓ	HDPE Plastic bottle	J/6610/17

Density at 20°C: 0.8
Flash point: 19°C
ADR/RID: 3, 8, II
EINECS: 200-578-6
UN: 2924
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, STOT SE 2
H225, H314, H371, H332, H312, H302
P301+P330+P331, P280, P305+P351+P338, P310, P260, P304+P340, P210, P240

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Potassium iodate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	P/5800/48
250 g	Plastic jar	P/5800/50
500 g	Plastic jar	P/5800/53
1 kg	Plastic jar	P/5800/60

KIO_3
CAS: 7758-05-6
MW: 214.00
Density at 20°C: 3.93
Melting point: 560°C
ADR/RID: 5.1, II
EINECS: 231-831-9
UN: 1479
GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H302, H335, H319
P210, P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99.9%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 7	Lead (Pb)	<10 ppm
Loss on drying	<0.05%	Magnesium (Mg)	<5 ppm
Bromate, bromide, chlorate & chloride: < 0.02%		Sodium (Na)	<100 ppm
		Total nitrogen (N)	<20 ppm
Calcium (Ca)	<200 ppm	Total silicon (Si)	<10 ppm
Copper (Cu)	<10 ppm	Total sulphur (S)	<100 ppm
Iodide (I)	<0.001%	Zinc (Zn)	<10 ppm
Iron (Fe)	<10 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label.

Potassium iodate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	P/5760/48
500 g	Plastic jar	P/5760/53
25 kg	Plastic keg	P/5760/70

KIO_3
CAS: 7758-05-6
MW: 214.00
Density at 20°C: 3.93
Melting point: 560°C
ADR/RID: 5.1, II
EINECS: 231-831-9
UN: 1479

GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H302, H335, H319
P210, P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

Loss on drying	<0.2%	Lead (Pb)	<50 ppm
Bromate, bromide, chlorate and chloride	<0.1%	Magnesium (Mg)	<20 ppm
Calcium (Ca)	<500 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<50 ppm	Total silicon (Si)	<50 ppm
Iodide (I)	<0.005%	Total sulphur (S)	<500 ppm
Iron (Fe)	<50 ppm	Zinc (Zn)	<50 ppm

Potassium iodate 0.025M solution stabilised with 10 ppm mercury(II) chloride
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/6700/17

Guaranteed analysis

Value between 0.024

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Potassium iodate 0.05M solution stabilised with 10 ppm mercury(II) chloride — Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/6690/15
2.5 ℓ	Glass bottle	J/6690/17

P262

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Potassium iodide — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	P/5880/48
250 g	Plastic jar	P/5880/50
500 g	Plastic jar	P/5880/53
1 kg	Plastic jar	P/5880/60
3 kg	Plastic jar	P/5880/63
25 kg	Plastic keg	P/5880/70

KI
CAS: 7681-11-0
MW: 166.01

Boiling point: 1330°C
Melting point: 680°C
EINECS: 231-659-4

Assay: >99.9%

Guaranteed analysis

Water insoluble matter	<0.005%	Lead (Pb)	<2 ppm
pH (aqueous solution 5%)	6 to 8	Magnesium (Mg)	<5 ppm
Loss on drying	<0.2%	Sodium (Na)	<500 ppm
Heavy metals	<10 ppm	Total chloride (Cl)	<0.1%
Iodine reducing substances	: <0.001%	Total nitrogen (N)	<10 ppm
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<10 ppm
Chloride and Bromide	<0.01%	Total silicon (Si)	<10 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<20 ppm
Iodate (IO_3)	<2 ppm	Zinc (Zn)	<10 ppm
Iron (Fe)	<2 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<0.1 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Potassium iodide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	P/5840/48
250 g	Plastic jar	P/5840/50
500 g	Plastic jar	P/5840/53
1 kg	Plastic jar	P/5840/60
5 kg	Plastic jar	P/5840/65
10 kg	Plastic keg	P/5840/68

KI
CAS: 7681-11-0
MW: 166.01

Boiling point: 1330°C
Melting point: 680°C
EINECS: 231-659-4

Assay: >99.5%

Guaranteed analysis

Loss on drying	<0.5%	Magnesium (Mg)	<20 ppm
Calcium (Ca)	<20 ppm	Sodium (Na)	<2000 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<50 ppm
Iodate (IO_3)	<10 ppm	Total silicon (Si)	<50 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<100 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<50 ppm

Potassium iron(III)cyanide
See Potassium hexacyanoferrate (III), page 254

Potassium metabisulfite — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/5960/53
1 kg	Plastic jar	P/5960/60

$K_2O_5S_2$
CAS: 16731-55-8
MW: 222.33
Melting point: 190°C
EINECS: 240-795-3

GHS: Eye Dam. 1, STOT SE 3
H318, H335, EUH031
P280, P305+P351+P338, P310, P261, P233

Assay: >96%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<10 ppm	Total chloride (Cl)	<0.02%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<5 ppm
Arsenic (As)	<0.2 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm

Lot analysis on the label.

Potassium metabisulfite — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/5920/53
1 kg	Plastic jar	P/5920/60

$K_2O_5S_2$
CAS: 16731-55-8
MW: 222.33
Melting point: 190°C
EINECS: 240-795-3

GHS: Eye Dam. 1, STOT SE 3
H318, H335, EUH031
P280, P305+P351+P338, P310, P261, P233

Assay: >95%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<5000 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.1%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm

Potassium nitrate — Certified AR, Eur.Ph., BP
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/6120/50
500 g	Plastic jar	P/6120/53
1 kg	Plastic jar	P/6120/60
5 kg	Plastic jar	P/6120/65

KNO_3
CAS: 7757-79-1
MW: 101.11
Boiling point: 400°C
Melting point: 334°C
ADR/RID: 5.1, III

EINECS: 231-818-8
UN: 1486
GHS: Ox. Sol. 3
H272
P210

Assay: 99.5 to 101%

Guaranteed analysis

Acidity / Alkalinity	Pass	Nitrite (NO_2)	<0.0001%
pH (aqueous solution 5%)	5 to 8	Sodium (Na)	<500 ppm
Heavy metals	<10 ppm	Total chloride (Cl)	<0.0005%
Ammonium (NH_4)	<0.001%	Total phosphorus (P)	<5 ppm
Calcium (Ca)	<20 ppm	Total silicon (Si)	<20 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<20 ppm
Iodate (IO_3)	<0.5 ppm	Zinc (Zn)	<10 ppm
Iron (Fe)	<1 ppm	Sulfate (SO_4)	<150 ppm
Lead (Pb)	<1 ppm	Reducing substance	Pass
Magnesium (Mg)	<10 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Potassium nitrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/6080/53
1 kg	Plastic jar	P/6080/60
2 kg	Plastic jar	P/6080/61
5 kg	Plastic jar	P/6080/65

KNO_3
CAS: 7757-79-1
MW: 101.11
Boiling point: 400°C
Melting point: 334°C
ADR/RID: 5.1, III

EINECS: 231-818-8
UN: 1486
GHS: Ox. Sol. 3
H272
P210

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm
Sodium (Na)	<2000 ppm		

Potassium nitrate
Technical

packaging		Mfr. No
1 kg	Plastic jar	P/6040/60
3 kg	Plastic jar	P/6040/63

KNO_3
CAS: 7757-79-1
MW: 101.11
Boiling point: 400°C
Melting point: 334°C
ADR/RID: 5.1, III

EINECS: 231-818-8
UN: 1486
GHS: Ox. Sol. 3
H272
P210

Guaranteed analysis

Identity test ..... : Pass

Potassium nitrite — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/6162/50

KNO_2
CAS: 7758-09-0
MW: 85.11
Density at 20°C: 19.15
Melting point: 387°C
ADR/RID: 5.1, II

EINECS: 231-832-4
UN: 1488
GHS: Ox. Sol. 2, Acute Tox. 3, Aquatic Acute 1
H272, H301, H400
P301+P310, P210, P273

Assay: >99%

Guaranteed analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Propan--1-ol	<5 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<5000 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Lithium (Li)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Potassium nitrite — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/6160/53

KNO_2
CAS: 7758-09-0
MW: 85.11
Density at 20°C: 19.15
Melting point: 387°C
ADR/RID: 5.1, II

EINECS: 231-832-4
UN: 1488
GHS: Ox. Sol. 2, Acute Tox. 3, Aquatic Acute 1
H272, H301, H400
P301+P310, P210, P273

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<500 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<100 ppm
Sodium (Na)	<10000 ppm		

tri-Potassium orthophosphate monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/6280/53

$K_3PO_4.H_2O$
CAS: 27176-10-9
MW: 230.29
Density at 20°C: 2.564
Melting point: 1340°C
ADR/RID: 8, II

EINECS: 231-907-1
UN: 3262
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >95%

Guaranteed analysis

Lead (Pb)	<50 ppm	n-Butyl formate	<0.005%
Sulfate (SO_4)	<0.005%		

Potassium oxalate monohydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/6360/50
500 g	Plastic jar	P/6360/53
25 kg	Fibre Keg	P/6360/70

$C_2K_2O_4.H_2O$
CAS: 6487-48-5
MW: 184.23
Density at 20°C: 2.13
Melting point: 356°C
ADR/RID: 6.1, III

EINECS: 209-506-8
UN: 2811
GHS: Acute Tox. 4
H312, H302
P280, P302+P352, P301+P312

Assay: 99.5 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	7 to 8.5	Molybdenum (Mo)	<5 ppm
Aluminium (Al)	<5 ppm	Nickel (Ni)	<5 ppm
Barium (Ba)	<5 ppm	Propan--1-ol	<5 ppm
Cadmium (Cd)	<5 ppm	Sodium (Na)	<200 ppm
Calcium (Ca)	<50 ppm	Strontium (Sr)	<5 ppm
Chromium (Cr)	<5 ppm	Titanium (Ti)	<5 ppm
Cobalt (Co)	<5 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Lithium (Li)	<5 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm	Zinc (Zn)	<20 ppm

Lot analysis on the label.

Potassium oxalate monohydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/6320/53
1 kg	Plastic jar	P/6320/60

$C_2K_2O_4.H_2O$
CAS: 6487-48-5
MW: 184.23
Density at 20°C: 2.13
Melting point: 356°C
ADR/RID: 6.1, III

EINECS: 209-506-8
UN: 2811
GHS: Acute Tox. 4
H312, H302
P280, P302+P352, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm
Sodium (Na)	<1000 ppm		

Potassium perchlorate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/6400/53

$KClO_4$
CAS: 7778-74-7
MW: 138.55
Density at 20°C: 2.52
Melting point: 400°C
ADR/RID: 5.1, II

EINECS: 231-912-9
UN: 1489
GHS: Ox. Sol. 1, Acute Tox. 4
H271, H302
P210, P220, P301+P312

Assay: >99%

Guaranteed analysis

Sodium (Na)	<100 ppm	n-Butyl formate	<0.054%
Sulfate (SO_4)	<0.005%		

Potassium periodate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	P/6480/48

KIO_4
CAS: 7790-21-8
MW: 230.00
Density at 20°C: 3.62
Melting point: 582°C
ADR/RID: 5.1, II
EINECS: 232-196-0
UN: 1479

GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H319, H302, H315, H312, H332, H335
P280, P210, P302+P352, P261, P301+P312, P304+P340, P305+P351+P338

Assay: >99.8%

Guaranteed analysis

Loss on drying	<0.1%	Lead (Pb)	<5 ppm
Bromate, bromide, chlorate & chloride: < 0.01%		Magnesium (Mg)	<10 ppm
		Sodium (Na)	<500 ppm
Calcium (Ca)	<30 ppm	Total silicon (Si)	<20 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<100 ppm
Iodide (I)	<0.001%	Zinc (Zn)	<10 ppm
Iron (Fe)	<20 ppm		

Lot analysis on the label

Potassium periodate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/6440/53

KIO_4
CAS: 7790-21-8
MW: 230.00
Density at 20°C: 3.62
Melting point: 582°C
ADR/RID: 5.1, II
EINECS: 232-196-0
UN: 1479

GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H319, H302, H315, H312, H332, H335
P280, P210, P302+P352, P261, P301+P312, P304+P340, P305+P351+P338

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Magnesium (Mg)	<50 ppm
Calcium (Ca)	<100 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<20 ppm	Total silicon (Si)	<100 ppm
Iodide (I)	<0.005%	Total sulphur (S)	<500 ppm
Iron (Fe)	<54 ppm	Zinc (Zn)	<50 ppm
Lead (Pb)	<20 ppm		

Potassium permanganate — Certified AR, Eur.Ph., USP, BP
for analysis

packaging		Mfr. No
250 g	Glass jar	P/6560/50
500 g	Glass jar	P/6560/53
5 kg	Plastic keg	P/6560/65
25 kg	Plastic keg	P/6560/70

$KMnO_4$
CAS: 7722-64-7
MW: 158.04
Melting point: 240°C
ADR/RID: 5.1, II
EINECS: 231-760-3

UN: 1490
GHS: Ox. Sol. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1
H272, H410, H302
P210, P273, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	Total chloride (Cl)	<0.005%
Iron (Fe)	<20 ppm	Total nitrogen (N)	<50 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Arsenic (As)	<2 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<0.001 %	Strontium (Sr)	<5 ppm
Cadmium (Cd)	<5 ppm	Titanium (Ti)	<5 ppm
Cobalt (Co)	<5 ppm	Vanadium (V)	<5 ppm
Lithium (Li)	<5 ppm		

Lot analysis on the label.

Potassium permanganate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Glass jar	P/6520/53
5 kg	Glass jar	P/6520/65

$KMnO_4$
CAS: 7722-64-7
MW: 158.04
Melting point: 240°C
ADR/RID: 5.1, II
EINECS: 231-760-3

UN: 1490
GHS: Ox. Sol. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1
H272, H410, H302
P210, P273, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<100 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<100 ppm	Total sulphur (S)	<500 ppm
Lead (Pb)	<100 ppm	Zinc (Zn)	<500 ppm
Magnesium (Mg)	<100 ppm		

Potassium permanganate solution 0.02M (0.1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/6900/15
2.5 ℓ	Coated Glass bottle	J/6900/PB17

$KMnO_4$
CAS: 7722-64-7
MW: 158.04
Density at 20°C: 1

EINECS: 231-760-3
GHS: Aquatic Chronic 3
H412
P273

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Potassium persulfate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/6640/50
500 g	Plastic jar	P/6640/53

$K_2S_2O_8$
CAS: 7727-21-1
MW: 270.31
Melting point: 100°C
ADR/RID: 5.1, III
EINECS: 231-781-8
UN: 1492
GHS: Ox. Sol. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2,

Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H272, H334, H302, H319, H335, H315, H317
P304+P341, P342+P311, P261, P301+P312, P302+P352, P280, P305+P351+P338, P210

Assay: >99%

Guaranteed analysis

Acidity	<0.01 meq/g	Sodium (Na)	<100 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.002%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<20 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<1 ppm		

Lot analysis on the label.

Potassium persulfate
for electrophoresis

packaging		Mfr. No
10 g	Glass jar	P/P560/45

$K_2S_2O_8$
CAS: 7727-21-1
MW: 270.31
Melting point: 100°C
ADR/RID: 5.1, III
EINECS: 231-781-8
UN: 1492
GHS: Ox. Sol. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2,

Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H272, H334, H302, H319, H335, H315, H317
P304+P341, P342+P311, P261, P301+P312, P302+P352, P280, P305+P351+P338, P210

Assay: >99%

Guaranteed analysis

Iron (Fe)	<20 ppm	n-Butyl formate	<0.0005%

Potassium persulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	P/6600/50
500 g	Plastic jar	P/6600/53

$K_2S_2O_8$
CAS: 7727-21-1
MW: 270.31
Melting point: 100°C
ADR/RID: 5.1, III
EINECS: 231-781-8
UN: 1492
GHS: Ox. Sol. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H272, H334, H302, H319, H335, H315, H317
P304+P341, P342+P311, P261, P301+P312, P302+P352, P280, P305+P351+P338, P210

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<50 ppm
Magnesium (Mg)	<100 ppm		

Potassium pyrogallate solution
pure

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/7000/PB17

ADR/RID: 8, II
UN: 1760
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Potassium pyrosulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/6720/53

$K_2S_2O_7$
CAS: 7790-62-7
MW: 254.31
Density at 20°C: 2.51
Melting point: 325°C
ADR/RID: 8, III
EINECS: 232-216-8
UN: 3260
GHS: Skin Corr. 1C, Eye Dam. 1
H314
P305+P351+P338, P310, P280, P260, P264, P301+P330+P331

Assay: >97%

Guaranteed analysis

Iron (Fe)	<20 ppm	n-Butyl formate	<0.003%
Lead (Pb)	<10 ppm		

Potassium sodium tartrate tetrahydrate — Certified AR
for analysis, crystals

packaging		Mfr. No
500 g	Plastic jar	P/6880/53
1 kg	Plastic jar	P/6880/60
2.5 kg	Plastic jar	P/6880/62

$C_4H_4KNaO_6.4H_2O$
CAS: 6381-59-5
MW: 282.23
Melting point: 70 to 80°C
EINECS: 206-156-8

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	7 to 8.5	Total nitrogen (N)	<50 ppm
Calcium (Ca)	<20 ppm	Total phosphorus (P)	<10 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<10 ppm	Reducing substance	Pass
Total chloride (Cl)	<0.005%		

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm
Manganese (Mn)	<1 ppm		

Lot analysis on the label.

Potassium sodium tartrate tetrahydrate — SLR
extra pure, crystals

packaging		Mfr. No
500 g	Plastic jar	P/6800/53
1 kg	Plastic jar	P/6800/60
5 kg	Plastic keg	P/6800/65
25 kg	Fibre Keg	P/6800/70

$C_4H_4KNaO_6.4H_2O$
CAS: 6381-59-5
MW: 282.23
Melting point: 70 to 80°C
EINECS: 206-156-8

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	7 to 9	n-Butyl formate	<0.02%
Calcium (Ca)	<100 ppm	Total phosphorus (P)	<500 ppm
Copper (Cu)	<10 ppm	Total silicon (Si)	<100 ppm
Iron (Fe)	<20 ppm	Total sulphur (S)	<200 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<50 ppm		

Potassium sodium tartrate tetrahydrate — SLR
extra pure, powder

packaging		Mfr. No
500 g	Plastic jar	P/6840/53

$C_4H_4KNaO_6.4H_2O$
CAS: 6381-59-5
MW: 282.23
Melting point: 70 to 80°C
EINECS: 206-156-8

Assay: >99%

Guaranteed analysis

Water insoluble matter	<0.05%	Magnesium (Mg)	<50 ppm
pH (aqueous solution 5%)	7 to 9	n-Butyl formate	<0.02%
Heavy metals	<5 ppm	Total phosphorus (P)	<50 ppm
Calcium (Ca)	<100 ppm	Total silicon (Si)	<100 ppm
Copper (Cu)	<10 ppm	Total sulphur (S)	<200 ppm
Iron (Fe)	<20 ppm	Zinc (Zn)	<10 ppm
Lead (Pb)	<10 ppm		

Potassium sulfate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	P/7000/53
1 kg	Plastic jar	P/7000/60
5 kg	Plastic jar	P/7000/65

K_2SO_4
CAS: 7778-80-5
MW: 174.27
Boiling point: 1689°C
Melting point: 1067°C
EINECS: 231-915-5

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	5.5 to 7.5	Sodium (Na)	<500 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<2 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<10 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Molybdenum (Mo)	<1 ppm
Cadmium (Cd)	<1 ppm	Nickel (Ni)	<1 ppm
Chromium (Cr)	<1 ppm	Silver (Ag)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Potassium sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/6960/53
1 kg	Plastic jar	P/6960/60
5 kg	Plastic jar	P/6960/65

K_2SO_4
CAS: 7778-80-5
MW: 174.27
Boiling point: 1689°C
Melting point: 1067°C
EINECS: 231-915-5

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<2000 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<20 ppm
Magnesium (Mg)	<100 ppm		

Potassium (+)-tartrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/7080/53

$C_4H_4K_2O_6$
CAS: 921-53-9
MW: 235.28
EINECS: 213-067-8

Assay: 99 to 102%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<5000 ppm
Copper (Cu)	<50 ppm	Sulfate (SO_4)	<1000 ppm
Iron (Fe)	<50 ppm	n-Butyl formate	<0.05%
Lead (Pb)	<50 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Potassium tetraborate tetrahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	P/7140/53

$K_2B_4O_7.4H_2O$
CAS: 12045-78-2
MW: 305.51
Melting point: 850°C
EINECS: 215-575-5
GHS: Repr. 2
H361f
P281

Assay: >98.5%

Guaranteed analysis

Sulfate (SO_4)	<0.02%	n-Butyl formate	<0.005%

Potassium tetrachloroplatinate(II) — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 g	Plastic jar	P/7170/43

K_2PtCl_4
CAS: 10025-99-7
MW: 415.11
Density at 20°C: 3.499
Melting point: 250°C
ADR/RID: 6.1, III
EINECS: 233-050-9
UN: 3288
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1
H301, H315, H318, H334, H317
P280, P305+P351+P338, P304+P341, P342+P311, P310, P261

Guaranteed analysis

Identity test	: Pass

Potassium tetraoxalate dihydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/7200/50

$C_4H_3KO_8.2H_2O$
CAS: 6100-20-5
MW: 254.20
ADR/RID: 6.1, III
EINECS: 204-874-6
UN: 2811
GHS: Acute Tox. 4
H312, H302
P280, P302+P352, P301+P312

Assay: 99.5 to 100.2%

Guaranteed analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Propan--1-ol	<5 ppm
Calcium (Ca)	<20 ppm	Sodium (Na)	<100 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.0005%
Iron (Fe)	<10 ppm	Total nitrogen (N)	<100 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<20 ppm
Lithium (Li)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm	Zinc (Zn)	<5 ppm

Lot analysis on the label.

Potassium thiocyanate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	P/7280/50
500 g	Plastic jar	P/7280/53

KSCN
CAS: 333-20-0
MW: 97.18
Density at 20°C: 1.886
Boiling point: D500°C
Melting point: 170 to 179°C
EINECS: 206-370-1
GHS: Acute Tox. 4, Aquatic Chronic 3
H412, H302, H332, H312, EUH032
P280, P302+P352, P273, P233, P301+P312, P304+P340

Assay: >99.5%

Guaranteed analysis

Iodine consuming substances	: <0.01%	Magnesium (Mg)	<10 ppm
Ammonium (NH_4)	<0.002%	Sodium (Na)	<100 ppm
Cadmium (Cd)	<5 ppm	Sulfate (SO_4)	<0.002%
Calcium (Ca)	<20 ppm	Sulfide (S)	<0.001%
Copper (Cu)	<2 ppm	Total chloride (Cl)	<0.005%
Iron (Fe)	<1 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Chromium (Cr)	<5 ppm	Silver (Ag)	<5 ppm
Cobalt (Co)	<5 ppm	Strontium (Sr)	<5 ppm
Lithium (Li)	<5 ppm	Titanium (Ti)	<5 ppm
Manganese (Mn)	<5 ppm	Vanadium (V)	<5 ppm

Lot analysis on the label.

Potassium thiocyanate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	P/7240/50
500 g	Plastic jar	P/7240/53

KSCN
CAS: 333-20-0
MW: 97.18
Density at 20°C: 1.886
Boiling point: D500°C
Melting point: 170 to 179°C
EINECS: 206-370-1

GHS: Acute Tox. 4, Aquatic Chronic 3
H412, H302, H332, H312, EUH032
P280, P302+P352, P273, P233, P301+P312, P304+P340

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<2000 ppm
Copper (Cu)	<20 ppm	Sulfate (SO_4)	<0.05%
Iron (Fe)	<10 ppm	n-Butyl formate	<0.01%
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Potassium thiocyanate solution 0.1M (0.1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/7050/15
2.5 ℓ	HDPE Plastic bottle	J/7050/PB17

GHS: Acute Tox. 4
H302, H312, EUH032
P280, P301+P312, P302+P352

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Praseodymium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLPR22Y
500 mℓ	Plastic bottle	SPPLPR22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Preservative
For microscopy, odourless

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/7300/PB08

GHS: Acute Tox. 4
H302
P264, P270, P280, P301+P312, P330

L-Proline
pure

packaging		Mfr. No
100 g	Glass jar	P/7425/48

$C_5H_9NO_2$
CAS: 147-85-3
MW: 115.13

Density at 20°C: 1.35
Melting point: 228 to 233°C
EINECS: 205-702-2

Assay: >99%

Guaranteed analysis

Water	<0.5%	Iron (Fe)	<10 ppm
Specific rotation	-85.5° to -84°	Lead (Pb)	<10 ppm
Residue after ignition	<0.1%		

Propane-1.2-diol — SLR, Eur.Ph., BP, USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/7440/08
2.5 ℓ	Glass bottle	P/7440/17
25 ℓ	Metal drum	P/7440/25
200 ℓ	Metal drum	P/7440/27

$C_3H_8O_2$
CAS: 57-55-6
MW: 76.09
Density at 20°C: 1.03

Boiling point: 187°C
Melting point: -60°C
Flash point: 99°C
EINECS: 200-338-0

Assay (CG): >99%

Guaranteed analysis

Acidity <0.0005 meq/g

Propane-1.3-diol
pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/7450/08

$C_3H_8O_2$
CAS: 504-63-2
MW: 76.09
Boiling point: 214°C

Melting point: -32°C
Flash point: 140°C
EINECS: 207-997-3

2-Propanol *See Isopropanol, page 168*

Propan-1-ol — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	P/7486/15
2.5 ℓ	Glass bottle	P/7486/17

C_3H_8O
CAS: 71-23-8
MW: 60.10
Density at 20°C: 0.800
Boiling point: 97°C
Melting point: -127°C
Flash point: 15°C
ADR/RID: 3, II

EINECS: 200-746-9
UN: 1274
GHS: Flam. Liq. 2, Eye Dam. 1, STOT SE 3
H225, H336, H318
P280, P305+P351+P338, P310, P261, P301+P312, P210, P240, P304+P340

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Residue after evaporation	<10 ppm
Water	<0.05%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

220 nm	<0.7 A.U.	250 nm	<0.05 A.U.
230 nm	<0.25 A.U.	260 nm	<0.05 A.U.
240 nm	<0.1 A.U.	270 nm	<0.01 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Propan-1-ol NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	P/7481/15
1 ℓ	Coated Glass bottle	P/7481/PB15
2.5 ℓ	Glass bottle	P/7481/17
5 ℓ	Fluorinated HDPE Plastic bottle	P/7481/21
25 ℓ	Metal drum	P/7481/25
200 ℓ	Metal drum	P/7481/27

C_3H_8O
CAS: 71-23-8
MW: 60.10
Density at 20°C: 0.800
Boiling point: 97°C
Melting point: -127°C
Flash point: 15°C
ADR/RID: 3, II

EINECS: 200-746-9
UN: 1274
GHS: Flam. Liq. 2, Eye Dam. 1, STOT SE 3
H225, H336, H318
P280, P305+P351+P338, P310, P261, P301+P312, P210, P240, P304+P340

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Substances reducing $KMnO_4$	<0.0005%
Colour	<10 APHA	Total phosphorus (P)	<0.1 ppm
Water	<0.1%	Total silicon (Si)	<0.05 ppm
Residue after evaporation	<10 ppm	Total sulphur (S)	<0.5 ppm
Calcium (Ca)	<0.2 ppm	Zinc (Zn)	<0.1 ppm
Copper (Cu)	<0.02 ppm	Ethanol 90 % v/v	<0.01%
Iron (Fe)	<0.1 ppm	Methanol	<0.005%
Lead (Pb)	<0.02 ppm	Propan--2-ol	<0.005%
Magnesium (Mg)	<0.1 ppm	Substances darkened by H_2SO_4	<10 APHA
Potassium (K)	<0.2 ppm		
Sodium (Na)	<1 ppm		

Typical analysis

Aluminium (Al)	<0.02 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

Propan-1-ol NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/7480/08
2.5 ℓ	Glass bottle	P/7480/17
5 ℓ	Fluorinated HDPE Plastic bottle	P/7480/21
25 ℓ	Metal drum	P/7480/25
200 ℓ	Metal drum	P/7480/27

C_3H_8O
CAS: 71-23-8
MW: 60.10
Density at 20°C: 0.800
Boiling point: 97°C
Melting point: -127°C
Flash point: 15°C
ADR/RID: 3, II

EINECS: 200-746-9
UN: 1274
GHS: Flam. Liq. 2, Eye Dam. 1, STOT SE 3
H225, H336, H318
P280, P305+P351+P338, P310, P261, P301+P312, P210, P240, P304+P340

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<10 APHA	Potassium (K)	<2 ppm
Water	<0.5%	Sodium (Na)	<5 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<2 ppm
Substances reducing $KMnO_4$	<0.01%	Total silicon (Si)	<2 ppm
Calcium (Ca)	<5 ppm	Total sulphur (S)	<2 ppm
Copper (Cu)	<2 ppm	Zinc (Zn)	<2 ppm
Iron (Fe)	<5 ppm	Substances darkened by H_2SO_4	<20 APHA
Lead (Pb)	<2 ppm		

Propionaldehyde — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 mℓ	Coated Glass bottle	P/7520/PB07

C_3H_6O
CAS: 123-38-6
MW: 58.08
Density at 20°C: 0.798
Boiling point: 48°C
Melting point: -81°C
Flash point: -40°C
ADR/RID: 3, II

EINECS: 204-623-0
UN: 1275
GHS: Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H315, H319, H335
P261, P302+P352, P280, P305+P351+P338, P210, P240

Assay (CG): >95%

Guaranteed analysis

Acidity <0.1 meq/g

Propionic acid — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	P/7564/PB08

$C_3H_6O_2$
CAS: 79-09-4
MW: 74.08
Density at 20°C: 0.990
Boiling point: 141°C
Melting point: -22°C
Flash point: 51°C
ADR/RID: 8, 3, II

EINECS: 201-176-3
UN: 3463
GHS: Flam. Liq. 3, Skin Corr. 1B, Eye Dam. 1
H314, H226
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >99%

Guaranteed analysis

Aluminium (Al)	<0.5 ppm	Molybdenum (Mo)	<0.2 ppm
Barium (Ba)	<0.5 ppm	Nickel (Ni)	<0.2 ppm
Cadmium (Cd)	<0.2 ppm	Potassium (K)	<1 ppm
Calcium (Ca)	<5 ppm	Sodium (Na)	<5 ppm
Chromium (Cr)	<0.5 ppm	Strontium (Sr)	<0.2 ppm
Cobalt (Co)	<0.2 ppm	Titanium (Ti)	<0.2 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<2 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<1 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<5 ppm
Lithium (Li)	<0.2 ppm	Vanadium (V)	<0.2 ppm
Magnesium (Mg)	<2 ppm	Zinc (Zn)	<0.2 ppm
Manganese (Mn)	<0.2 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
280 nm <0.1 A.U.

Lot analysis on the label.

Propionic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	P/7560/PB08
2.5 ℓ	HDPE Plastic bottle	P/7560/PB17
25 ℓ	HDPE Plastic container	P/7560/25

$C_3H_6O_2$
CAS: 79-09-4
MW: 74.08
Density at 20°C: 0.990
Boiling point: 141°C
Melting point: -22°C
Flash point: 51°C
ADR/RID: 8, 3, II

EINECS: 201-176-3
UN: 3463
GHS: Flam. Liq. 3, Skin Corr. 1B, Eye Dam. 1
H314, H226
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<20 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<10 ppm		

iso-Propyl acetate
pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/7640/08
2.5 ℓ	Glass bottle	P/7640/17
2.5 ℓ	Coated Glass bottle	P/7640/PB17
25 ℓ	Metal drum	P/7640/25

$C_5H_{10}O_2$
CAS: 108-21-4
MW: 102.13
Density at 20°C: 0.872
Boiling point: 88.8°C
Melting point: -73°C
Flash point: 4°C
ADR/RID: 3, II

EINECS: 203-561-1
UN: 1220
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H336, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >98%

Guaranteed analysis
Residue after evaporation ..... <100 ppm Acidity ..... <0.002 meq/g

n-Propyl acetate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/7600/08
2.5 ℓ	Glass bottle	P/7600/17

$C_5H_{10}O_2$
CAS: 109-60-4
MW: 102.13
Density at 20°C: 0.880
Boiling point: 102°C
Melting point: -95°C
Flash point: 10°C
ADR/RID: 3, II

EINECS: 203-686-1
UN: 1276
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H336, H319, EUH066
P261, P280, P305+P351+P338, P210, P240

Assay (CG): >98%

Guaranteed analysis
Residue after evaporation ..... <100 ppm

Propyl alcohol
See Propan-1-ol, page 264

Propylene glycol
See Propane-1, page 264

Pumice stone
Technical, granular about 7-9mm

packaging		Mfr. No
500 g	Plastic jar	P/7800/53

CAS: 1332-09-8

Guaranteed analysis
Identity test ..... : Pass

Pumice stone
Technical, powder 240 mesh

packaging		Mfr. No
3 kg	Plastic jar	P/7760/63

CAS: 1332-09-8

Guaranteed analysis
Identity test ..... : Pass

Pyridine
For IR Spectroscopy

packaging		Mfr. No
100 mℓ	Coated Glass bottle	P/7965/PB05
500 mℓ	Coated Glass bottle	P/7965/PB08

C_5H_5N
CAS: 110-86-1
MW: 79.10
Density at 20°C: 0.978
Boiling point: 115 to 116°C
Melting point: -42°C
Flash point: 17°C

ADR/RID: 3, II
EINECS: 203-809-9
UN: 1282
GHS: Flam. Liq. 2, Acute Tox. 4
H225, H312, H332, H302
P280, P302+P352, P304+P340, P210, P240

Guaranteed analysis
Complies with standard IR spectrum: Pass

Lot analysis on the label.

Pyridine — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	P/7960/08
500 mℓ	Coated Glass bottle	P/7960/PB08
1 ℓ	Glass bottle	P/7960/15
1 ℓ	Coated Glass bottle	P/7960/PB15
2.5 ℓ	Coated Glass bottle	P/7960/PB17
25 ℓ	Metal drum	P/7960/25

C_5H_5N
CAS: 110-86-1
MW: 79.10
Density at 20°C: 0.978
Boiling point: 115 to 116°C
Melting point: -42°C
Flash point: 17°C

ADR/RID: 3, II
EINECS: 203-809-9
UN: 1282
GHS: Flam. Liq. 2, Acute Tox. 4
H225, H312, H332, H302
P280, P302+P352, P304+P340, P210, P240

Assay: >99.5%
Assay (CG): >99.5%

Guaranteed analysis

Water	<0.05%	Potassium (K)	<0.1 ppm
Residue after evaporation	<20 ppm	Sodium (Na)	<1 ppm
Ammonium (NH_4)	<0.002 %	Substances reducing $KMnO_4$	Pass
Calcium (Ca)	<0.5 ppm	Total phosphorus (P)	<0.1 ppm
Chlorine	<5 ppm	Total silicon (Si)	<0.05 ppm
Free Chlorine (Cl_2)	<5 ppm	Total sulphur (S)	<0.5 ppm
Copper (Cu)	<0.05 ppm	Zinc (Zn)	<0.2 ppm
Iron (Fe)	<0.2 ppm	Ammonia (NH_3)	<0.002%
Lead (Pb)	<0.05 ppm		
Magnesium (Mg)	<0.1 ppm		

Typical analysis

Aluminium (Al)	0.02 ppm	Manganese (Mn)	0.02 ppm
Barium (Ba)	0.02 ppm	Molybdenum (Mo)	0.02 ppm
Cadmium (Cd)	0.02 ppm	Nickel (Ni)	0.02 ppm
Chromium (Cr)	0.02 ppm	Strontium (Sr)	0.02 ppm
Cobalt (Co)	0.02 ppm	Titanium (Ti)	0.02 ppm
Lithium (Li)	0.02 ppm	Vanadium (V)	0.02 ppm

Pyridine NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	P/7920/08
2.5 ℓ	Coated Glass bottle	P/7920/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	P/7920/21
25 ℓ	Metal drum	P/7920/25

C_5H_5N
CAS: 110-86-1
MW: 79.10
Density at 20°C: 0.978
Boiling point: 115 to 116°C
Melting point: -42°C
Flash point: 17°C

ADR/RID: 3, II
EINECS: 203-809-9
UN: 1282
GHS: Flam. Liq. 2, Acute Tox. 4
H225, H312, H332, H302
P280, P302+P352, P304+P340, P210, P240

Assay (CG): >99%

Guaranteed analysis

Colour	>0 APHA	Potassium (K)	<2 ppm
Water	<0.1%	Sodium (Na)	<5 ppm
Residue after evaporation	<200 ppm	Substances reducing $KMnO_4$	Pass
Calcium (Ca)	<5 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<2 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<2 ppm		

Pyridine anhydrous
for DNA synthesis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	P/7950/PB15

C_5H_5N
CAS: 110-86-1
MW: 79.10
Density at 20°C: 0.978
Boiling point: 115 to 116°C
Melting point: -42°C
Flash point: 17°C

ADR/RID: 3, II
EINECS: 203-809-9
UN: 1282
GHS: Flam. Liq. 2, Acute Tox. 4
H225, H312, H332, H302
P280, P302+P352, P304+P340, P210, P240

Guaranteed analysis
Water ..... <0.01%

Containing activated 3A molecular sieve.

Pyridine, anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	P/7940/PB08
2.5 ℓ	Coated Glass bottle	P/7940/PB17

C_5H_5N
CAS: 110-86-1
MW: 79.10
Density at 20°C: 0.978
Boiling point: 115 to 116°C
Melting point: -42°C
Flash point: 17°C

ADR/RID: 3, II
EINECS: 203-809-9
UN: 1282
GHS: Flam. Liq. 2, Acute Tox. 4
H225, H312, H332, H302
P280, P302+P352, P304+P340, P210, P240

Guaranteed analysis
Water ..... <0.02%

For the analysis by Karl Fischer titration in non-aqueous.

Pyridine solution 65 % v/v in water
pure

packaging		Mfr. No
500 mℓ	Glass bottle	J/9014/08

ADR/RID: 3, III
UN: 1993
GHS: Flam. Liq. 2, Acute Tox. 4
H226, H302, H312, H332

P210, P280, P301+P312, P304+P340, P305+P351+P338, P303+P361+P353

3-Pyridinecarboxylic acid
See Nicotinic acid, page 214

Pyridinium chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	P/7980/48

$C_5H_5N.HCl$
CAS: 628-13-7
MW: 115.56
Boiling point: 222 to 224°C
Melting point: 140 to 146°C
ADR/RID: 6.1, III
EINECS: 211-027-4
UN: 2811

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H302, H312, H332, H315, H335
P280, P302+P352, P261, P301+P312, P304+P340, P305+P351+P338

Assay: >97%

1-(2-Pyridylazo)-2-naphthol
pure

packaging		Mfr. No
1 g	Vial	P/8000/43
5 g	Glass jar	P/8000/44

$C_{15}H_{11}N_3O$
CAS: 85-85-8
MW: 249.27
Melting point: 138 to 141°C
EINECS: 201-637-9

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

4-(2-Pyridylazo)-resorcinol mono sodium salt
pure

packaging		Mfr. No
1 g	Vial	P/8040/43

$C_{11}H_8N_3NaO_2.H_2O$
CAS: 1141-59-9
MW: 215.21
Melting point: 188°C
EINECS: 214-528-6

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Pyrocatechol
See Catechol, page 80

Pyrogallol — Certified AR
for analysis

packaging		Mfr. No
100 g	Glass jar	P/8122/48

$C_6H_6O_3$
CAS: 87-66-1
MW: 126.11
Density at 20°C: 1.453
Boiling point: 309°C
Melting point: 131 to 135°C
ADR/RID: 6.1, II

EINECS: 201-762-9
UN: 2811
GHS: Muta. 2, Acute Tox. 4, Aquatic Chronic 3
H412, H302, H341, H332, H312
P280, P302+P352, P273, P301+P312, P304+P340

Assay (CG): >99%

Guaranteed analysis

pH (aqueous solution 5%)	4 to 5	Sodium (Na)	<200 ppm
Calcium (Ca)	<50 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<20 ppm		

Lot analysis on the label.

Pyrogallol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Glass jar	P/8120/48

$C_6H_6O_3$
CAS: 87-66-1
MW: 126.11
Density at 20°C: 1.453
Boiling point: 309°C
Melting point: 131 to 135°C
ADR/RID: 6.1, II

EINECS: 201-762-9
UN: 2811
GHS: Muta. 2, Acute Tox. 4, Aquatic Chronic 3
H412, H302, H341, H332, H312
P280, P302+P352, P273, P301+P312, P304+P340

Assay (CG): >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<100 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm

Pyrogallol
pure

packaging		Mfr. No
100 g	Glass jar	P/8080/48

$C_6H_6O_3$
CAS: 87-66-1
MW: 126.11
Density at 20°C: 1.453
Boiling point: 309°C
Melting point: 131 to 135°C
ADR/RID: 6.1, II

EINECS: 201-762-9
UN: 2811
GHS: Muta. 2, Acute Tox. 4, Aquatic Chronic 3
H412, H302, H341, H332, H312
P280, P302+P352, P273, P301+P312, P304+P340

Assay (CG): >98%

Pyrrolidine
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 mℓ	Coated Glass bottle	P/8140/PB05

C_4H_9N
CAS: 123-75-1
MW: 71.12
Density at 20°C: 0.866
Boiling point: 86 to 88°C
Melting point: -63°C
Flash point: 3°C
ADR/RID: 3, 8, II

EINECS: 204-648-7
UN: 1922
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1
H225, H314, H332, H302
P301+P330+P331, P280, P305+P351+P338, P310, P304+P340, P210

Assay (CG): >97%

Guaranteed analysis

Water	<3%

Quinhydrone
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	Q/0120/48

$C_{12}H_{10}O_4$
CAS: 106-34-3
MW: 218.21
Density at 20°C: 14
Melting point: 168 to 172°C
ADR/RID: 6.1, III
EINECS: 203-387-6

UN: 2811
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1
H301, H319, H335, H315, H400
P261, P273, P302+P352, P280, P305+P351+P338

Guaranteed analysis

Complies with standard IR spectrum: Pass		Potassium (K)	<50 ppm
Calcium (Ca)	<100 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<100 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm

Quinine sulfate dihydrate
pure

packaging		Mfr. No
25 g	Glass jar	Q/0136/46

$C_{40}H_{48}N_4O_4.H_2SO_4.2H_2O$
CAS: 6119-70-6
MW: 782.96
Melting point: 233 to 235°C
ADR/RID: 6.1, III
EINECS: 212-359-2

UN: 1544
GHS: Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1
H334, H302, H317
P261, P304+P341, P342+P311, P280, P301+P312

Guaranteed analysis

Complies with standard IR spectrum: Pass

Quinol
for analysis — Certified AR

packaging		Mfr. No
500 g	Plastic jar	Q/0152/53

$C_6H_6O_2$
CAS: 123-31-9
MW: 110.11
Density at 20°C: 1.32
Boiling point: 285 to 286°C
Melting point: 170 to 174°C
Flash point: 165°C
ADR/RID: 9, III
EINECS: 204-617-8

UN: 3077
GHS: Carc. 2, Muta. 2, Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, Aquatic Acute 1
H318, H341, H317, H351, H302, H400
P280, P312, P302+P350, P305+P351+P338, P301+P312, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<50 ppm	Pyrocatechol	<0.02%

Quinol
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
250 g	Plastic jar	Q/0150/50
500 g	Plastic jar	Q/0150/53

$C_6H_6O_2$
CAS: 123-31-9
MW: 110.11
Density at 20°C: 1.32
Boiling point: 285 to 286°C
Melting point: 170 to 174°C
Flash point: 165°C
ADR/RID: 9, III
EINECS: 204-617-8

UN: 3077
GHS: Carc. 2, Muta. 2, Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, Aquatic Acute 1
H318, H341, H317, H351, H302, H400
P280, P312, P302+P350, P305+P351+P338, P301+P312, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<50 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<200 ppm		

Quinone
See p-Benzoquinone (dried) , page 56

Raffinose hydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
25 g	Plastic jar	R/0020/46

$C_{18}H_{32}O_{16}.5H_2O$
CAS: 512-69-6
MW: 594.52

Melting point: 80°C
EINECS: 208-146-9

Guaranteed analysis

Water	15 to 15.5%	Lead (Pb)	<10 ppm
Specific rotation	103° to 106°	Residue after ignition	<0.1%
Reducing sugars	: <0.3%		

Rennet
pure

packaging		Mfr. No
25 g	Glass jar	R/0030/46

CAS: 9042-08-4
EINECS: 232-926-8

Guaranteed analysis

Identity test ..... : Pass

Resazurin tablets
pure

packaging		Mfr. No
10 PC	Glass jar	R/0040/99
1000 PC	Glass jar	R/0040/79

CAS: 550-82-3
EINECS: 208-987-1

Guaranteed analysis

Complies with standard IR spectrum: Pass

Resorcinol
for analysis — Certified AR

packaging		Mfr. No
100 g	Glass jar	R/0200/48
250 g	Glass jar	R/0200/50

$C_6H_6O_2$
CAS: 108-46-3
MW: 110.11
Density at 20°C: 1.272
Boiling point: 281°C
Melting point: 109 to 111°C
Flash point: 127°C
ADR/RID: 6.1, III

EINECS: 203-585-2
UN: 2876
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Aquatic Acute 1
H319, H315, H410, H302
P273, P302+P352, P280, P305+P351+P338

Assay (CG): >99%

Guaranteed analysis

Acidity	<0.0005 meq/g	Potassium (K)	<20 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Resorcinol
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Glass jar	R/0150/48
250 g	Glass jar	R/0150/50

$C_6H_6O_2$
CAS: 108-46-3
MW: 110.11
Density at 20°C: 1.272
Boiling point: 281°C
Melting point: 109 to 111°C
Flash point: 127°C
ADR/RID: 6.1, III

EINECS: 203-585-2
UN: 2876
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Aquatic Acute 1
H319, H315, H410, H302
P273, P302+P352, P280, P305+P351+P338

Assay (CG): >98%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Sodium (Na)	<500 ppm
Copper (Cu)	<50 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<100 ppm		

Rhenium standard metal solution 1000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLRE92Y
500 mℓ	Plastic bottle	SPPLRE92X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Rhodamine B C.I. 45170
pure

packaging		Mfr. No
100 g	Glass jar	R/0250/48

$C_{28}H_{31}ClN_2O_3$
CAS: 81-88-9
MW: 479.02
Density at 20°C: >1.0
Melting point: 210 to 211°C
ADR/RID: 6.1, III
EINECS: 201-383-9

UN: 2811
GHS: Muta. 2, Acute Tox. 4, Eye Dam. 1
H318, H341, H302
P280, P305+P351+P338, P301+P312, P260

Guaranteed analysis

Complies with standard IR spectrum: Pass

Conforming to the IR spectrum of reference.

Rhodium standard metal solution 1000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLRH32Y
500 mℓ	Plastic bottle	SPPLRH32X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Rhodium standard metal solution 10 ppm
for ICP-MS solution in HCl 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLRH11AY

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Rhodizonic acid sodium salt
pure

packaging		Mfr. No
5 g	Glass jar	R/0300/44

$C_6Na_2O_6$
CAS: 523-21-7
MW: 214.04

Melting point: >300°C
EINECS: 208-340-3

Guaranteed analysis

Identity test ..... : Pass

Riboflavin
for electrophoresis

packaging		Mfr. No
25 g	Plastic jar	R/P300/46

$C_{17}H_{20}N_4O_6$
CAS: 83-88-5
MW: 376.36
Melting point: 290°C
EINECS: 201-507-1

Assay: 98 to 102%

Ricinus oil
See Castor oil, page 80

Ringer's solution
pure, tablets

packaging		Mfr. No
1000 PC	Plastic jar	R/0350/79

EINECS: 233-140-8

Guaranteed analysis
Complies with standard IR spectrum: Pass

Quarter strength for milk testing.One tablet dissolved in 500mℓ of glass distilled water yields quarter strength solution.

Rose Bengal C.I. 45440
pure

packaging		Mfr. No
25 g	Glass jar	R/0400/46

$C_{20}H_2Cl_4I_4Na_2O_5$
CAS: 632-69-9
MW: 101.65
Flash point: >92°C
EINECS: 211-183-3
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Rose water
pure

packaging		Mfr. No
100 mℓ	Glass bottle	R/0370/05

CAS: 7732-18-5
Density at 20°C: 1
Boiling point: 100°C
Melting point: 0°C
EINECS: 231-791-2

Rubidium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLRB22Y
500 mℓ	Plastic bottle	SPPLRB22X

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Rubidium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	PLRB23Y
500 mℓ	Plastic bottle	PLRB23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Rubidium chloride
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
5 g	Plastic jar	R/0500/44

RbCl
CAS: 7791-11-9
MW: 120.92
Boiling point: 1390°C
Melting point: 718°C
EINECS: 232-240-9

Guaranteed analysis
Identity test ..... : Pass

Ruthenium standard metal solution 1000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLRU32Y
500 mℓ	Plastic bottle	SPPLRU32X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Ruthenium trichloride
pure, powder

packaging		Mfr. No
1 g	Vial	R/0600/43

$RuCl_3$
CAS: 10049-08-8
MW: 207.43
Density at 20°C: 3.11
Melting point: 500°C
ADR/RID: 6.1, III
EINECS: 233-167-5
UN: 3260
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Chronic 3
H412, H314, H302
P301+P330+P331, P280, P305+P351+P338, P310, P273, P301+P312

Guaranteed analysis
Identity test ..... : Pass

Saccharin
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	S/0040/48

$C_7H_5NO_3S$
CAS: 81-07-2
MW: 183.19
Density at 20°C: 0.828
Melting point: 226 to 230°C
EINECS: 201-321-0
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >98%

Guaranteed analysis

Water	<1%	Arsenic (As)	<2 ppm
Residue after ignition	<0.2%	Lead (Pb)	<10 ppm

Saccharin sodium dihydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	S/0080/48

$C_7H_4NNaO_3S.2H_2O$
CAS: 6155-57-3
MW: 241.21
EINECS: 204-886-1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >98%

Guaranteed analysis

Loss on drying	12 to 16%	Lead (Pb)	<10 ppm
Arsenic (As)	<2 ppm		

Safranine C.I 50240
pure

packaging		Mfr. No
25 g	Glass jar	S/0120/46

$C_{20}H_{19}ClN_4$
CAS: 477-73-6
MW: 350.84
EINECS: 207-518-8
GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Salicylaldehyde
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 mℓ	Coated Glass bottle	S/0200/PB05

$C_7H_6O_2$
CAS: 90-02-8
MW: 122.12
Density at 20°C: 1.16
Boiling point: 197°C
Melting point: -7°C
Flash point: 76°C
ADR/RID: 6.1, III
EINECS: 201-961-0
UN: 2810
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2
H315, H319, H311, H302
P280, P302+P352, P264, P270, P305+P351+P338, P301+P312

Salicylic acid
for analysis — Certified AR

packaging		Mfr. No
500 g	Plastic jar	S/0282/53

$C_7H_6O_3$
CAS: 69-72-7
MW: 138.12
Boiling point: 211°C
Melting point: 158 to 161°C
Flash point: 157°C
EINECS: 200-712-3
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H302, H318, H315, H335
P280, P305+P351+P338, P304+P340, P261, P301+P312, P302+P352

Assay: >99.8%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<1 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<1 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<1 ppm	Total silicon (Si)	<10 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<20 ppm	Zinc (Zn)	<5 ppm

Lot analysis on the label

Salicylic acid
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
250 g	Plastic jar	S/0280/50
500 g	Plastic jar	S/0280/53
1 kg	Plastic jar	S/0280/60

$C_7H_6O_3$
CAS: 69-72-7
MW: 138.12
Boiling point: 211°C
Melting point: 158 to 161°C
Flash point: 157°C
EINECS: 200-712-3
GHS: Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H302, H318, H315, H335
P280, P305+P351+P338, P304+P340, P261, P301+P312, P302+P352

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<20 ppm

Samarium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSM22Y
500 mℓ	Plastic bottle	SPPLSM22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Sand Ottawa
extra pure, 20-30 mesh — SLR

packaging		Mfr. No
1 kg	Plastic jar	S/0365/60
3 kg	Plastic jar	S/0365/63

SiO_2
CAS: 14808-60-7
MW: 60.08
Density at 20°C: 2.65
Boiling point: 2230°C
Melting point: 1610°C
EINECS: 238-878-4

Guaranteed analysis
Identity test ..... : Pass

Sand low iron
extra pure, 40-100 mesh — SLR

packaging		Mfr. No
1 kg	Plastic jar	S/0360/60
3 kg	Plastic jar	S/0360/63

SiO_2
CAS: 14808-60-7
MW: 60.08
Density at 20°C: 2.65
Boiling point: 2230°C
Melting point: 1610°C
EINECS: 238-878-4

Guaranteed analysis
Identity test ..... : Pass

Sand
extra pure, fine SLR

packaging		Mfr. No
3 kg	Plastic jar	S/0320/63
5 kg	Plastic jar	S/0320/65
25 kg	Plastic keg	S/0320/70

SiO_2
CAS: 14808-60-7
MW: 60.08
Density at 20°C: 2.65
Boiling point: 2230°C
Melting point: 1610°C
EINECS: 238-878-4

Guaranteed analysis
Identity test ..... : Pass

Sand sea, acid washed
specified reagents for general laboratory work- extra pure SLR

packaging		Mfr. No
1 kg	Plastic jar	S/0330/60
5 kg	Plastic jar	S/0330/65

SiO_2
CAS: 14808-60-7
MW: 60.08
Density at 20°C: 2.65
Boiling point: 2230°C
Melting point: 1610°C
EINECS: 238-878-4

Guaranteed analysis
Identity test ..... : Pass

Sand silver
pure

packaging		Mfr. No
3 kg	Plastic jar	S/0370/63
25 kg	Plastic keg	S/0370/70

SiO_2
CAS: 14808-60-7
MW: 60.08
Density at 20°C: 2.65
Boiling point: 2230°C
Melting point: 1610°C
EINECS: 238-878-4

Guaranteed analysis
Identity test ..... : Pass

Saponin
specified reagents for general laboratory work- extra pure SLR

packaging		Mfr. No
100 g	Plastic jar	S/0380/48

CAS: 8047-15-2
EINECS: 232-462-6
GHS: Eye Irrit. 2, STOT SE 3
H319, H335
P280, P261,
P305+P351+P338, P304+P340

Guaranteed analysis
Complies with standard IR spectrum: Pass

Scandium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSC22Y
250 mℓ	Plastic bottle	SPPLSC22T
500 mℓ	Plastic bottle	SPPLSC22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Scandium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSC23Y
500 mℓ	Plastic bottle	SPPLSC23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Scandium standard metal solution 10 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLSC21AY

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Schiff's reagent
pure, for determination of aldehydes

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/7300/PB08
1 ℓ	Coated Glass bottle	J/7300/PB15

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H302, H312, H315, H335
P280, P302+P352, P261, P301+P312, P304+P340, P305+P351+P338

SDS *See Sodium dodecyl sulfate, page 290*

Sebacoyl chloride solution
extra pure, 5% solution in trichloroethylene SLR

packaging		Mfr. No
100 mℓ	Coated Glass bottle	S/0423/PB05

CAS: 79-01-6
ADR/RID: 6.1, III
EINECS: 201-167-4
UN: 1710
GHS: Carc. 1B, Muta. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE
3, Aquatic Chronic 3
H350, H319, H315, H341, H336, H412
P280, P308+P313, P304+P340, P302+P350, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Selenium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8061/05
500 mℓ	HDPE Plastic bottle	J/8061/08

ADR/RID: 8, III
UN: 3264
GHS: Skin Corr. 1B
H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Selenium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8306/08

ADR/RID: 8, III
UN: 3264
GHS: Skin Corr. 1B
H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Selenium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8305/05

ADR/RID: 8, III
UN: 3264
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280,
P305+P351+P338, P310,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Selenium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSE22Y
250 mℓ	Plastic bottle	SPPLSE22T
500 mℓ	Plastic bottle	SPPLSE22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Selenium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSE23Y
500 mℓ	Plastic bottle	SPPLSE23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Selenium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLSE22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Selenium
specified reagents for general laboratory work- extra pure SLR

packaging		Mfr. No
25 g	Plastic jar	S/0441/46
1 kg	Plastic jar	S/0441/60

Se
CAS: 7782-49-2
MW: 78.96
Boiling point: 690°C
Melting point: 220 to 222°C
ADR/RID: 6.1, III
EINECS: 231-957-4
UN: 3283
GHS: Acute Tox. 3, STOT RE 2, Aquatic Chronic 4
H373, H301, H331, H413
P301+P310, P304+P340, P260, P273

Assay: >99.5%

Guaranteed analysis

Copper (Cu)	<100 ppm	Tellurium (Te)	<0.05%
Iron (Fe)	<100 ppm	Total sulphur (S)	<100 ppm

Selenous acid
pure

packaging		Mfr. No
100 g	Plastic jar	S/0520/48

H_2SeO_3
CAS: 7783-00-8
MW: 128.97
Melting point: 70°C
ADR/RID: 6.1, I
EINECS: 231-974-7
UN: 3283
GHS: Acute Tox. 3, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1
H410, H331, H301, H373
P301+P310, P304+P340, P260, P273

Guaranteed analysis
Identity test ..... : Pass

Semicarbazide hydrochloride SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/0560/48
25 kg	Plastic keg	S/0560/70

$CH_5N_3O.HCl$
CAS: 563-41-7
MW: 111.53
Melting point: 170 to 178°C
ADR/RID: 6.1, III
EINECS: 209-247-0
UN: 2811

GHS: Carc. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H351, H314, H301
P301+P310, P301+P330+P331, P280, P305+P351+P338, P310, P281

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<50 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<100 ppm	Hydrazine	<0.5%

Shellac orange
pure, flake

packaging		Mfr. No
250 g	Plastic jar	S/0600/50
500 g	Plastic jar	S/0600/53

CAS: 9000-59-3
EINECS: 232-549-9

Guaranteed analysis
Complies with standard IR spectrum: Pass

Silica gel incorporating 12-13% calcium sulfate as a binder
For Thin layer chromatography

packaging		Mfr. No
500 g	Plastic jar	S/0790/53

SiO_2
MW: 60.08

Guaranteed analysis
Identity test ..... : Pass

Silica gel 40 Angstrom pore size, 0.2-0.5mm
For chromatography column

packaging		Mfr. No
500 g	Plastic jar	S/0780/53
1 kg	Plastic jar	S/0780/60

SiO_2
CAS: 112926-00-8
MW: 60.08

Silica gel 60 Angstrom pore size, 6-35 micron
For chromatography column, Davisil® Silicagel

packaging		Mfr. No
500 g	Plastic jar	S/0691/53
1 kg	Plastic jar	S/0691/60
25 kg	Fibre Keg	S/0691/70

SiO_2
CAS: 7631-86-9
MW: 60.08
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silica gel 60 Angstrom pore size, 20-45 micron
For chromatography column, Davisil® Silicagel

packaging		Mfr. No
500 g	Plastic jar	S/0692/53
1 kg	Plastic jar	S/0692/60
25 kg	Fibre Keg	S/0692/70

SiO_2
CAS: 7631-86-9
MW: 60.08
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silica gel 60 Angstrom pore size, 40-63 micron
For chromatography column, Davisil® Silicagel

packaging		Mfr. No
500 g	Plastic jar	S/0698/53
1 kg	Plastic jar	S/0698/60
25 kg	Fibre Keg	S/0698/70

SiO_2
CAS: 7631-86-9
MW: 60.08
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silica gel 60 Angstrom pore size, 60-200 micron
For chromatography column, Davisil® Silicagel

packaging		Mfr. No
500 g	Plastic jar	S/0694/53
1 kg	Plastic jar	S/0694/60
25 kg	Fibre Keg	S/0694/70

SiO_2
CAS: 7631-86-9
MW: 60.08
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silica gel 60 Angstrom pore size, 35-70 micron
For chromatography column, Davisil® Silicagel

packaging		Mfr. No
500 g	Plastic jar	S/0693/53
1 kg	Plastic jar	S/0693/60
5 kg	Plastic keg	S/0693/65
25 kg	Fibre Keg	S/0693/70

SiO_2
CAS: 7631-86-9
MW: 60.08
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silica gel 60 Angstrom pore size, 70-200 micron
For chromatography column, Davisil® Silicagel

packaging		Mfr. No
500 g	Plastic jar	S/0695/53
1 kg	Plastic jar	S/0695/60
25 kg	Fibre Keg	S/0695/70

SiO_2
CAS: 7631-86-9
MW: 60.08
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silica gel 100 Angstrom pore size, 35-70 micron
For chromatography column,Davisil® Silicagel

packaging		Mfr. No
25 kg	Fibre Keg	S/0696/70

SiO_2
CAS: 7631-86-9
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silica gel 150 Angstrom pore size, 35-70 micron
for chromatography column, Davisil Silicagel

packaging		Mfr. No
500 g	Plastic jar	S/0699/53
1 kg	Plastic jar	S/0699/60

SiO_2
CAS: 7631-86-9
MW: 60.08
EINECS: 231-545-4

Silica gel grade 923 Davisil®
For chromatography column

packaging		Mfr. No
100 g	Plastic jar	S/0697/48
250 g	Plastic jar	S/0697/50
500 g	Plastic jar	S/0697/53

SiO_2
CAS: 7631-86-9
MW: 60.08
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silica gel (2.5-6.0 mm) self indicating
dessicant agent

packaging		Mfr. No
500 g	Plastic jar	S/0762/53
1 kg	Plastic jar	S/0762/60
5 kg	Plastic keg	S/0762/65

SiO_2
CAS: 7631-86-9
MW: 60.08
Density at 20°C: 2.20
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Colour change orange to green as water absorbed

Silica gel (2.5-6.0 mm) self indicating (iron salt)
pure, Dessicant agent

packaging		Mfr. No
500 g	Plastic jar	S/0761/53
1 kg	Plastic jar	S/0761/60
5 kg	Plastic keg	S/0761/65

SiO_2
CAS: 7631-86-9
MW: 60.08
Density at 20°C: 2.20
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Contains iron salts,
Colour change from orange to colorless as water is absorbed.

Silica gel (2.5-6.0 mm)
pure, Dessicant agent

packaging		Mfr. No
500 g	Plastic jar	S/0720/53
1 kg	Plastic jar	S/0720/60

SiO_2
CAS: 7631-86-9
MW: 60.08
EINECS: 231-545-4

Silica gel (1.0-3.0 mm)
pure, Dessicant agent

packaging		Mfr. No
500 g	Plastic jar	S/0730/53

SiO_2
CAS: 7631-86-9
MW: 60.08
EINECS: 231-545-4

Silica precipitated
pure

packaging		Mfr. No
500 g	Plastic jar	S/0680/53

SiO_2
CAS: 7631-86-9
MW: 60.09
Boiling point: 2230°C
Melting point: 1710°C
EINECS: 231-545-4

Silicon powder
technical

packaging		Mfr. No
500 g	Plastic jar	S/0850/53

CAS: 7440-21-3
Density at 20°C: 0.6
Melting point: 1410°C
ADR/RID: 4.1, III
EINECS: 231-130-8
UN: 1346
GHS: Flam. Sol. 2
H228
P280, P210

Guaranteed analysis
Identity test ..... : Pass

Silicon standard metal solution 1000 ppm
for AAS, solution aqueous

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8062/05
500 mℓ	HDPE Plastic bottle	J/8062/08

Density at 20°C: 1
EINECS: 240-968-3

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Silicon standard metal solution 1000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSI92Y
250 mℓ	Plastic bottle	SPPLSI92T
500 mℓ	Plastic bottle	SPPLSI92X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Silicon standard metal solution 10 000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSI93Y
500 mℓ	Plastic bottle	SPPLSI93X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

UHPLC
Filtered to 0.1 µm, Fisher Chemical UHPLC gradient grade solvents (Acetonitrile, Methanol and Water) are perfect for those working at high pressure.
See page 309 for more information

Silicon standard metal solution 10 000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLSI9A3X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Silicon tetrachloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	S/0844/PB08

$SiCl_4$
CAS: 10026-04-7
MW: 169.90
Density at 20°C: 1.48
Boiling point: 58°C
Melting point: -70°C
ADR/RID: 8, II
EINECS: 233-054-0

UN: 1818
GHS: Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1, STOT SE 3
H335, H301, H331, H314, EUH014
P280, P305+P351+P338, P261, P402+P404

Assay: >97%

Silver standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8064/05
500 mℓ	HDPE Plastic bottle	J/8064/08

ADR/RID: 8, III
UN: 3264
GHS: Skin Corr. 1B
H314

P301+P330+P331, P280, P305+P351+P338, P310, P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Silver standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8310/08

ADR/RID: 8, III
UN: 3264
GHS: Skin Corr. 1B
H314

P301+P330+P331, P280, P305+P351+P338, P310, P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Silver standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8309/05

ADR/RID: 8,
III UN: 3264

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Silver standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLAG22Y
250 mℓ	Plastic bottle	SPPLAG22T
500 mℓ	Plastic bottle	SPPLAG22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Silver standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLAG23Y
500 mℓ	Plastic bottle	SPPLAG23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Silver standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLAG22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Silver metal powder — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Vial	S/0960/45

Ag
CAS: 7440-22-4
MW: 107.87

Boiling point: 2212°C
Melting point: 961°C
EINECS: 231-131-3

Guaranteed analysis
Identity test ..... : Pass

The prices apply to the silver and derivatives vary with the price of the raw material.

Silver metal foil — SLR
extra pure, 0.1 mm thick, approx 10 g

packaging		Mfr. No
10 g	Plastic jar	S/0880/90

Ag
CAS: 7440-22-4
MW: 107.87
Density at 20°C: 10.5

Boiling point: 2212°C
Melting point: 961°C
EINECS: 231-131-3

Guaranteed analysis
Identity test ..... : Pass

The prices apply to the silver and derivatives vary with the price of the raw material.

Silver metal wire 1.2 mm — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Glass jar	S/1010/45

Ag
CAS: 7440-22-4
MW: 107.87

Boiling point: 2212°C
Melting point: 961°C
EINECS: 231-131-3

Guaranteed analysis
Identity test ..... : Pass

The prices apply to the silver and derivatives vary with the price of the raw material.

Silver chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Glass jar	S/1120/46

AgCl
CAS: 7783-90-6
MW: 143.32

Boiling point: 1150°C
Melting point: 455°C
EINECS: 232-033-3

Assay: >99%

Silver diethyldithiocarbamate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
5 g	Glass jar	S/1200/44

$C_5H_{10}AgNS_2$
CAS: 1470-61-7
MW: 256.14
Melting point: 172 to 175°C
EINECS: 216-003-7
GHS: Acute Tox. 4, Skin Irrit.

2, Eye Irrit. 2, STOT SE 3
H335, H302, H315, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Silver nitrate — Certified AR
for analysis

packaging		Mfr. No
25 g	Glass jar	S/1280/46
100 g	Glass jar	S/1280/48
250 g	Glass jar	S/1280/50
500 g	Glass jar	S/1280/53
10 kg	Plastic keg	S/1280/68

$AgNO_3$
CAS: 7761-88-8
MW: 169.87
Boiling point: 444°C
Melting point: 212°C
ADR/RID: 5.1, II
EINECS: 231-853-9
UN: 1493

GHS: Ox. Sol. 2, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H410, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210, P273

Assay: >99.9%

Guaranteed analysis

Water insoluble matter	<0.005%	Potassium (K)	<20 ppm
Not precipitated by HCl	: <0.01%	Sodium (Na)	<20 ppm
Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.0002%
Copper (Cu)	<2 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<5 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<1 ppm	Molybdenum (Mo)	<1 ppm
Cadmium (Cd)	<1 ppm	Nickel (Ni)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Silver nitrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Glass jar	S/1240/46
100 g	Glass jar	S/1240/48
250 g	Glass jar	S/1240/50
500 g	Glass jar	S/1240/53

$AgNO_3$
CAS: 7761-88-8
MW: 169.87
Boiling point: 444°C
Melting point: 212°C
ADR/RID: 5.1, II
EINECS: 231-853-9
UN: 1493

GHS: Ox. Sol. 2, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H410, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210, P273

Assay: >99.8%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<100 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<50 ppm

Silver nitrate solution 1000 g/ℓ
For COD

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/7380/PB08

ADR/RID: 8, II
UN: 1760
GHS: Skin Corr. 1B, Aquatic Chronic 2

H314, H411
P301+P330+P331, P280, P305+P351+P338, P310, P273

Silver nitrate solution 1M (1N)
Standard solution ready to use for volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7320/PB15
2.5 ℓ	HDPE Plastic bottle	J/7320/PB17

CAS: 7761-88-8
Density at 20°C: 1.13
ADR/RID: 8, II
EINECS: 231-853-9
UN: 1760

GHS: Skin Corr. 1B, Aquatic Chronic 2
H314, H411
P301+P330+P331, P280, P305+P351+P338, P310, P273

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Silver nitrate solution 0.1M (0.1N) — Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7330/15
2.5 ℓ	HDPE Plastic bottle	J/7330/17
10 ℓ	Bag in box	J/7330/24
25 ℓ	HDPE Drum	J/7330/25

CAS: 7761-88-8
Density at 20°C: 1.015
EINECS: 231-853-9
GHS: Skin Irrit. 2, Eye Irrit. 2,

Aquatic Chronic 3
H319, H412, H315
P273, P302+P352, P280, P305+P351+P338

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Silver nitrate solution 0.1M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7330C/05
6	Ampoule	J/7330C/90

CAS: 7761-88-8
Density at 20°C: 1.13
ADR/RID: 8, II
EINECS: 231-853-9
UN: 1760

GHS: Skin Corr. 1B, Aquatic Chronic 2
H314, H411
P301+P330+P331, P280, P305+P351+P338, P310, P273

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Silver nitrate solution 0.05M (0.05N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7340/15
2.5 ℓ	HDPE Plastic bottle	J/7340/17

CAS: 7761-88-8
Density at 20°C: 1.015
EINECS: 231-853-9
GHS: Skin Irrit. 2, Eye Irrit. 2,

Aquatic Chronic 3
H319, H412, H315
P273, P302+P352, P280, P305+P351+P338

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Silver nitrate solution 0.0282M (0.0282N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
250 mℓ	Glass bottle	J/7370/07
1 ℓ	HDPE Plastic bottle	J/7370/15
2.5 ℓ	HDPE Plastic bottle	J/7370/17

CAS: 7761-88-8
Density at 20°C: 1.015
EINECS: 231-853-9
GHS: Skin Irrit. 2, Eye Irrit. 2,

Aquatic Chronic 3
H319, H412, H315
P273, P302+P352, P280, P305+P351+P338

Manufactured to a tolerance of ± 0.3%.
See the full range of Standard Volumetric solution page 323.

Silver nitrate solution 0.025M (0.025N)
Standard solution ready to use, For volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/7310/15
2.5 ℓ	HDPE Plastic bottle	J/7310/17

CAS: 7761-88-8
Density at 20°C: 1.015
ADR/RID: /II
EINECS: 231-853-9
GHS: Skin Irrit. 2, Eye Irrit. 2,

Aquatic Chronic 3
H319, H412, H315
P273, P302+P352, P280, P305+P351+P338

See the full range of Standard Volumetric solution page 323.
Manufactured to a tolerance of ± 0.1%

Silver nitrate solution 0.02M (0.02N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7350/15
2.5 ℓ	HDPE Plastic bottle	J/7350/17

CAS: 7761-88-8
Density at 20°C: 1.015
EINECS: 231-853-9
GHS: Skin Irrit. 2, Eye Irrit. 2,

Aquatic Chronic 3
H319, H412, H315
P273, P302+P352, P280, P305+P351+P338

Manufactured to a tolerance of ± 0.3%.
See the full range of Standard Volumetric solution page 323.

Silver oxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Glass jar	S/1320/45
25 g	Glass jar	S/1320/46

Ag_2O
CAS: 20667-12-3
MW: 231.74
Density at 20°C: 7.14
ADR/RID: 5.1, 8, II
EINECS: 243-957-1

UN: 3085
GHS: Ox. Sol. 2, Skin Corr. 1B, Eye Dam. 1
H272, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Guaranteed analysis
Identity test ..... : Pass

Silver sulfate — Certified AR
for analysis

packaging		Mfr. No
25 g	Glass jar	S/1400/46
100 g	Glass jar	S/1400/48
500 g	Glass jar	S/1400/53

Ag_2SO_4
CAS: 10294-26-5
MW: 311.79
Boiling point: 1085°C
Melting point: 652°C

EINECS: 233-653-7
GHS: Eye Dam. 1
H318
P280, P305+P351+P338, P310

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<5 ppm	Zinc (Zn)	<10 ppm
Iron (Fe)	<5 ppm	Copper (Cu)	<5 ppm
Lead (Pb)	<5 ppm	Iron (Fe)	<5 ppm
Magnesium (Mg)	<20 ppm	Lead (Pb)	<5 ppm
Potassium (K)	<50 ppm	n-Butyl formate	<0.001%
Sodium (Na)	<50 ppm	Total nitrogen (N)	<20 ppm
Total chloride (Cl)	<0.001%		

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<5 ppm
Barium (Ba)	<5 ppm	Molybdenum (Mo)	<5 ppm
Cadmium (Cd)	<5 ppm	Nickel (Ni)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
CO	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm

Lot analysis on the label.

Silver sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Glass jar	S/1360/46
100 g	Glass jar	S/1360/48

Ag_2SO_4
CAS: 10294-26-5
MW: 311.79
Boiling point: 1085°C
Melting point: 652°C

EINECS: 233-653-7
GHS: Eye Dam. 1
H318
P280, P305+P351+P338, P310

Assay: >98.5%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<20 ppm	n-Butyl formate	<0.002%
Lead (Pb)	<20 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm

Silver sulfate solution 5%w/v (d = 1.84) in sulfuric acid
For COD

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	J/7410/PB17

Ag_2SO_4
MW: 311.79
ADR/RID: 8,
II UN: 1830

Guaranteed analysis
Assay (w/w) ..... : 4.99 to 5.01 % Dichromate demand (mℓ $FeSO_4$) ... <2 mℓ

Silver sulfate solution 1%w/v (d = 1.84) in sulfuric acid
For COD

packaging		Mfr. No
1 ℓ	Coated Glass bottle	J/7400/PC15
2.5 ℓ	Coated Glass bottle	J/7400/PB17

Ag_2SO_4
CAS: 10294-26-5
MW: 311.79
Density at 20°C: 1.84
ADR/RID: 8, II
EINECS: 233-653-7

UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Guaranteed analysis
Assay (silver) ..... : 0.9 to 1.1% Dichromate demand (mℓ $FeSO_4$) ... <2 mℓ

Soap powder
pure, hard

packaging		Mfr. No
500 g	Plastic jar	S/1450/53

Guaranteed analysis
Identity test ..... : Pass

Soap solution Clarks'
pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/7490/17

Flash point: 25°C
ADR/RID: 3, III
UN: 1170

GHS: Flam. Liq. 3
H226
P210

Soap solution Wanklyn
pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/7500/17

Boiling point: 78°C
Flash point: 27°C
ADR/RID: 3, III
UN: 1170

GHS: Flam. Liq. 3
H226
P210

Soda lime, granules — SLR
extra pure, 1.0-2.5mm not hygroscopic self indicating

packaging		Mfr. No
500 g	Plastic jar	S/1700/53

CAS: 8006-28-8
ADR/RID: 8, III
UN: 1907
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P301+P330+P331, P280, P305+P351+P338, P310

Guaranteed analysis
Identity test ..... : Pass

Virage from green to brown.

Soda lime — SLR
extra pure, 1.0-2.5mm not hygroscopic granules

packaging		Mfr. No
500 g	Plastic jar	S/1600/53

CAS: 8006-28-8
ADR/RID: 8, III
UN: 1907
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P301+P330+P331, P280, P305+P351+P338, P310

Guaranteed analysis
Identity test ..... : Pass

Soda lime — SLR
extra pure, 2.5-5mm not hygroscopic granules

packaging		Mfr. No
250 g	Plastic jar	S/1560/50
500 g	Plastic jar	S/1560/53
1 kg	Plastic jar	S/1560/60
5 kg	Plastic keg	S/1560/65

CAS: 8006-28-8
ADR/RID: 8, III
UN: 1907
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P301+P330+P331, P280, P305+P351+P338, P310

Guaranteed analysis
Identity test ..... : Pass

Sodium standard solution 1000 ppm (1 mg/mℓ)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4562/05

Manufactured to a tolerance of ± 1%.

Sodium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8065/05
500 mℓ	HDPE Plastic bottle	J/8065/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314

P280, P301+P330+P331, P310, P303+P361+P353, P305+P351+P338

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Sodium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8316/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314

P280, P301+P330+P331, P310, P303+P361+P353, P305+P351+P338

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Sodium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8315/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Sodium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLNA22Y
250 mℓ	Plastic bottle	SPPLNA22T
500 mℓ	Plastic bottle	SPPLNA22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Sodium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLNA12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Sodium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLNA23Y
500 mℓ	Plastic bottle	SPPLNA23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Sodium standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLNA13X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Sodium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLNA22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Sodium
extra pure, metal sticks in liquid paraffin — SLR

packaging		Mfr. No
100 g	Aluminium jar	S/1920/48

Na
CAS: 7440-23-5
MW: 23.99
Boiling point: 883°C
Melting point: 98°C
ADR/RID: 4.3, I
EINECS: 231-132-9
UN: 1428

GHS: Water-react. 1, Skin Corr. 1B, Eye Dam. 1
H260, H314, EUH014
P301+P310,
P301+P330+P331, P280, P305+P351+P338, P310, P402+P404

Guaranteed analysis

Calcium (Ca)	<1000 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<10 ppm		

Sodium acetate anhydrous
for analysis — Certified AR

packaging		Mfr. No
250 g	Plastic jar	S/2120/50
500 g	Plastic jar	S/2120/53
1 kg	Plastic jar	S/2120/60
25 kg	Plastic keg	S/2120/70

$C_2H_3NaO_2$
CAS: 127-09-3
MW: 82.04

Melting point: 324°C
Flash point: >250°C
EINECS: 204-823-8

Assay: >99%

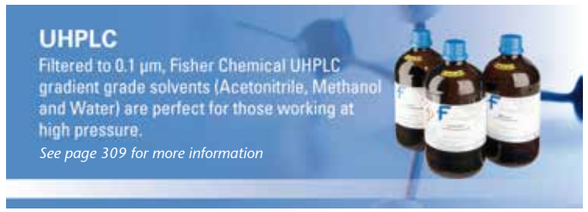
Guaranteed analysis

Acidity	<0.0005 meq/g	Magnesium (Mg)	<5 ppm
Alkalinity	<0.001 meq/g	Potassium (K)	<50 ppm
pH (aqueous solution 5%)	7 to 9.2	Total chloride (Cl)	<0.0005%
Loss on drying	<1%	Total nitrogen (N)	<20 ppm
Insoluble matter	<0.01%	Total phosphorus (P)	<5 ppm
Calcium (Ca)	<50 ppm	Total silicon (Si)	<20 ppm
Carbonate (Na_2CO_3)	<0.02%	Total sulphur (S)	<20 ppm
Copper (Cu)	<5 ppm	Zinc (Zn)	<10 ppm
Iron (Fe)	<5 ppm	Phosphate (PO_4)	<0.001%
Lead (Pb)	<5 ppm	Sulfate (SO_4)	<0.003%

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.



Sodium acetate anhydrous
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	S/2080/53
1 kg	Plastic jar	S/2080/60
5 kg	Plastic keg	S/2080/65

$C_2H_3NaO_2$
CAS: 127-09-3
MW: 82.04

Melting point: 324°C
Flash point: >250°C
EINECS: 204-823-8

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<1000 ppm		

Sodium acetate, concentrated solution 0.1M, (0.5N)
Standard concentrate, For volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7440C/05

Each ampoule makes up 500mℓ of solution

Sodium acetate trihydrate
for HPLC — Certified

packaging		Mfr. No
250 g	Plastic jar	S/2046/50
1 kg	Plastic jar	S/2046/60

$C_2H_3NaO_2.3H_2O$
CAS: 6131-90-4
MW: 136.08

Density at 20°C: 1.45
Melting point: 58°C
EINECS: 204-814-9

Assay: >99%

Guaranteed analysis

Reaction (5% solution) at 25°C	: 7.5 to 9.2	Lead (Pb)	<5 ppm
Iron (Fe)	<3 ppm	n-Butyl formate	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.02 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Sodium acetate trihydrate
HPLC for electrochemical detection — Certified

packaging		Mfr. No
250 g	Plastic jar	S/2052/50

$C_2H_3NaO_2.3H_2O$
CAS: 6131-90-4
MW: 136.08

Density at 20°C: 1.45
Melting point: 58°C
EINECS: 204-814-9

Assay: >99%

Guaranteed analysis

Electrochemical test	Pass	Iron (Fe)	<3 ppm
Reaction (5% solution) at 25°C	: 7.5 to 9.2	Lead (Pb)	<5 ppm
		n-Butyl formate	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.02 A.U.

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Electrode- Graphite.
Lot analysis on the label.
Filtered to 0.2 µm.

Sodium acetate trihydrate
for analysis, crystals — Certified AR

packaging		Mfr. No
500 g	Plastic jar	S/2040/53
1 kg	Plastic jar	S/2040/60
2.5 kg	Plastic jar	S/2040/62
5 kg	Plastic keg	S/2040/65

$C_2H_3NaO_2.3H_2O$
CAS: 6131-90-4
MW: 136.08

Density at 20°C: 1.45
Melting point: 58°C
EINECS: 204-814-9

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	8 to 9	Potassium (K)	<50 ppm
Substances reducing $KMnO_4$	<0.005%	Total chloride (Cl)	<0.0005%
Calcium (Ca)	<10 ppm	Total nitrogen (N)	<10 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<5 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<10 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium acetate trihydrate
extra pure, crystals — SLR, Eur.Ph.,BP

packaging		Mfr. No
500 g	Plastic jar	S/2000/53
1 kg	Plastic jar	S/2000/60
2.5 kg	Plastic jar	S/2000/62
5 kg	Plastic keg	S/2000/65

$C_2H_3NaO_2.3H_2O$
CAS: 6131-90-4
MW: 136.08

Density at 20°C: 1.45
Melting point: 58°C
EINECS: 204-814-9

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	7.5 to 9	Magnesium (Mg)	<20 ppm
Loss on drying	39 to 40.5%	Potassium (K)	<200 ppm
Heavy metals	<10 ppm	Sulfate (SO_4)	<200 ppm
Arsenic (As)	<2 ppm	n-Butyl formate	<0.01%
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<20 ppm	Total silicon (Si)	<100 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<20 ppm

Sodium alginate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	S/2160/53

CAS: 9005-38-3
Melting point: >300°C

Guaranteed analysis
Complies with standard IR spectrum: Pass

Sodium aluminate
Technical

packaging		Mfr. No
1 kg	Plastic jar	S/2200/60

$AlO_2.Na$
CAS: 1302-42-7
MW: 81.97
Melting point: 1650°C
ADR/RID: 8, III
EINECS: 215-100-1

UN: 2812
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Guaranteed analysis
Identity test ..... : Pass

Sodium arsenate hydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	S/2272/50

$Na_2HAsO_4.7H_2O$
CAS: 10048-95-0
MW: 312.01
ADR/RID: 6.1, II
UN: 1685
GHS: Carc. 1B, Acute Tox. 3,

Aquatic Acute 1, Aquatic Chronic 1
H301, H331, H350, H400
P201, P280, P301+P310, P304+P340, P310, P273

Assay: 99 to 102%

Guaranteed analysis

pH (aqueous solution 5%)	8.5 to 9	Potassium (K)	<100 ppm
Calcium (Ca)	<50 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<100 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<20 ppm
Magnesium (Mg)	<20 ppm	Arsenite	<0.002%

Lot analysis on the label.

Sodium arsenite — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/2330/48

$NaAsO_2$
CAS: 7784-46-5
MW: 129.91
Density at 20°C: 1.87
Melting point: 615°C
ADR/RID: 6.1, II

EINECS: 232-070-5
UN: 2027
GHS: Acute Tox. 2, Aquatic Acute 1, Aquatic Chronic 1
H350, H331, H300, H310, H410
P201, P313, P273, P280

Assay: >98%

Guaranteed analysis

Chloride (Cl)	<0.04%	Lead (Pb)	<0.01%
Copper (Cu)	<0.01%	Nickel (Ni)	<0.1%
Iron (Fe)	<0.01%	Sulfate (SO_4)	<0.1%

Sodium arsenite solution 0.05M (0.1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7510/PB15
2.5 ℓ	HDPE Plastic bottle	J/7510/PB17

ADR/RID: 6.1, III
UN: 1686
GHS: Aquatic Chronic 3

H350, H412
P281, P308+P313, P273

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Sodium azide — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	S/2380/48
500 g	Plastic jar	S/2380/53

NaN_3
CAS: 26628-22-8
MW: 65.01
Density at 20°C: 1.85
Boiling point: 300°C
Melting point: 275°C
ADR/RID: 6.1, II

EINECS: 247-852-1
UN: 1687
GHS: Acute Tox. 2, Aquatic Acute 1, Aquatic Chronic 1
H300, H410, EUH032
P301+P310, P280, P302+P350, P273

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Potassium (K)	<100 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.001%
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label.

Sodium azide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/2360/48
500 g	Plastic jar	S/2360/53
10 kg	Plastic keg	S/2360/68

NaN_3
CAS: 26628-22-8
MW: 65.01
Density at 20°C: 1.85
Boiling point: 300°C
Melting point: 275°C
ADR/RID: 6.1, II

EINECS: 247-852-1
UN: 1687
GHS: Acute Tox. 2, Aquatic Acute 1, Aquatic Chronic 1
H300, H410, EUH032
P301+P310, P280, P302+P350, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Sodium benzoate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/2441/53

$C_7H_5NaO_2$
CAS: 532-32-1
MW: 144.11
Melting point: 300°C

EINECS: 208-534-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	7 to 8	Iron (Fe)	<1 ppm
Loss on drying	<1%	Lead (Pb)	<1 ppm
Aluminium (Al)	<2 ppm	Lithium (Li)	<2 ppm
Barium (Ba)	<2 ppm	Magnesium (Mg)	<50 ppm
Cadmium (Cd)	<2 ppm	Manganese (Mn)	<2 ppm
Calcium (Ca)	<100 ppm	Molybdenum (Mo)	<2 ppm
Chlorine (Cl) compounds	<0.01%	Nickel (Ni)	<2 ppm
Chromium (Cr)	<2 ppm	Potassium (K)	<500 ppm
Cobalt (Co)	<2 ppm	Propan--1-ol	<2 ppm
Copper (Cu)	<1 ppm		

Strontium (Sr)	<2 ppm	Total silicon (Si)	<50 ppm
Titanium (Ti)	<2 ppm	Total sulphur (S)	<100 ppm
n-Butyl formate	<0.005%	Vanadium (V)	<2 ppm
Total phosphorus (P)	<50 ppm		

Lot analysis on the label.

Sodium benzoate — SLR, Eur.Ph., BP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/2440/53
1 kg	Plastic jar	S/2440/60
25 kg	Plastic keg	S/2440/70

$C_7H_5NaO_2$
CAS: 532-32-1
MW: 144.11
Melting point: 300°C

EINECS: 208-534-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Loss on drying	<2%	Potassium (K)	<1000 ppm
Calcium (Ca)	<500 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<100 ppm

Sodium bichromate
See Sodium dichromate dihydrated, page 288

Sodium bismuthate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/2480/48

$NaBiO_3$
CAS: 12232-99-4
MW: 279.96
EINECS: 235-455-6

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H302, H315, H319, H335
P264, P270, P301+P330+P331

Guaranteed analysis
Identity test ..... : Pass

Sodium borate decahydrate
See di-Sodium tetraborate decahydrated, page 305

Sodium borohydride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
10 g	Plastic jar	S/2560/45
25 g	Plastic jar	S/2560/46
100 g	Plastic jar	S/2560/48

$NaBH_4$
CAS: 16940-66-2
MW: 37.83
Melting point: 400°C
Flash point: 69°C
ADR/RID: 4.3, I
EINECS: 241-004-4

UN: 1426
GHS: Water-react. 1, Acute Tox. 3, Skin Corr. 1C, Eye Dam. 1
H260, H314, H301, H332
P280, P305+P351+P338, P310, P223, P260, P264

Assay: >98%

Guaranteed analysis
Identity test ..... : Pass

Sodium bromate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/2600/53

$NaBrO_3$
CAS: 7789-38-0
MW: 150.90
Density at 20°C: 3.33
Melting point: 381°C
ADR/RID: 5.1, II
EINECS: 232-160-4

UN: 1494
GHS: Ox. Sol. 1, Eye Irrit. 2, STOT SE 3
H271, H335, H319
P210, P261, P280, P305+P351+P338

Assay: >95%

Sodium bromide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/2640/53
3 kg	Plastic jar	S/2640/63

NaBr
CAS: 7647-15-6
MW: 102.89
Density at 20°C: 3.208

Boiling point: 1390°C
Melting point: 755°C
EINECS: 231-599-9

Assay: >99%

Guaranteed analysis

Alkalinity	<0.002 meq/g	Lead (Pb)	<5 ppm
Loss on drying	<3%	Sulfate (SO_4)	<0.02%
Iron (Fe)	<10 ppm	n-Butyl formate	<0.4%

Sodium cacodylate trihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/2660/48

$Na(CH_3)_2AsO_2.3H_2O$
CAS: 124-65-2
MW: 214.03
Melting point: -61°C
ADR/RID: 6.1, II
EINECS: 204-708-2

UN: 1688
GHS: Acute Tox. 3, Aquatic Acute 1, Aquatic Chronic 1
H331, H410, H301, H350
P301+P310, P201, P308+P313, P304+P340, P273

Assay: >97%

Guaranteed analysis

Acidity	<0.07 meq/g	Sulfate (SO_4)	<0.3%
Alkalinity	<0.025 meq/g	n-Butyl formate	<0.1%

Sodium carbonate anhydrous — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/2920/53
1 kg	Plastic jar	S/2920/60
2.5 kg	Plastic jar	S/2920/62
5 kg	Plastic keg	S/2920/65

CNa_2O_3
CAS: 497-19-8
MW: 105.99
Density at 20°C: 2.53
Boiling point: 1600°C
Melting point: 851°C
EINECS: 207-838-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99.9%

Guaranteed analysis

Water insoluble matter	<0.005%	Total chloride (Cl)	<0.001%
Loss on drying 300°C	: <1%	Total nitrogen (N)	<10 ppm
Calcium (Ca)	<100 ppm	Total phosphorus (P)	<5 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<10 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<20 ppm	Phosphate (PO_4)	<0.001%
Potassium (K)	<50 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium carbonate anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/2880/53
1 kg	Plastic jar	S/2880/60
2.5 kg	Plastic jar	S/2880/62
5 kg	Plastic keg	S/2880/65
25 kg	Fibre Keg	S/2880/70

Na_2CO_3
CAS: 497-19-8
MW: 105.99
Density at 20°C: 2.53
Boiling point: 1600°C
Melting point: 851°C
EINECS: 207-838-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

Loss on drying	<2%	Potassium (K)	<200 ppm
Calcium (Ca)	<500 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm

Sodium carbonate anhydrous
Technical

packaging		Mfr. No
2.5 kg	Plastic jar	S/2840/62
25 kg	Fibre Keg	S/2840/70

Na_2CO_3
CAS: 497-19-8
MW: 105.99
Density at 20°C: 2.53
Boiling point: 1600°C
Melting point: 851°C
EINECS: 207-838-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis

Identity test ..... : Pass

Sodium carbonate decahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/2760/53
1 kg	Plastic jar	S/2760/60
5 kg	Plastic keg	S/2760/65

$Na_2CO_3.10H_2O$
CAS: 6132-02-1
MW: 286.14
Density at 20°C: 1.46
Melting point: 34°C
EINECS: 207-838-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Aluminium (Al)	<5 ppm	Total chloride (Cl)	<0.0015%
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<2 ppm	Total phosphorus (P)	<5 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<2 ppm	Total sulphur (S)	<20 ppm
Potassium (K)	<50 ppm		

Typical analysis

Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

Sodium carbonate decahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/2720/60
2.5 kg	Plastic jar	S/2720/62
5 kg	Plastic keg	S/2720/65

$Na_2CO_3.10H_2O$
CAS: 6132-02-1
MW: 286.14
Density at 20°C: 1.46
Melting point: 34°C
EINECS: 207-838-8
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<100 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<200 ppm		

Sodium carbonate decahydrate
technical

packaging		Mfr. No
3 kg	Plastic jar	S/2700/63

$Na_2CO_3.10H_2O$
CAS: 6132-02-1
MW: 286.14
Density at 20°C: 1.46
Melting point: 34°C
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis

Identity test ..... : Pass

Sodium carbonate solution 0.05M (0.1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7580/PB15
2.5 ℓ	HDPE Plastic bottle	J/7580/17

P262

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sodium carbonate solution 0.05M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7580C/05
6	Ampoule	J/7580C/90

P262

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sodium carbonate solution 0.5M (1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7520/PB15
2.5 ℓ	HDPE Plastic bottle	J/7520/17

P262

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sodium chlorate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	S/3045/50

$NaClO_3$
CAS: 7775-09-9
MW: 106.44
Density at 20°C: 2.49
Melting point: 248 to 261°C
ADR/RID: 5.1, II
EINECS: 231-887-4
UN: 1495
GHS: Ox. Sol. 1, Acute Tox. 4, Aquatic Chronic 2
H271, H302, H411
P210, P273, P301+P312

Assay: >99%

Guaranteed analysis

Aluminium (Al)	<5 ppm	Nickel (Ni)	<5 ppm
Barium (Ba)	<5 ppm	Potassium (K)	<100 ppm
Cadmium (Cd)	<5 ppm	Propan--1-ol	<5 ppm
Calcium (Ca)	<20 ppm	Strontium (Sr)	<5 ppm
Chromium (Cr)	<5 ppm	Titanium (Ti)	<5 ppm
Cobalt (Co)	<5 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<100 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Lithium (Li)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm	Zinc (Zn)	<20 ppm
Molybdenum (Mo)	<5 ppm		

Sodium chlorate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/3040/53
1 kg	Plastic jar	S/3040/60

$NaClO_3$
CAS: 7775-09-9
MW: 106.44
Density at 20°C: 2.49
Melting point: 248 to 261°C
ADR/RID: 5.1, II
EINECS: 231-887-4
UN: 1495
GHS: Ox. Sol. 1, Acute Tox. 4, Aquatic Chronic 2
H271, H302, H411
P210, P273, P301+P312

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<50 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<200 ppm

Sodium chlorate
Technical

packaging		Mfr. No
1 kg	Plastic jar	S/3000/60
3 kg	Plastic jar	S/3000/63

$NaClO_3$
CAS: 7775-09-9
MW: 106.44
Density at 20°C: 2.49
Melting point: 248 to 261°C
ADR/RID: 5.1, II
EINECS: 231-887-4
UN: 1495
GHS: Ox. Sol. 1, Acute Tox. 4, Aquatic Chronic 2
H271, H302, H411
P210, P273, P301+P312

Sodium chloride — Certified
for HPLC

packaging		Mfr. No
500 g	Plastic jar	S/3165/53

NaCl
CAS: 7647-14-5
MW: 58.44
Density at 20°C: 2.165
Boiling point: 1461°C
Melting point: 801°C
EINECS: 231-598-3

Assay: 0 to 150%

Guaranteed analysis

Bromide and iodide	<0.005%	Potassium (K)	<50 ppm
Iron (Fe)	<1 ppm	Total phosphorus (P)	<2 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<10 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
206 nm ..... : <1 A.U. 254 nm ..... <0.02 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Sodium chloride — NEW — Certified AR, Eur.Ph.
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/3161/53
1 kg	Plastic jar	S/3161/60
3 kg	Plastic jar	S/3161/63
5 kg	Plastic jar	S/3161/65
10 kg	Plastic keg	S/3161/68
25 kg	Plastic keg	S/3161/70

NaCl
CAS: 7647-14-5
MW: 58.44
Boiling point: 1461°C
Melting point: 801°C
EINECS: 231-598-3

Assay: 99.5 to 100.5%

Guaranteed analysis

Alkalinity	Pass	Arsenic (As)	<1 ppm
Loss on drying	<0.5%	Barium (Ba)	Pass
Bacterial endotoxins	: <5	Bromide (Br)	<100 ppm
Ferrocyanide (Pass/Fail)	: Pass	Iodide (I)	Pass
Heavy metals	<5 ppm	Iron (Fe)	<2 ppm
Mg and alkaline earth metals	: <100 ppm	Phosphate (PO_4)	<25 ppm
Nitrite at 354 nm	: <0.01 A.U.	Potassium (K)	<500 ppm
Acidity	Pass	Sulfate (SO_4)	<200 ppm
Aluminium (Al)	<0.2 ppm		

Lot analysis on the label

Sodium chloride — Certified AR, Eur.Ph.
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/3160/53
1 kg	Plastic jar	S/3160/60
3 kg	Plastic jar	S/3160/63
5 kg	Plastic jar	S/3160/65
10 kg	Plastic keg	S/3160/68
25 kg	Plastic keg	S/3160/70

NaCl
CAS: 7647-14-5
MW: 58.44
Density at 20°C: 2.165
Boiling point: 1461°C
Melting point: 801°C
EINECS: 231-598-3

Assay: >99.9%

Guaranteed analysis

Water insoluble matter	<0.005%	Potassium (K)	<50 ppm
pH (aqueous solution 5%)	5 to 9	Total nitrogen (N)	<5 ppm
Insoluble matter	<0.005%	Total phosphorus (P)	<2 ppm
Bromide and iodide	<0.002%	Total silicon (Si)	<20 ppm
Calcium (Ca)	<20 ppm	Total sulphur (S)	<20 ppm
Copper (Cu)	<2 ppm	Zinc (Zn)	<5 ppm
Iron (Fe)	<2 ppm	Phosphate (PO_4)	<5 ppm
Iron cyanide	<0.0001 %	Sulfate (SO_4)	<0.004%
Lead (Pb)	<2 ppm	Ferrocyanide	<0.0001%
Magnesium (Mg)	<5 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium chloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/3120/53
1 kg	Plastic jar	S/3120/60
3 kg	Plastic jar	S/3120/63
5 kg	Plastic jar	S/3120/65
25 kg	Plastic keg	S/3120/70

NaCl
CAS: 7647-14-5
MW: 58.44
Density at 20°C: 2.165
Boiling point: 1461°C
Melting point: 801°C
EINECS: 231-598-3

Assay: >99.5%

Guaranteed analysis

Heavy metals	<10 ppm	Magnesium (Mg)	<20 ppm
Bromide (Br)	<0.005%	Potassium (K)	<200 ppm
Calcium (Ca)	<100 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<10 ppm	Total silicon (Si)	<100 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<100 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<20 ppm

Sodium chloride (rock salt)
Technical

packaging		Mfr. No
3 kg	Plastic jar	S/3100/63

NaCl
CAS: 7647-14-5
MW: 58.44
Density at 20°C: 2.165
Boiling point: 1461°C
Melting point: 801°C
EINECS: 231-598-3

Guaranteed analysis

Identity test ..... : Pass

Sodium chloride
Technical

packaging		Mfr. No
3 kg	Plastic jar	S/3105/63
25 kg	Plastic keg	S/3105/70

NaCl
CAS: 7647-14-5
MW: 58.44
Density at 20°C: 2.165
Boiling point: 1461°C
Melting point: 801°C
EINECS: 231-598-3

Sodium chloride solution 0.1M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7590C/05
6	Ampoule	J/7590C/90

NaCl
CAS: 7647-14-5
MW: 58.44
EINECS: 231-598-3

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sodium chloroacetate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	S/3200/50

$C_2H_2ClNaO_2$
CAS: 3926-62-3
MW: 116.48
Melting point: 199°C
ADR/RID: 6.1, III
EINECS: 223-498-3
UN: 2659
GHS: Acute Tox. 3, Skin Irrit. 2, Aquatic Acute 1
H301, H315, H400
P301+P310, P273, P302+P352

Guaranteed analysis

Identity test ..... : Pass

Sodium chromate anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/3240/53

Na_2CrO_4
CAS: 7775-11-3
MW: 161.97
Melting point: 792°C
ADR/RID: 6.1, II
EINECS: 231-889-5
UN: 3288
GHS: Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 2, Skin Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H301, H312, H372, H314, H330, H334, H340, H410, H317, H350, H360FD
P280, P301+P330+P331, P305+P351+P338, P304+P341, P201, P308+P313, P304+P340, P302+P352, P260, P273

Guaranteed analysis

Identity test ..... : Pass

tri-Sodium citrate dihydrate — Certified
HPLC for electrochemical detection

packaging		Mfr. No
500 g	Plastic jar	S/3380/53

$C_6H_5Na_3O_7.2H_2O$
CAS: 6132-04-3
MW: 294.09
Melting point: 300°C
EINECS: 200-675-3

Assay: 99.5 to 100.5%

Guaranteed analysis

Electrochemical test	Pass	Lead (Pb)	<5 ppm
Reaction (5% solution) at 25°C	: 8 to 9	n-Butyl formate	<0.005%
Iron (Fe)	<5 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) ..... : <0.1 A.U. 270 nm (sol. aqu. 1 M) ..... : <0.05 A.U.

Purified then tested by HPLC-EC to show low electrochemical response.
Detector - ESA Coulochem II
Mode-oxydative
Electrode- Graphite.
Lot analysis on the label.
Filtered to 0.2 µm.

tri-Sodium citrate dihydrate
for electrophoresis

packaging		Mfr. No
500 g	Plastic jar	S/P500/53
5 kg	Plastic keg	S/P500/65

$C_6H_5Na_3O_7.2H_2O$
CAS: 6132-04-3
MW: 294.09
Melting point: 300°C

Assay: 99.5 to 100.5%

Suitable as a buffer component in electrophoresis.

tri-Sodium citrate dihydrate — Certified AR, Eur.Ph., BP, USP
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/3320/53
1 kg	Plastic jar	S/3320/60
5 kg	Plastic keg	S/3320/65
25 kg	Fibre Keg	S/3320/70

$C_6H_5Na_3O_7.2H_2O$
CAS: 6132-04-3
MW: 294.09
Melting point: 300°C
EINECS: 200-675-3

Assay: 99.5 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	8 to 9	Total chloride (Cl)	<0.005%
Calcium (Ca)	<20 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<2 ppm
Potassium (K)	<100 ppm	Readily carbonisable substances test: Pass	

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

tri-Sodium citrate dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/3280/53
1 kg	Plastic jar	S/3280/60
5 kg	Plastic keg	S/3280/65

$C_6H_5Na_3O_7.2H_2O$
CAS: 6132-04-3
MW: 294.09
Melting point: 300°C
EINECS: 200-675-3

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	8 to 9	Potassium (K)	<200 ppm
Calcium (Ca)	<100 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm

Sodium cyanide — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	S/3481/50

NaCN
CAS: 143-33-9
MW: 49.01
Boiling point: 1497°C
Melting point: 562°C
ADR/RID: 6.1, I
EINECS: 205-599-4
UN: 1689
GHS: Acute Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H330, H310, H410, H300, EUH032
P301+P310, P280, P361, P302+P350, P305+P351+P338, P310, P304+P340, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	>0 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label

Sodium cyanide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/3480/53

NaCN
CAS: 143-33-9
MW: 49.01
Density at 20°C: 16
Boiling point: 1497°C
Melting point: 562°C
ADR/RID: 6.1, I
EINECS: 205-599-4
UN: 1689
GHS: Acute Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H330, H310, H410, H300, EUH032
P301+P310, P280, P361, P302+P350, P305+P351+P338, P310, P304+P340, P273

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<200 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<1000 ppm		

Sodium dichromate dihydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/3561/53

$Na_2Cr_2O_7.2H_2O$
CAS: 7789-12-0
MW: 298.00
Boiling point: 400°C
Melting point: 357°C
ADR/RID: 5.1, 6.1, II
EINECS: 234-190-3
UN: 3087
GHS: Ox. Sol. 2, Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 2, Skin Corr. 1B, Eye

Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H340, H317, H330, H334, H314, H350, H360FD, H372, H301, H312, H335, H410
P280, P305+P351+P338, P310, P201, P210, P273

Assay: 99.5 to 101%

Guaranteed analysis

Aluminium (Al)	<5 ppm	Magnesium (Mg)	<20 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Potassium (K)	<200 ppm
Calcium (Ca)	<20 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	n-Butyl formate	<0.002%
Copper (Cu)	<10 ppm	Total silicon (Si)	<50 ppm
Iron (Fe)	<20 ppm	Total sulphur (S)	<100 ppm
Lead (Pb)	<20 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm	Zinc (Zn)	<20 ppm

Lot analysis on the label.

Sodium dichromate dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/3560/53
1 kg	Plastic jar	S/3560/60
3 kg	Plastic jar	S/3560/63

$Na_2Cr_2O_7.2H_2O$
CAS: 7789-12-0
MW: 298.00
Boiling point: 400°C
Melting point: 357°C
ADR/RID: 5.1, 6.1, II
EINECS: 234-190-3
UN: 3087
GHS: Ox. Sol. 2, Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 2, Skin Corr. 1B, Eye

Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H340, H317, H330, H334, H314, H350, H360FD, H372, H301, H312, H335, H410
P280, P305+P351+P338, P310, P201, P210, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<1000 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<100 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<100 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<100 ppm

Sodium dichromate dihydrate
Technical

packaging		Mfr. No
1 kg	Plastic jar	S/3520/60
3 kg	Plastic jar	S/3520/63

$Na_2Cr_2O_7.2H_2O$
CAS: 7789-12-0
MW: 298.00
Boiling point: 400°C
Melting point: 357°C
ADR/RID: 5.1, 6.1, II
EINECS: 234-190-3
UN: 3087
GHS: Ox. Sol. 2, Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 2, Skin Corr. 1B, Eye

Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H272, H340, H317, H330, H334, H314, H350, H360FD, H372, H301, H312, H335, H410
P280, P305+P351+P338, P310, P201, P210, P273

Assay: >98%

Sodium diethyldithiocarbamate trihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	S/3640/46
100 g	Plastic jar	S/3640/48

$C_5H_{10}NNaS_2.3H_2O$
CAS: 20624-25-3
MW: 225.31
Melting point: 95 to 98.5°C
ADR/RID: 9, III
EINECS: 205-710-6
UN: 3077

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1
H302, H335, H315, H319, H400
P280, P270, P305+P351+P338, P310, P273, P261

Assay: >98.5%

Guaranteed analysis

Sensitivity to Cu molar absorptivity ..... : > 12000

Sodium dihydrogen orthophosphate dihydrate
for electrophoresis, monobasic

packaging		Mfr. No
500 g	Plastic jar	S/P520/53
3 kg	Plastic jar	S/P520/63

$NaH_2PO_4.2H_2O$
CAS: 13472-35-0
MW: 156.01

Density at 20°C: ~ 2.0
Melting point: 60°C

Assay: 99.5 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	4.3 to 4.5	Lead (Pb)	<1 ppm
Copper (Cu)	<1 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<5 ppm	Total sulphur (S)	<10 ppm

Suitable for use in in electrophoresis.

Sodium dihydrogen orthophosphate dihydrate — Certified
HPLC for electrochemical detection

packaging		Mfr. No
500 g	Plastic jar	S/3770/53

$NaH_2PO_4.2H_2O$
CAS: 13472-35-0
MW: 156.01

Density at 20°C: ~ 2.0
Melting point: 60°C
EINECS: 231-449-2

Assay: 99 to 101%

Guaranteed analysis

Electrochemical test	Pass	Iron (Fe)	<10 ppm
Reaction (5% solution) at 25°C	: 4.3 to 4.5	Lead (Pb)	<2 ppm
		n-Butyl formate	<0.001%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) ..... : <0.05 A.U.

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

Sodium dihydrogen orthophosphate dihydrate — Certified AR, Eur.Ph., BP
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/3760/53
1 kg	Plastic jar	S/3760/60
5 kg	Plastic keg	S/3760/65
25 kg	Plastic keg	S/3760/70

$NaH_2PO_4.2H_2O$
CAS: 13472-35-0
MW: 156.01

Density at 20°C: ~ 2.0
Melting point: 60°C
EINECS: 231-449-2

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	4.3 to 4.5	Potassium (K)	<100 ppm
Heavy metals	<10 ppm	Total chloride (Cl)	<0.001%
Calcium (Ca)	<20 ppm	Total silicon (Si)	<50 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<20 ppm
Iron (Fe)	<10 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm	Reducing substance	Pass
Magnesium (Mg)	<10 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<1 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<1 ppm
Barium (Ba)	<1 ppm	Silver (Ag)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<0.001 %
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm
Manganese (Mn)	<1 ppm		

Lot analysis on the label.

Sodium dihydrogen orthophosphate dihydrate — SLR
extra pure, crystals

packaging		Mfr. No
500 g	Plastic jar	S/3720/53
1 kg	Plastic jar	S/3720/60
5 kg	Plastic keg	S/3720/65
25 kg	Plastic keg	S/3720/70

$NaH_2PO_4.2H_2O$
CAS: 13472-35-0
MW: 156.01

Density at 20°C: ~ 2.0
Melting point: 60°C
EINECS: 231-449-2

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<10 ppm

Sodium dihydrogen orthophosphate 0.25M solution — Certified
HPLC for gradient analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/7600/PB08

EINECS: 231-449-2

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Drift in gradient baseline ..... <40 mA.U.

Absorbance of the largest eluted peak: <1.5 mA.U.
Conditions:
Column: C18 Reverse Phase
Flow Rate: 3ml/min
Wavelength: 254nm
Solvent A: Water + 10%Buffer
Solvent B: Acetonitrile + 10% Buffer
Gradient: 10 min. At 5% solvent B followed by a linear gradient to 95% solvent B over 15min.
Sodium phosphate buffers should be adjusted to the appropriate pH with 1M Orthophosphoric acid

Sodium diphenylamine-4-sulfonate
pure

packaging		Mfr. No
5 g	Glass jar	S/3780/44

$C_{12}H_{10}NNaO_3S$
CAS: 6152-67-6
MW: 271.26
Melting point: 200°C
EINECS: 228-165-6

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Sodium dithionite — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/3800/53
3 kg	Plastic jar	S/3800/63

$Na_2S_2O_4$
CAS: 7775-14-6
MW: 174.10
Density at 20°C: 1.4
Melting point: 300°C
ADR/RID: 4.2, II

EINECS: 231-890-0
UN: 1384
GHS: Self-heat. 1, Acute Tox. 4
H251, H302, EUH031
P235+P410, P233, P301+P312

Assay: >85%

Sodium dodecyl sulfate
for electrophoresis

packaging		Mfr. No
100 g	Plastic jar	S/P530/48
500 g	Plastic jar	S/P530/53
25 kg	Fibre Keg	S/P530/70

$C_{12}H_{25}NaO_4S$
CAS: 151-21-3
MW: 288.38
Melting point: 206°C
Flash point: >100°C
ADR/RID: 4.1, 6.1, III
EINECS: 205-788-1
UN: 2926

GHS: Flam. Sol. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H228, H311, H302, H335, H315, H319
P280, P302+P352, P210, P270, P301+P312, P305+P351+P338

This grade of SDS has been purified for use as a denaturant for proteins and also acts as an excellent solubiliser.

Sodium dodecyl sulfate
Technical

packaging		Mfr. No
500 g	Plastic jar	S/5200/53

$C_{12}H_{25}NaO_4S$
CAS: 151-21-3
MW: 288.38
Melting point: 206°C
Flash point: >100°C
ADR/RID: 4.1, 6.1, III
EINECS: 205-788-1
UN: 2926

GHS: Flam. Sol. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H228, H311, H302, H335, H315, H319
P280, P302+P352, P210, P270, P301+P312, P305+P351+P338

Assay (CG): >97.5%

Sodium sulfate alkyl contains mainly sodium lauryl sulfate.

Sodium fluoride — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	S/3920/50
500 g	Plastic jar	S/3920/53
1 kg	Plastic jar	S/3920/60
3 kg	Plastic jar	S/3920/63
25 kg	Plastic keg	S/3920/70

NaF
CAS: 7681-49-4
MW: 41.99
Density at 20°C: 2.78
Boiling point: 1700°C
Melting point: 993°C
ADR/RID: 6.1, III

EINECS: 231-667-8
UN: 1690
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2
H315, H301, H319, EUH032
P301+P310, P280, P302+P350, P305+P351+P338

Assay: >99%

Guaranteed analysis

Acidity	<0.05 meq/g	Magnesium (Mg)	<20 ppm
Alkalinity	<0.01 meq/g	Potassium (K)	<200 ppm
Loss on drying	<0.2%	Total chloride (Cl)	<0.002%
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<50 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<200 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm		

Lot analysis on the label.

Sodium fluoride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	S/3880/50
500 g	Plastic jar	S/3880/53

NaF
CAS: 7681-49-4
MW: 41.99
Density at 20°C: 2.78
Boiling point: 1700°C
Melting point: 993°C
ADR/RID: 6.1, III

EINECS: 231-667-8
UN: 1690
GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2
H315, H301, H319, EUH032
P301+P310, P280, P302+P350, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<1000 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<500 ppm		

Sodium formaldehydesulfoxylate dihydrate
pure

packaging		Mfr. No
500 g	Plastic jar	S/4040/53
25 kg	Fibre Keg	S/4040/70

$CH_3NaO_3S.2H_2O$
CAS: 6035-47-8
MW: 154.12
Melting point: 63 to 64°C
ADR/RID: 6.1, III

UN: 3288
GHS: Muta. 2, Acute Tox. 4
H341, EUH031
P281, P308+P313

Guaranteed analysis
Complies with standard IR spectrum: Pass

Sodium formate — Certified
for HPLC

packaging		Mfr. No
250 g	Plastic jar	S/4086/50

$CHNaO_2$
CAS: 141-53-7
MW: 68.01
Density at 20°C: 1.92

Boiling point: 360°C
Melting point: 258 to 261°C
EINECS: 205-488-0

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) ..... : <0.02 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Sodium formate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/4082/53

$CHNaO_2$
CAS: 141-53-7
MW: 68.01
Density at 20°C: 1.92

Boiling point: 360°C
Melting point: 258 to 261°C
EINECS: 205-488-0

Assay: >99%

Guaranteed analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<1 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Potassium (K)	<100 ppm
Calcium (Ca)	<50 ppm	Propan--1-ol	<1 ppm
Chromium (Cr)	<1 ppm	Titanium (Ti)	<1 ppm
Cobalt (Co)	<1 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total silicon (Si)	<50 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<10 ppm	Vanadium (V)	<1 ppm
Lithium (Li)	<1 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<5 ppm		

Lot analysis on the label.

Sodium formate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/4080/53

$CHNaO_2$
CAS: 141-53-7
MW: 68.01
Density at 20°C: 1.92

Boiling point: 360°C
Melting point: 258 to 261°C
EINECS: 205-488-0

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<50 ppm

Sodium gluconate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/4100/53

$C_6H_{11}NaO_7$
CAS: 527-07-1
MW: 218.14

Melting point: 206 to 209°C
EINECS: 208-407-7

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	5.5 to 7.5	Sulfate (SO_4)	<0.02%
Iron (Fe)	<10 ppm	n-Butyl formate	<0.005%
Lead (Pb)	<20 ppm		

Sodium β-glycerophosphate pentahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/4110/48

$C_3H_7Na_2O_6P.51/2H_2O$
CAS: 819-83-0
MW: 315.11

Melting point: 102 to 104°C
EINECS: 212-464-3

Assay: >97%

Guaranteed analysis

pH (aqueous solution 2%)	8 to 10.5	Lead (Pb)	<20 ppm
Inorganic Phosphate	<0.2%		

Sodium hexametaphosphate — SLR
extra pure, powder mainly $(NaPO_3)_6$

packaging		Mfr. No
500 g	Plastic jar	S/4160/53
1 kg	Plastic jar	S/4160/60

$Na_6O_{18}P_6$
CAS: 10124-56-8
MW: 611.52

Density at 20°C: 2.181
Melting point: 640°C
EINECS: 233-243-1

Guaranteed analysis
Identity test ..... : Pass

Sodium hexametaphosphate
pure, Flake, mainly $(NaPO_3)_6$

packaging		Mfr. No
500 g	Plastic jar	S/4120/53
1 kg	Plastic jar	S/4120/60

$Na_6O_{18}P_6$
CAS: 10124-56-8
MW: 611.52

Density at 20°C: 2.181
Melting point: 640°C
EINECS: 233-243-1

Guaranteed analysis
Identity test ..... : Pass

Sodium hydrogen carbonate — Certified
for HPLC

packaging		Mfr. No
250 g	Plastic jar	S/4246/50

$NaHCO_3$
CAS: 144-55-8
MW: 84.01

Melting point: 270°C
EINECS: 205-633-8

Assay: >99.5%

Guaranteed analysis

Iron (Fe)	<5 ppm	Ammonium (NH_4)	<0.0005%
Lead (Pb)	<2 ppm	pH (aqueous solution 1%)	<8.4

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) ..... : <0.03 A.U.

Sodium hydrogen carbonate — Certified AR, Eur.Ph.
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/4240/53
1 kg	Plastic jar	S/4240/60
3 kg	Plastic jar	S/4240/63
5 kg	Plastic keg	S/4240/65
25 kg	Plastic keg	S/4240/70

$NaHCO_3$
CAS: 144-55-8
MW: 84.01

Melting point: 270°C
EINECS: 205-633-8

Assay: 99.7 to 100.3%

Guaranteed analysis

pH (aqueous solution 1%)	8 to 8.5	Total chloride (Cl)	<0.01%
Insoluble matter	<0.015%	Total nitrogen (N)	<20 ppm
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<2 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<10 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<50 ppm	Ammonium (NH_4)	<0.0005%
Potassium (K)	<50 ppm	Phosphate (PO_4)	<0.001%

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium hydrogen carbonate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/4200/60
3 kg	Plastic jar	S/4200/63
5 kg	Plastic keg	S/4200/65
25 kg	Plastic keg	S/4200/70

$NaHCO_3$
CAS: 144-55-8
MW: 84.01

Melting point: 270°C
EINECS: 205-633-8

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.02%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<500 ppm		

di-Sodium hydrogen citrate sesquihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/4280/53

$C_6H_6Na_2O_7.1.5H_2O$
CAS: 6132-05-4
MW: 263.11

Melting point: 149°C
EINECS: 205-623-3

Assay: 99 to 101%

Guaranteed analysis

pH (solution aq. 3%)	: 4.9 to 5.2	Sulfate (SO_4)	<0.02%
Lead (Pb)	<10 ppm	n-Butyl formate	<0.01%
Potassium (K)	<200 ppm		

di-Sodium hydrogen orthophosphate anhydrous
for electrophoresis, dibasic

packaging		Mfr. No
500 g	Plastic jar	S/P525/53
3 kg	Plastic keg	S/P525/63

Na_2HPO_4
CAS: 7558-79-4
MW: 141.96
EINECS: 231-448-7

Assay: >99%

Guaranteed analysis

n-Butyl formate ..... <0.01%

di-Sodium hydrogen orthophosphate anhydrous
Certified AR, Eur.Ph., BP - for analysis

packaging		Mfr. No
500 g	Plastic jar	S/4520/53
1 kg	Plastic jar	S/4520/60
3 kg	Plastic jar	S/4520/63
5 kg	Plastic keg	S/4520/65
25 kg	Fibre Keg	S/4520/70

Na_2HPO_4
CAS: 7558-79-4
MW: 141.96
EINECS: 231-448-7

Assay: 99.5 to 101%

Guaranteed analysis

pH (aqueous solution 2%)	9 to 9.3	Magnesium (Mg)	<10 ppm
pH(aq. Solution 5%) at 25°C	8.7 to 9.3	Potassium (K)	<200 ppm
Loss on drying	<0.2%	Total chloride (Cl)	<0.002%
Heavy metals	<10 ppm	Total nitrogen (N)	<20 ppm
Insoluble matter	<0.01%	Total silicon (Si)	<50 ppm
Monosodium phosphate	<2.5%	Total sulphur (S)	<20 ppm
Calcium (Ca)	<20 ppm	Zinc (Zn)	<5 ppm
Copper (Cu)	<5 ppm	Sulfate (SO_4)	<0.005%
Iron (Fe)	<10 ppm	Reducing substance	Pass
Lead (Pb)	<5 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<1 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<1 ppm
Barium (Ba)	<1 ppm	Silver (Ag)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm
Manganese (Mn)	<1 ppm		

Lot analysis on the label.

di-Sodium hydrogen orthophosphate anhydrous SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/4480/53
1 kg	Plastic jar	S/4480/60
5 kg	Plastic keg	S/4480/65

Na_2HPO_4
CAS: 7558-79-4
MW: 141.96
EINECS: 231-448-7

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Potassium (K)	<500 ppm
Calcium (Ca)	<100 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<50 ppm	Total silicon (Si)	<200 ppm
Iron (Fe)	<50 ppm	Total sulphur (S)	<100 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<200 ppm
Magnesium (Mg)	<50 ppm		

di-Sodium hydrogen orthophosphate dihydrate Certified
HPLC for electrochemical detection

packaging		Mfr. No
500 g	Plastic jar	S/4460/53

$Na_2HPO_4.2H_2O$
CAS: 10028-24-7
MW: 177.99
Melting point: 243 to 245°C
EINECS: 231-448-7

Assay: >99%

Guaranteed analysis

Electrochemical test	Pass	Iron (Fe)	<10 ppm
Reaction (5% solution) at 25°C	7.5 to 9.2	Lead (Pb)	<5 ppm
		n-Butyl formate	<0.0005%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.5 M) ..... : <0.05 A.U.

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
Lot analysis on the label.
Filtered to 0.2 µm.

di-Sodium hydrogen orthophosphate dihydrate Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/4450/53
1 kg	Plastic jar	S/4450/60
5 kg	Plastic keg	S/4450/65
10 kg	Plastic keg	S/4450/68
25 kg	Plastic keg	S/4450/70

$Na_2HPO_4.2H_2O$
CAS: 10028-24-7
MW: 177.99
Melting point: 243 to 245°C
EINECS: 231-448-7

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 2%)	9 to 9.3	Potassium (K)	<100 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.002%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<1 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<1 ppm
Barium (Ba)	<1 ppm	Silver (Ag)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm
Manganese (Mn)	<1 ppm		

Lot analysis on the label.

di-Sodium hydrogen orthophosphate dihydrate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/4440/53
1 kg	Plastic jar	S/4440/60
5 kg	Plastic keg	S/4440/65

$Na_2HPO_4.2H_2O$
CAS: 10028-24-7
MW: 177.99
Melting point: 243 to 245°C
EINECS: 231-448-7

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<500 ppm		

di-Sodium hydrogen orthophosphate dodecahydrate
Certified AR, Eur.Ph., BP
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/4400/53
1 kg	Plastic jar	S/4400/60
10 kg	Plastic keg	S/4400/68

$Na_2HPO_4.12H_2O$
CAS: 10039-32-4
MW: 358.14
Melting point: 35°C
EINECS: 231-448-7

Assay: 99 to 102%

Guaranteed analysis

pH (aqueous solution 5%)	9.1 to 9.4	Potassium (K)	<50 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.002%
Copper (Cu)	<2 ppm	Total silicon (Si)	<50 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<5 ppm
Magnesium (Mg)	<5 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<1 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<1 ppm
Barium (Ba)	<1 ppm	Silver (Ag)	<1 ppm
Cadmium (Cd)	<1 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm
Manganese (Mn)	<1 ppm		

Lot analysis on the label.

di-Sodium hydrogen orthophosphate dodecahydrate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/4360/53
1 kg	Plastic jar	S/4360/60
2.5 kg	Plastic jar	S/4360/62

$Na_2HPO_4.12H_2O$
CAS: 10039-32-4
MW: 358.14
Melting point: 35°C
EINECS: 231-448-7

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm

di-Sodium hydrogen orthophosphate 0.25M solution Certified
for HPLC

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/7650/PB08

Na_2HPO_6
MW: 141.98
EINECS: 231-448-7

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Drift in gradient baseline ..... <40 mA.U.

Absorbance of the largest eluted peak: <1.5 mA.U.

Sodium hydrogen sulfate monohydrate Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/4690/53

$NaHSO_4.H_2O$
CAS: 10034-88-5
MW: 138.08
Density at 20°C: 2.12
Melting point: 58°C
ADR/RID: 8, III
EINECS: 231-665-7
UN: 3260
GHS: Eye Dam. 1
H318
P305+P351+P338, P310, P280

Assay: >99%

Guaranteed analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<5 ppm
Barium (Ba)	<5 ppm	Molybdenum (Mo)	<5 ppm
Cadmium (Cd)	<5 ppm	Nickel (Ni)	<5 ppm
Calcium (Ca)	<20 ppm	Potassium (K)	<20 ppm
Chromium (Cr)	<5 ppm	Propan--1-ol	<5 ppm
Cobalt (Co)	<5 ppm	Strontium (Sr)	<5 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<5 ppm	Total nitrogen (N)	<10 ppm
Lead (Pb)	<5 ppm	Total phosphorus (P)	<5 ppm
Lithium (Li)	<5 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Sodium hydrogen tartrate monohydrate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/4720/53

$NaHCH_4O_6.H_2O$
CAS: 6131-98-2
MW: 190.08
EINECS: 208-400-9

Assay: > 98%

Guaranteed analysis

pH (aqueous solution 5%) ..... 3.3 - 3.6

Sodium hydrogen tartrate decahydrate Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/4760/53

$NaHCH_4O_6.H_2O$
CAS: 6131-98-2
MW: 190.08

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	3.3 to 3.6	Potassium (K)	<100 ppm
Loss on drying	<10%	n-Butyl formate	<0.001%
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<50 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<10 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<20 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<0.5 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label

Sodium hydroxide pellets — Certified AR, Eur.Ph., BP
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/4920/53
1 kg	Plastic jar	S/4920/60
3 kg	Plastic jar	S/4920/63
5 kg	Plastic jar	S/4920/65
10 kg	Plastic keg	S/4920/68
25 kg	Plastic keg	S/4920/70

NaOH
CAS: 1310-73-2
MW: 40.00
Boiling point: 1390°C
Melting point: 318°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1823
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331,
P305+P351+P338, P302+P352

Assay: >98%

Guaranteed analysis

Heavy metals	<20 ppm	Total nitrogen (N)	<10 ppm
Calcium (Ca)	<20 ppm	Total phosphorus (P)	<5 ppm
Carbonate (Na_2CO_3)	<1%	Total silicon (Si)	<50 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<20 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<5 ppm
Lead (Pb)	<5 ppm	Mercury (Hg)	<0.1 ppm
Magnesium (Mg)	<5 ppm	Phosphate (PO_4)	<0.001%
Potassium (K)	<200 ppm	Sulfate (SO_4)	<0.003%
Total chloride (Cl)	<0.005%		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<10 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<10 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium hydroxide pellets — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	S/4880/50
500 g	Plastic jar	S/4880/53
1 kg	Plastic jar	S/4880/60
3 kg	Plastic jar	S/4880/63
5 kg	Plastic jar	S/4880/65
10 kg	Plastic keg	S/4880/68

NaOH
CAS: 1310-73-2
MW: 40.00
Boiling point: 1390°C
Melting point: 318°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1823
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331,
P305+P351+P338, P302+P352

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<2000 ppm
Carbonate (Na_2CO_3)	<2%	n-Butyl formate	<0.02%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<500 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<500 ppm

Sodium hydroxide pearl — Certified AR
for analysis

packaging		Mfr. No
1 kg	Plastic jar	S/4845/60
25 kg	Plastic keg	S/4845/70

NaOH
CAS: 1310-73-2
MW: 40.00
Boiling point: 1390°C
Melting point: 318°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1823
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331,
P305+P351+P338, P302+P352

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.005%
Carbonate (Na_2CO_3)	<1%	Total nitrogen (N)	<5 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<500 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<10 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Sodium hydroxide pearl — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/4840/60
3 kg	Plastic jar	S/4840/63

NaOH
CAS: 1310-73-2
MW: 40.00
Boiling point: 1390°C
Melting point: 318°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1823
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331,
P305+P351+P338, P302+P352

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<2000 ppm
Carbonate (Na_2CO_3)	<2%	n-Butyl formate	<0.02%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<500 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm

Sodium hydroxide pearl
Technical

packaging		Mfr. No
1 kg	Plastic jar	S/4800/60
3 kg	Plastic jar	S/4800/63
5 kg	Plastic jar	S/4800/65
10 kg	Plastic keg	S/4800/68
25 kg	Plastic keg	S/4800/70

NaOH
CAS: 1310-73-2
MW: 40.00
Boiling point: 1390°C
Melting point: 318°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1823
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331,
P305+P351+P338, P302+P352

Sodium hydroxide 46-48% solution — Certified
HPLC for electrochemical detection

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	S/4940/17

NaOH
CAS: 1310-73-2
MW: 40.00
Density at 20°C: 1.5
Boiling point: 145°C
Melting point: >12°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Assay: 46 to 51%

Guaranteed analysis

Electrochemical test	Pass	Lead (Pb)	<5 ppm
Iron (Fe)	<5 ppm	n-Butyl formate	<0.01%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.05 A.U.

Purified then tested by HPLC-EC to show low electrochemical response.
Detector - ESA Coulochem II
Mode-oxydative
Graphite Electrode.
The concentration of a solution of sodium hydroxide 46/48% is 17.6 M (17.6 N).
Lot analysis on the label.
Filtered to 0.2 µm.

Sodium hydroxyde solution 32% — NEW — Certified AR
for analysis, for Nitrogen determination

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	S/4955/PB15
2.5 ℓ	HDPE Plastic bottle	S/4955/PB17

NaOH
CAS: 1310-73-2
MW: 40.00
Density at 20°C: 1.33 to1.36
Boiling point: 120°C
Melting point: 8°C

ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Assay: 32 to 33%

Guaranteed analysis

Heavy metals	5 ppm	Iron (Fe)	5 ppm
Silicate	: 10 ppm	Phosphate (PO_4)	5 ppm
Aluminium (Al)	5 ppm	Sulfate (SO_4)	5 ppm
Carbonate (Na_2CO_3)	<=0.2 %%	Total nitrogen (N)	1 ppm
Chloride (Cl)	5 ppm		

Lot analysis on the label

Sodium hydroxide 30% solution — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	S/4950/PB15
2.5 ℓ	HDPE Plastic bottle	S/4950/PB17

NaOH
CAS: 1310-73-2
MW: 40.00
Density at 20°C: 1.33 to1.36
Boiling point: 120°C
Melting point: 8°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Assay: >30%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Potassium (K)	<200 ppm
Carbonate (Na_2CO_3)	<0.1%	Total chloride (Cl)	<0.1%
Copper (Cu)	<2 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<2 ppm
Lead (Pb)	<1 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<10 ppm
Manganese (Mn)	<1 ppm	Zinc (Zn)	<5 ppm
Nickel (Ni)	<1 ppm		

Sodium hydroxide 46-48% solution d=1.50 — Certified AR
for analysis

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	S/4930/05
1 ℓ	HDPE Plastic bottle	S/4930/15
2.5 ℓ	HDPE Plastic bottle	S/4930/17
5 ℓ	HDPE Plastic bottle	S/4930/21
25 ℓ	HDPE Plastic container	S/4930/25
200 ℓ	HDPE Plastic container	S/4930/27

NaOH
CAS: 1310-73-2
MW: 40.00
Density at 20°C: 1.5
Boiling point: 145°C
Melting point: >12°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Assay: 46 to 51%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.01%
Carbonate (Na_2CO_3)	<0.1%	Total nitrogen (N)	<10 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<2 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<200 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<10 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Advantages:
(I) The use of a solution ready to use saving the time required for preparation and to limit the risks arising from manipulation of solid sodium hydroxide.
(II) An extremely low carbonate content for the preparation of carbonate-free sodium hydroxide solutions.
(III) Low nitrogen content of the solution permitting use in the determination of nitrogen by Kjeldahl method.
The concentration of a solution of sodium hydroxide 46/48% is 17.6 M (17.6 N).
Lot analysis on the label.

Sodium hydroxide 30% solution — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	S/4945/PB15
5 ℓ	HDPE Plastic bottle	S/4945/PB21
20 ℓ	HDPE Plastic container	S/4945/31

NaOH
CAS: 1310-73-2
MW: 40.00
Density at 20°C: 1.33 to1.36
Boiling point: 120°C
Melting point: 8°C
ADR/RID: 8, II

EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Assay: >30%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Potassium (K)	<200 ppm
Carbonate (Na_2CO_3)	<0.1%	n-Butyl formate	<0.1%
Copper (Cu)	<2 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<2 ppm
Lead (Pb)	<1 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<5 ppm	Total sulphur (S)	<10 ppm
Manganese (Mn)	<1 ppm	Zinc (Zn)	<5 ppm
Nickel (Ni)	<1 ppm		

Sodium hydroxide solution 2 % v/v
pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/9013/08

Assay: 1.9 to 2.1%

Sodium hydroxide solution 2M
pure, Bench Reagent

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/7810/17
25 ℓ	HDPE Plastic container	J/7810/25

ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Sodium hydroxide solution 10M (10N) ca. 40w/v
Standard solution ready to use, For volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7800/15
2.5 ℓ	HDPE Plastic bottle	J/7800/17
5 ℓ	HDPE Plastic bottle	J/7800/21
10 ℓ	Bag in box	J/7800/24
25 ℓ	HDPE Plastic container	J/7800/25

Density at 20°C: 1.33 to 1.36
Boiling point: 120°C
Melting point: 8°C
ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: 39.8 to 40.2%

Manufactured to a tolerance of ± 0.5%.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 2M (2N) BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7610/PB15
2.5 ℓ	HDPE Plastic bottle	J/7610/17
5 ℓ	HDPE Plastic bottle	J/7610/21

Density at 20°C: 1.36
Boiling point: 120°C
Melting point: 8°C
ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 1M (1N) Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7620/15
2.5 ℓ	HDPE Plastic bottle	J/7620/17
5 ℓ	HDPE Plastic bottle	J/7620/21
10 ℓ	Bag in box	J/7620/24

Density at 20°C: 1.040
Boiling point: 120°C
Melting point: 8°C
ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 1M (1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7620C/05
6	Ampoule	J/7620C/90

Boiling point: 120°C
ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution methanolic 1M (1N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7625/PB15
2.5 ℓ	HDPE Plastic bottle	J/7625/17

Density at 20°C: 1.040
Boiling point: 120°C
Melting point: 8°C
ADR/RID: 3, 6.1. 8, II
EINECS: 215-185-5
UN: 3286
GHS: Flam. Liq. 2, Acute
Tox. 3, Skin Corr. 1B, Eye Dam. 1, STOT SE 1
H225, H331, H311, H301, H370, H314
P280, P260, P264, P270, P210, P307+P311

Manufactured to a tolerance of ± 0.2%.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 0.5M (0.5N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7630/15
2.5 ℓ	HDPE Plastic bottle	J/7630/17
5 ℓ	HDPE Plastic bottle	J/7630/21
10 ℓ	Bag in box	J/7630/24
200 ℓ	HDPE Plastic container	J/7630/27

Density at 20°C: 1.020
Boiling point: 100°C
ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 0.5M (0.5N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7630C/05
6	Ampoule	J/7630C/90

Boiling point: 100°C
ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P302+P350, P305+P351+P338, P301+P330+P331, P315

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 0.2M (0.2N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7640/15
2.5 ℓ	HDPE Plastic bottle	J/7640/17
5 ℓ	HDPE Plastic bottle	J/7640/21
10 ℓ	Bag in box	J/7640/24

Density at 20°C: 1.010
ADR/RID: 8, III
EINECS: 215-185-5
UN: 1824
GHS: Skin Irrit. 2, Eye Irrit. 2
H315, H319
P280, P305+P351+P338, P302+P350

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 0.1M (0.1N) Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7660/15
2.5 ℓ	HDPE Plastic bottle	J/7660/17
5 ℓ	HDPE Plastic bottle	J/7660/21
10 ℓ	Bag in box	J/7660/24

Density at 20°C: 1.000
Boiling point: 100°C
ADR/RID: 8/III
EINECS: 215-185-5
UN: 1824

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 0.1M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7660C/05
6	Ampoule	J/7660C/90

Density at 20°C: 1.040
ADR/RID: 8, II
EINECS: 215-185-5
UN: 1824
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sodium hydroxide solution 0.01M (0.01N)
NIST Standard solution ready to use, For volumetric analysis

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/9010/17

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page...

Sodium hypochlorite solution
Technical, min. 14% free chlorine

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	S/5042/15

NaOCl
CAS: 7681-52-9
MW: 74.44
Density at 20°C: 1.200
Melting point: -16°C
ADR/RID: 8, III
EINECS: 231-668-3
UN: 1791
GHS: Skin Corr. 1B, Aquatic Acute 1
H314, H400, EUH031
P301+P330+P331, P280, P305+P351+P338, P310, P273, P233

Guaranteed analysis
Chlorine ..... >14%

Sodium hypochlorite solution self indicating
Technical

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	S/5041/21

NaClO
CAS: 7681-52-9
MW: 74.44
Density at 20°C: 1.1
Melting point: -16°C
ADR/RID: 8, III
EINECS: 231-668-3
UN: 1791
GHS: Skin Corr. 1B, Eye Dam. 1
H314, EUH031
P280, P305+P351+P338, P310, P273, P233, P302+P352

Guaranteed analysis
Chlorine ..... >8%

Contains about 20 ppm Potassium permanganate.

Sodium hypochlorite solution
Technical

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	S/5040/PB15
2.5 ℓ	HDPE Plastic bottle	S/5040/PB17
5 ℓ	HDPE Plastic bottle	S/5040/21

NaClO
CAS: 7681-52-9
MW: 74.44
Density at 20°C: 1.200
Melting point: -16°C
ADR/RID: 8, III
EINECS: 231-668-3
UN: 1791
GHS: Skin Corr. 1B, Aquatic Acute 1
H314, H400, EUH031
P301+P330+P331, P280, P305+P351+P338, P310, P273, P233

Guaranteed analysis
Alkalinity ..... <2% Chlorine ..... >14%

Sodium hypophosphite monohydrate Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/5081/53

$NaH_2PO_2 \cdot H_2O$
CAS: 10039-56-2
MW: 105.99
Melting point: 90°C
EINECS: 216-948-5

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 7	Magnesium (Mg)	<5 ppm
Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Ammonia (NH_3)	<0.0005%	Molybdenum (Mo)	<2 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<2 ppm
Barium (Ba)	<2 ppm	Potassium (K)	<100 ppm
Cadmium (Cd)	<2 ppm	Propan--1-ol	<2 ppm
Calcium (Ca)	<100 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	n-Butyl formate	<0.05%
Copper (Cu)	<5 ppm	Total silicon (Si)	<100 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<200 ppm
Lead (Pb)	<5 ppm	Vanadium (V)	<2 ppm
Lithium (Li)	<2 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Sodium iodate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/5100/48

$NaIO_3$
CAS: 7681-55-2
MW: 197.89
Density at 20°C: 4.28
ADR/RID: 5.1, II
EINECS: 231-672-5
UN: 1479
GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H335, H302, H315, H319
P210, P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

Chloride and chlorate	<0.04%	Sulfate (SO_4)	<0.03%
Iodide (I)	<0.002%		

Sodium iodide — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	S/5130/48
500 g	Plastic jar	S/5130/53
10 kg	Plastic keg	S/5130/68

NaI
CAS: 7681-82-5
MW: 149.89
Density at 20°C: 3.66
Boiling point: 1300°C
Melting point: 661°C
EINECS: 231-679-3

Assay: >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.002 meq/g	Lead (Pb)	<2 ppm
Loss on drying	<0.5%	Magnesium (Mg)	<5 ppm
Iodine reducing substances	: <0.005%	Potassium (K)	<100 ppm
Calcium (Ca)	<10 ppm	Total nitrogen (N)	<10 ppm
Chloride and Bromide	<0.01%	Total phosphorus (P)	<10 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<20 ppm
Iodate (IO_3)	<2 ppm	Total sulphur (S)	<100 ppm
Iron (Fe)	<2 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<0.1 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Sodium iodide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/5120/48
250 g	Plastic jar	S/5120/50
500 g	Plastic jar	S/5120/53

NaI
CAS: 7681-82-5
MW: 149.89
Density at 20°C: 3.66
Boiling point: 1300°C
Melting point: 661°C
EINECS: 231-679-3

Assay: >99%

Guaranteed analysis

Loss on drying	<1%	Magnesium (Mg)	<20 ppm
Calcium (Ca)	<50 ppm	Potassium (K)	<500 ppm
Chloride and Bromide	<0.05%	Total phosphorus (P)	<50 ppm
Copper (Cu)	<20 ppm	Total silicon (Si)	<100 ppm
Iodate (IO_3)	<10 ppm	Total sulphur (S)	<100 ppm
Iron (Fe)	<20 ppm	Zinc (Zn)	<50 ppm
Lead (Pb)	<20 ppm		

Sodium lactate solution about 60% w/w — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	S/5161/08

$C_3H_5NaO_3$
CAS: 72-17-3
MW: 112.06
Density at 20°C: 1.3
Boiling point: 140°C
Melting point: 17.2°C
EINECS: 200-772-0
P262

Sodium lauryl sulfate
See Sodium dodecyl sulfate, page 290

Sodium lauryl sulfate solution 0.05 M
Standard solution ready to use, For volumetric analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/9021/17

CAS: 151-21-3
Density at 20°C: >> 1.0
EINECS: 205-788-1

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page...

Sodium metabisulfite — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/5250/53
1 kg	Plastic jar	S/5250/60

$Na_2S_2O_7$
CAS: 7681-57-4
MW: 190.10
Density at 20°C: 1.4
Melting point: 150°C
EINECS: 231-673-0
GHS: Acute Tox. 4, Eye Dam. 1
H302, H318, EUH031
P280, P305+P351+P338,
P310, P233, P301+P312

Assay: 99 to 100.5%

Guaranteed analysis

Heavy metals	<20 ppm	Magnesium (Mg)	<20 ppm
Thiosulfates test	: Pass	Potassium (K)	<500 ppm
Calcium (Ca)	<50 ppm	Total chloride (Cl)	<0.005%
Copper (Cu)	<5 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<5 ppm
Lead (Pb)	<5 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Arsenic (As)	<0.5 ppm	Nickel (Ni)	<2 ppm
Barium (Ba)	<2 ppm	Silver (Ag)	<2 ppm
Cadmium (Cd)	<2 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	Vanadium (V)	<2 ppm
Lithium (Li)	<2 ppm		

Lot analysis on the label.

Sodium metabisulfite — SLR, Eur.Ph., BP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/5240/53
1 kg	Plastic jar	S/5240/60
2.5 kg	Plastic jar	S/5240/62

$Na_2S_2O_7$
CAS: 7681-57-4
MW: 190.10
Density at 20°C: 1.4
Melting point: 150°C
EINECS: 231-673-0
GHS: Acute Tox. 4, Eye Dam. 1
H302, H318, EUH031
P280, P305+P351+P338,
P310, P233, P301+P312

Assay: >93%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.5%
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<20 ppm
Magnesium (Mg)	<100 ppm		

Sodium metaborate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/5280/53

$NaBO_2.4H_2O$
CAS: 10555-76-7
MW: 137.87
Melting point: 57°C
EINECS: 231-891-6
GHS: Repr. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335, H361fd
P280, P305+P351+P338,
P201, P308+P313

Assay: >98%

Guaranteed analysis

Sulfate (SO_4)	<0.03%	n-Butyl formate	<0.01%

Sodium metasilicate pentahydrate
Technical

packaging		Mfr. No
1 kg	Plastic jar	S/5360/60
3 kg	Plastic jar	S/5360/63

$Na_2O_3Si.5H_2O$
CAS: 10213-79-3
MW: 212.14
Melting point: 72°C
ADR/RID: 8, III
EINECS: 229-912-9
UN: 3253
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P280, P305+P351+P338,
P310, P301+P330+P331, P261

Guaranteed analysis

Identity test	: Pass

Sodium molybdate dihydrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	S/5480/48
250 g	Plastic jar	S/5480/50

$Na_2MoO_4.2H_2O$
CAS: 10102-40-6
MW: 241.95
Density at 20°C: 3.28
EINECS: 231-551-7
P262

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	7 to 10	Magnesium (Mg)	<20 ppm
Solution	: Pass	Potassium (K)	<500 ppm
Calcium (Ca)	<50 ppm	Total nitrogen (N)	<50 ppm
Total chloride (Cl)	<0.001 %	Total sulphur (S)	<200 ppm
Copper (Cu)	<20 ppm	Zinc (Zn)	<10 ppm
Iron (Fe)	<20 ppm	n-Butyl formate	<0.001%
Lead (Pb)	<20 ppm		

Typical analysis

Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Chromium (Cr)	<2 ppm	Silver (Ag)	<2 ppm
Cobalt (Co)	<2 ppm	Strontium (Sr)	<2 ppm
Lithium (Li)	<2 ppm	Titanium (Ti)	<2 ppm
Manganese (Mn)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Sodium molybdate dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	S/5440/50
500 g	Plastic jar	S/5440/53

$Na_2MoO_4.2H_2O$
CAS: 10102-40-6
MW: 241.95
Density at 20°C: 3.28
EINECS: 231-551-7
P262

Assay: >95%

Sodium nitrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/5560/53
3 kg	Plastic jar	S/5560/63

$NaNO_3$
CAS: 7631-99-4
MW: 84.99
Boiling point: 380°C
Melting point: 306°C
ADR/RID: 5.1, III
EINECS: 231-554-3
UN: 1498
GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H335, H302, H319
P261, P301+P312,
P302+P352, P280,
P305+P351+P338, P210

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 7	Nitrite (NO_2)	<0.001%
Calcium (Ca)	<20 ppm	Potassium (K)	<100 ppm
Copper (Cu)	<2 ppm	Total chloride (Cl)	<0.0005%
Iodate (IO_3)	<5 ppm	Total phosphorus (P)	<2 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium nitrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/5520/53
1 kg	Plastic jar	S/5520/60
3 kg	Plastic jar	S/5520/63

$NaNO_3$
CAS: 7631-99-4
MW: 84.99
Boiling point: 380°C
Melting point: 306°C
ADR/RID: 5.1, III
EINECS: 231-554-3
UN: 1498
GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H335, H302, H319
P261, P301+P312,
P302+P352, P280,
P305+P351+P338, P210

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm
Potassium (K)	<500 ppm		

Sodium nitrite — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/5640/53
2.5 kg	Plastic jar	S/5640/62

$NaNO_2$
CAS: 7632-00-0
MW: 69.00
Boiling point: 320°C
Melting point: 271°C
ADR/RID: 5.1, 6.1, III
EINECS: 231-555-9

UN: 1500
GHS: Ox. Sol. 3, Acute Tox. 3, Aquatic Acute 1
H272, H301, H400
P301+P310, P304+P340, P273, P210

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.002%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<100 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<0.5 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Sodium nitrite — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/5600/53
1 kg	Plastic jar	S/5600/60
2.5 kg	Plastic jar	S/5600/62

$NaNO_2$
CAS: 7632-00-0
MW: 69.00
Boiling point: 320°C
Melting point: 271°C
ADR/RID: 5.1, 6.1, III
EINECS: 231-555-9

UN: 1500
GHS: Ox. Sol. 3, Acute Tox. 3, Aquatic Acute 1
H272, H301, H400
P301+P310, P304+P340, P273, P210

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<50 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<500 ppm		

Sodium nitrite solution 0.5M (0.5N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	Glass bottle	J/7900/15

GHS: Acute Tox. 4
H302
P261, P280, P301+P312

Manufactured to a tolerance of ± 0.3%.
See the full range of Standard Volumetric solution page 323.

Sodium nitroprusside — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	S/5720/48

$C_5FeN_6Na_2O.2H_2O$
CAS: 13755-38-9
MW: 297.94
Density at 20°C: 1.72
ADR/RID: 6.1, II
UN: 1588

GHS: Acute Tox. 3
H301, H311, H331, EUH032
P301+P310, P280, P312, P302+P350, P310, P304+P340, P233

Assay: >99%

Guaranteed analysis

Sulfate (SO_4)	<0.01%	Ferricyanide	<0.01%
n-Butyl formate	<0.01%	Ferrocyanide	<0.02%

Lot analysis on the label

Sodium nitroprusside — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/5680/48

$C_5FeN_6Na_2O.2H_2O$
CAS: 13755-38-9
MW: 297.94
Density at 20°C: 1.72
ADR/RID: 6.1, II
EINECS: 238-373-9

UN: 1588
GHS: Acute Tox. 3
H301, H311, H331, EUH032
P301+P310, P280, P312, P302+P350, P310, P304+P340, P233

Assay: >98%

Guaranteed analysis

Ferricyanide	<0.02%	Sulfate (SO_4)	<0.05%
Ferrocyanide	<0.1%		

tri-Sodium orthophosphate dodecahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/5761/53

$Na_3PO_4.12H_2O$
CAS: 10101-89-0
MW: 380.13
Density at 20°C: 1.62
Melting point: 75°C
ADR/RID: 8, II
EINECS: 231-509-8

UN: 3262
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P305+P351+P338, P310, P260, P280, P264

Assay: 99 to 101%

Guaranteed analysis

Alkalinity	<0.7 meq/g	Manganese (Mn)	<2 ppm
Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Arsenic (As)	<2 ppm	Nickel (Ni)	<2 ppm
Barium (Ba)	<2 ppm	Potassium (K)	<50 ppm
Cadmium (Cd)	<2 ppm	Propan--1-ol	<2 ppm
Calcium (Ca)	<50 ppm	Strontium (Sr)	<2 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<10 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

tri-Sodium orthophosphate dodecahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	S/5760/50
500 g	Plastic jar	S/5760/53
1 kg	Plastic jar	S/5760/60
5 kg	Plastic keg	S/5760/65
25 kg	Plastic keg	S/5760/70

$Na_3PO_4.12H_2O$
CAS: 10101-89-0
MW: 380.13
Density at 20°C: 1.62
Melting point: 75°C
ADR/RID: 8, II
EINECS: 231-509-8

UN: 3262
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P305+P351+P338, P310, P260, P280, P264

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm

Sodium oxalate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	S/5840/50
500 g	Plastic jar	S/5840/53

$C_2Na_2O_4$
CAS: 62-76-0
MW: 134.00
Density at 20°C: 2.34
Melting point: 250 to 270°C

EINECS: 200-550-3
GHS: Acute Tox. 4
H312, H302
P280, P302+P352, P301+P312

Assay: >99.9%

Guaranteed analysis

pH (solution aq. 3%)	: 7 to 8.5	Potassium (K)	<50 ppm
Loss on drying	<0.05%	n-Butyl formate	<0.001%
Calcium (Ca)	<50 ppm	Total nitrogen (N)	<50 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<10 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label

Sodium oxalate
pure

packaging		Mfr. No
100 g	Plastic jar	S/5800/48
500 g	Plastic jar	S/5800/53

$C_2Na_2O_4$
CAS: 62-76-0
MW: 134.00
Density at 20°C: 2.3421
Melting point: 250 to 270°C
ADR/RID: 6.1/III

EINECS: 200-550-3
UN: 2811
GHS: Acute Tox. 4
H312, H302
P280, P302+P352, P301+P312

Sodium perborate trihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/5880/53

$NaBO_3.4H_2O$
CAS: 10486-00-7
MW: 153.87
Melting point: 60°C
ADR/RID: 5.1/III
EINECS: 231-556-4

UN: 1479
GHS: Repr. 1B, Eye Dam. 1, STOT SE 3
H360Df, H319, H335
P280, P305+P351+P338, P201, P308+P313, P261

Guaranteed analysis

Identity test : Pass

Sodium perchlorate — Certified
for HPLC

packaging		Mfr. No
250 g	Plastic jar	S/5966/50

$NaClO_4.H_2O$
CAS: 7791-07-3
MW: 140.46
Density at 20°C: 2.02
Melting point: 130°C
ADR/RID: 5.1, II

EINECS: 231-511-9
UN: 1502
GHS: Ox. Sol. 1, Acute Tox. 4
H271, H302
P210, P301+P312

Assay: >99%

Guaranteed analysis

Iron (Fe)	<2 ppm	Phosphate (PO_4)	<5 ppm
Lead (Pb)	<2 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 1 M) : <0.02 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Sodium perchlorate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/5965/53

$NaClO_4.H_2O$
CAS: 7791-07-3
MW: 140.46
Density at 20°C: 2.02
Melting point: 130°C
ADR/RID: 5.1, II

EINECS: 231-511-9
UN: 1502
GHS: Ox. Sol. 1, Acute Tox. 4
H271, H302
P210, P301+P312

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	4.5 to 7	Magnesium (Mg)	<10 ppm
Calcium (Ca)	<20 ppm	Potassium (K)	<50 ppm
Chloride and chlorate	<0.002%	Total phosphorus (P)	<10 ppm
Copper (Cu)	<5 ppm	Total silicon (Si)	<10 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<20 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Cadmium (Cd)	<2 ppm	Nickel (Ni)	<2 ppm
Chromium (Cr)	<2 ppm	Silver (Ag)	<2 ppm
Cobalt (Co)	<2 ppm	Strontium (Sr)	<2 ppm
Lithium (Li)	<2 ppm	Titanium (Ti)	<2 ppm
Manganese (Mn)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

Sodium perchlorate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	S/5960/50
500 g	Plastic jar	S/5960/53

$NaClO_4.H_2O$
CAS: 7791-07-3
MW: 140.46
Density at 20°C: 2.02
Melting point: 130°C
ADR/RID: 5.1, II

EINECS: 231-511-9
UN: 1502
GHS: Ox. Sol. 1, Acute Tox. 4
H271, H302
P210, P301+P312

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<500 ppm
Chloride and chlorate	<0.02%	Total phosphorus (P)	<100 ppm
Copper (Cu)	<50 ppm	Total silicon (Si)	<100 ppm
Iron (Fe)	<50 ppm	Total sulphur (S)	<200 ppm
Lead (Pb)	<50 ppm	Zinc (Zn)	<50 ppm
Magnesium (Mg)	<100 ppm		

Sodium periodate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	S/5980/48
250 g	Plastic jar	S/5980/50
5 kg	Plastic jar	S/5980/65

$NaIO_4$
CAS: 7790-28-5
MW: 213.89
Melting point: 300°C
ADR/RID: 5.1, 6.1, II
EINECS: 232-197-6
UN: 3087

GHS: Ox. Sol. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H319, H335, H301
P210, P302+P352, P280, P261, P301+P312, P305+P351+P338

Assay: >99%

Guaranteed analysis

pH (aqueous solution 5%)	3.5 to 4.5	Iron (Fe)	<5 ppm
Loss on drying	<0.05%	Lead (Pb)	<5 ppm
Bromate, bromide, chlorate & chloride: < 0.01%		Magnesium (Mg)	<10 ppm
		Potassium (K)	<200 ppm
Calcium (Ca)	<20 ppm	Total silicon (Si)	<20 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<100 ppm
Iodide (I)	<0.001%	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Cadmium (Cd)	<5 ppm	Nickel (Ni)	<5 ppm
Chromium (Cr)	<5 ppm	Silver (Ag)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label

Sodium peroxide — Certified AR
for analysis

packaging		Mfr. No
500 g	Metal can	S/6041/53

Na_2O_2
CAS: 1313-60-6
MW: 77.98
Density at 20°C: 2.8
Melting point: 460°C
ADR/RID: 5.1, I

EINECS: 215-209-4
UN: 1504
GHS: Ox. Sol. 1, Skin Corr. 1A
H271, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: >95%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Total chloride (Cl)	<0.005%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<500 ppm	Zinc (Zn)	<50 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Cadmium (Cd)	<5 ppm	Nickel (Ni)	<5 ppm
Chromium (Cr)	<5 ppm	Silver (Ag)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Sodium peroxide — SLR
extra pure, granulated

packaging		Mfr. No
500 g	Metal can	S/6040/53

Na_2O_2
CAS: 1313-60-6
MW: 77.98
Density at 20°C: 2.8
Melting point: 460°C
ADR/RID: 5.1, I

EINECS: 215-209-4
UN: 1504
GHS: Ox. Sol. 1, Skin Corr. 1A
H271, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay: > 94%

Guaranteed analysis

Total chloride (Cl)	<0.005%	Magnesium (Mg)	<500 ppm
Lead (Pb)	<20 ppm		

Sodium peroxydisulfate
See Sodium persulfate, page 302

Sodium persulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/6080/53

$Na_2S_2O_8$
CAS: 7775-27-1
MW: 238.09
Density at 20°C: 2.6
Melting point: 100°C
ADR/RID: 5.1, III
EINECS: 231-892-1
UN: 1505
GHS: Ox. Sol. 3, Acute Tox.

4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3
H272, H315, H302, H317, H334, H319, H335
P261, P280, P308+P313, P302+P352, P210, P305+P351+P338

Assay: >96%

Guaranteed analysis

Ammonia (NH_3)	<0.2%	n-Butyl formate	<0.005%

Sodium propionate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/6100/53

$C_3H_5NaO_2$
CAS: 137-40-6
MW: 96.06
Melting point: 285 to 286°C
Flash point: >250°C

EINECS: 205-290-4
GHS: Acute Tox. 4, Skin Irrit. 2
H315, H312
P280, P302+P352

Assay: >99%

tetra-Sodium pyrophosphate decahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/6140/53

$Na_4P_2O_7.12H_2O$
CAS: 13472-36-1
MW: 446.05
Boiling point: 93.8°C
Melting point: 80°C
EINECS: 205-290-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	10.2 to 10.7	Magnesium (Mg)	<10 ppm
Cadmium (Cd)	<5 ppm	Potassium (K)	<50 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.002%
Copper (Cu)	<2 ppm	Total silicon (Si)	<50 ppm
Iron (Fe)	<2 ppm	Total sulphur (S)	<50 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Chromium (Cr)	<5 ppm	Silver (Ag)	<5 ppm
Cobalt (Co)	<5 ppm	Strontium (Sr)	<5 ppm
Lithium (Li)	<5 ppm	Titanium (Ti)	<5 ppm
Manganese (Mn)	<5 ppm	Vanadium (V)	<5 ppm

tetra-Sodium pyrophosphate decahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/6120/60

$Na_4P_2O_7.12H_2O$
CAS: 13472-36-1
MW: 446.05
Density at 20°C: 1.82
Boiling point: 93.8°C
Melting point: 80°C

EINECS: 205-290-4
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<10 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Sodium pyrosulfite
See Sodium metabisulfite, page 298

Sodium salicylate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/6200/53
25 kg	Fibre Keg	S/6200/70

$C_7H_5NaO_3$
CAS: 54-21-7
MW: 160.11
Melting point: 200°C
EINECS: 200-198-0

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H302, H319
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

Water	<1%	Sulfate (SO_4)	<0.1%
Arsenic (As)	<2 ppm	n-Butyl formate	<0.04%
Lead (Pb)	<10 ppm		

Sodium selenite — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	S/6280/46

Na_2SeO_3
CAS: 10102-18-8
MW: 172.94
Density at 20°C: 3.121
Melting point: 350°C
ADR/RID: 6.1, I
EINECS: 233-267-9

UN: 2630
GHS: Acute Tox. 2, Skin Sens. 1, Aquatic Chronic 2
H317, H331, H411, H300, EUH031
P301+P310, P304+P340, P280, P260, P273

Assay: >99%

Guaranteed analysis

pH (aqueous solution 2%) 9 to 11

Sodium sesquicarbonate dihydrate
pure

packaging		Mfr. No
3 kg	Plastic jar	S/6310/63

$Na_2CO_3.NaHCO_3.2H_2O$
CAS: 6106-20-3
MW: 226.03
EINECS: 208-580-9

GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis

Identity test : Pass

Sodium silicate powder
Technical

packaging		Mfr. No
1 kg	Plastic jar	S/6400/60
25 kg	Fibre Keg	S/6400/70

$SiO_{2:Na_2O}$
CAS: 6834-92-0
MW: 122.06
Melting point: 72°C
ADR/RID: 8, III
EINECS: 229-912-9

UN: 3253
GHS: Skin Corr. 1B, STOT SE 3
H314, H335
P280, P301+P330+P331, P310, P305+P351+P338, P304+P340, P302+P352

Guaranteed analysis

Identity test : Pass

Wt ratio SiO2: Na2O approx.2:1

Sodium silicate solution d=1.5
Technical

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	S/6340/17
25 ℓ	HDPE Plastic container	S/6340/25

$SiO_{2:Na_2O}$
CAS: 1344-09-8
Density at 20°C: 1.4
Boiling point: 100.6°C
Melting point: -0.6°C
ADR/RID: 8/II

EINECS: 215-687-4
UN: 1760
GHS: Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H318, H315, H335
P280, P305+P351+P338

Guaranteed analysis

Identity test : Pass

Wt ratio SiO2: Na2 O approx. 2:1

Sodium succinate disodium salt hexahydrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	S/6490/48
10 kg	Plastic keg	S/6490/68

$C_4H_4Na_2O_4.6H_2O$
CAS: 6106-21-4
MW: 270.15
Melting point: >300°C

Assay: 99.5 to 100.5%

Guaranteed analysis

Calcium (Ca)	<20 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<50 ppm		

Lot analysis on the label

Sodium succinate disodium salt hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/6480/53

$C_4H_4Na_2O_4.6H_2O$
CAS: 6106-21-4
MW: 270.15

Melting point: >300°C
EINECS: 205-778-7

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Sodium sulfate anhydrous — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 kg	Plastic jar	S/6660/60

Na_2SO_4
CAS: 7757-82-6
MW: 142.04
Boiling point: 1700°C
Melting point: 884 to 888°C
EINECS: 231-820-9

Assay: > 99.5%

Guaranteed analysis

Loss on drying	<0.2%	Potassium (K)	<100 ppm

Sodium sulfate anhydrous — Certified AR
for analysis, granular

packaging		Mfr. No
500 g	Plastic jar	S/6640/53
1 kg	Plastic jar	S/6640/60
3 kg	Plastic jar	S/6640/63
5 kg	Plastic jar	S/6640/65
10 kg	Plastic keg	S/6640/68

Na_2SO_4
CAS: 7757-82-6
MW: 142.04
Boiling point: 1700°C
Melting point: 884 to 888°C
EINECS: 231-820-9

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 7	Magnesium (Mg)	<20 ppm
Loss on drying	<0.2%	Potassium (K)	<100 ppm
Reducing substances	: <0.002%	Total chloride (Cl)	<0.001%
Oxidizing substance	Pass	Total nitrogen (N)	<10 ppm
Calcium (Ca)	<50 ppm	Total phosphorus (P)	<20 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<20 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<10 ppm
Lead (Pb)	<2 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium sulfate anhydrous — Certified AR
for analysis, fine powder

packaging		Mfr. No
500 g	Plastic jar	S/6650/53
1 kg	Plastic jar	S/6650/60
5 kg	Plastic jar	S/6650/65

Na_2SO_4
CAS: 7757-82-6
MW: 142.04
Boiling point: 1700°C
Melting point: 884 to 888°C
EINECS: 231-820-9

Assay: >99.5%

Guaranteed analysis

Loss on drying	<0.2%	Magnesium (Mg)	<20 ppm
Reducing substances	: <0.002%	Potassium (K)	<100 ppm
Oxidizing substance	Pass	Total chloride (Cl)	<0.001%
Calcium (Ca)	<50 ppm	Total nitrogen (N)	<10 ppm
Copper (Cu)	<2 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium sulfate anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/6600/53
1 kg	Plastic jar	S/6600/60
3 kg	Plastic jar	S/6600/63
5 kg	Plastic jar	S/6600/65
25 kg	Plastic keg	S/6600/70

Na_2SO_4
CAS: 7757-82-6
MW: 142.04
Density at 20°C: 2.68
Boiling point: 1700°C
Melting point: 884 to 888°C
EINECS: 231-820-9

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Potassium (K)	<500 ppm
Calcium (Ca)	<200 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<10 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<50 ppm
Magnesium (Mg)	<100 ppm		

Sodium sulfate decahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/6560/53
1 kg	Plastic jar	S/6560/60

$Na_2SO_4.10H_2O$
CAS: 7727-73-3
MW: 322.19
Density at 20°C: 1.46
Melting point: 884°C
EINECS: 231-820-9

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	6 to 7	Magnesium (Mg)	<5 ppm
Reducing substances	: <0.001%	Potassium (K)	<50 ppm
Oxidizing substance	Pass	Total chloride (Cl)	<0.0005%
Calcium (Ca)	<50 ppm	Total nitrogen (N)	<5 ppm
Copper (Cu)	<1 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<1 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Lot analysis on the label.

Sodium sulfate decahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/6520/60

$Na_2SO_4.10H_2O$
CAS: 7727-73-3
MW: 322.19
Density at 20°C: 1.46
Melting point: 884°C
EINECS: 231-820-9

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<20 ppm

Sodium sulfite anhydrous — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/6850/53
1 kg	Plastic jar	S/6850/60

Na_2SO_3
CAS: 7757-83-7
MW: 126.05
Density at 20°C: 2.63
Melting point: >500°C
EINECS: 231-821-4

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<10 ppm	Total chloride (Cl)	<0.05%
Iron (Fe)	<10 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<20 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<5 ppm
Arsenic (As)	<0.5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm

Lot analysis on the label.

Sodium sulfite anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/6840/53
1 kg	Plastic jar	S/6840/60
3 kg	Plastic jar	S/6840/63

Na_2SO_3
CAS: 7757-83-7
MW: 126.05
Density at 20°C: 2.63
Melting point: >500°C
EINECS: 231-821-4

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<1000 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.1%
Iron (Fe)	<50 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<50 ppm	Zinc (Zn)	<50 ppm
Magnesium (Mg)	<100 ppm		

Sodium tauroglycocholate
technical

packaging		Mfr. No
100 g	Plastic jar	S/6960/48

$C_{28}H_{47}N_2NaO_8S$
CAS: 41945-48-6
MW: 230.08
EINECS: 255-596-7

Guaranteed analysis

Identity test : Pass

di-Sodium tetraborate decahydrate — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	S/7040/50
500 g	Plastic jar	S/7040/53
1 kg	Plastic jar	S/7040/60
5 kg	Plastic keg	S/7040/65

$Na_2B_4O_7.10H_2O$
CAS: 1303-96-4
MW: 381.36
Density at 20°C: 17.3
Melting point: 75°C
EINECS: 215-540-4
GHS: Repr. 1B
H360FD
P201, P308+P313

Assay: 99.5 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	9.2 to 9.4	Total chloride (Cl)	<0.0005%
Insoluble matter	<0.005%	Total phosphorus (P)	<10 ppm
Calcium (Ca)	<20 ppm	Total silicon (Si)	<50 ppm
Copper (Cu)	<5 ppm	Total sulphur (S)	<50 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<10 ppm
Lead (Pb)	<5 ppm	Phosphate (PO_4)	<10 ppm
Magnesium (Mg)	<10 ppm	Sulfate (SO_4)	<50 ppm
Potassium (K)	<100 ppm		

Typical analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm

Lot analysis on the label.

di-Sodium tetraborate decahydrate — SLR
extra pure, crystals

packaging		Mfr. No
1 kg	Plastic jar	S/7000/60
3 kg	Plastic jar	S/7000/63

$Na_2B_4O_7.10H_2O$
CAS: 1303-96-4
MW: 381.36
Density at 20°C: 17.3
Melting point: 75°C
EINECS: 215-540-4
GHS: Repr. 1B
H360FD
P201, P308+P313

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm

di-Sodium tetraborate decahydrate — SLR, Eur. Ph.
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/7010/60
3 kg	Plastic jar	S/7010/63
25 kg	Plastic keg	S/7010/70

$Na_2B_4O_7.10H_2O$
CAS: 1303-96-4
MW: 381.36
Density at 20°C: 17.3
Melting point: 75°C
EINECS: 215-540-4
GHS: Repr. 1B
H360FD
P201, P308+P313

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm

di-Sodium tetraborate anhydrous — SLR
extra pure, 99%+

packaging		Mfr. No
1 kg	Plastic jar	S/6980/60

$B_4Na_2O_7$
CAS: 1330-43-4
MW: 201.22
Density at 20°C: 2.36
Boiling point: 1575°C
Melting point: 741°C
EINECS: 215-540-4
GHS: Repr. 1B
H360FD
P201, P308+P313

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<50 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<50 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<500 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<100 ppm

Sodium tetrahydroborate

See Sodium borohydride, page 283

Sodium thiocyanate, anhydrous — SLR

specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/7120/53

NaSCN
CAS: 540-72-7
MW: 81.07
Melting point: 287°C
EINECS: 208-754-4
GHS: Acute Tox. 4, Aquatic

Chronic 3
H312, H412, H302, H332, EUH032
P280, P302+P352, P273, P233, P301+P312, P304+P340

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Magnesium (Mg)	<50 ppm
Copper (Cu)	<10 ppm	Potassium (K)	<500 ppm
Iron (Fe)	<20 ppm	n-Butyl formate	<0.05%
Lead (Pb)	<10 ppm	Zinc (Zn)	<100 ppm

Sodium thiosulfate anhydrous — SLR

specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/7250/53
1 kg	Plastic jar	S/7250/60
3 kg	Plastic jar	S/7250/63

$Na_2S_2O_3$
CAS: 7772-98-7
MW: 158.11
Density at 20°C: 1.66

Boiling point: 100°C
Melting point: 48°C
EINECS: 231-867-5

Guaranteed analysis

Identity test ..... : Pass

Sodium thiosulfate pentahydrate — Certified AR

for analysis

packaging		Mfr. No
500 g	Plastic jar	S/7240/53
1 kg	Plastic jar	S/7240/60
3 kg	Plastic jar	S/7240/63
5 kg	Plastic keg	S/7240/65
25 kg	Plastic keg	S/7240/70

$Na_2S_2O_3.5H_2O$
CAS: 10102-17-7
MW: 248.18

Melting point: 48.5°C
EINECS: 231-867-5

Assay: 99.5 to 100.5%

Guaranteed analysis

pH (aqueous solution 5%)	5.5 to 7.5	Potassium (K)	<50 ppm
Sulfate & sulfite	: <0.02%	Sulfide (S)	<0.0002%
Calcium (Ca)	<20 ppm	Sulphate and sulphite	>0.02 %
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.02%
Iron (Fe)	<5 ppm	Total nitrogen (N)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

Sodium thiosulfate pentahydrate — SLR

specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/7200/53
1 kg	Plastic jar	S/7200/60
2 kg	Plastic jar	S/7200/61
3 kg	Plastic jar	S/7200/63

$Na_2S_2O_3.5H_2O$
CAS: 10102-17-7
MW: 248.18

Density at 20°C: 1.72
Melting point: 48.5°C
EINECS: 231-867-5

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<500 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.1%
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<50 ppm
Magnesium (Mg)	<50 ppm		

Sodium thiosulfate pentahydrate

Technical

packaging		Mfr. No
3 kg	Plastic jar	S/7160/63
25 kg	Plastic keg	S/7160/70

$Na_2S_2O_3.5H_2O$
CAS: 10102-17-7
MW: 248.18

Density at 20°C: 1.72
Melting point: 48.5°C
EINECS: 231-867-5

Sodium thiosulfate solution 0.1M (0.1N) — Eur.Ph. , USP, BP

NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/7950/15
2.5 ℓ	HDPE Plastic bottle	J/7950/17
5 ℓ	HDPE Plastic bottle	J/7950/21
10 ℓ	Bag in box	J/7950/24

Density at 20°C: 1.12

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sodium thiosulfate solution 0.1M (0.1N)

NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7950C/05
6	Ampoule	J/7950C/90

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sodium thiosulfate solution 0.5M (0.5N)

NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/7951C/05
6	Ampoule	J/7951C/90

Density at 20°C: 1.0 to 1.1

Each ampoule makes 500 mℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sodium thiosulfate solution 0.01N — Eur.Ph, BP

Nist Standard solution ready to use, For volumetric analysis

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	J/9011/17

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page...

Sodium tungstate dihydrate — SLR

specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/7320/48

$Na_2WO_4.2H_2O$
CAS: 10213-10-2
MW: 329.86
Density at 20°C: 4.18
EINECS: 236-743-4

GHS: Acute Tox. 4, Eye Irrit. 2
H319, H302
P301+P312, P280, P305+P351+P338

Assay: 98 to 102%

Guaranteed analysis

pH (aqueous solution 2%)	7 to 10	Potassium (K)	<500 ppm
Calcium (Ca)	<50 ppm	n-Butyl formate	<0.01%
Copper (Cu)	<20 ppm	Total silicon (Si)	<500 ppm
Iron (Fe)	<20 ppm	Total sulphur (S)	<500 ppm
Lead (Pb)	<20 ppm	Zinc (Zn)	<20 ppm
Magnesium (Mg)	<20 ppm		

LC/MS application –including Optima LC/MS Solvents, Blends and Reagents NEW

Solvents tested on LC-MS Thermo Scientific instrument to ensure suitability. Filtered to 0.2µm.

designation	packsize	package type		Mfr. No	page
Acetic acid	1 mℓ ampoule	Ampoule		A113-1AMP	13
	10x1 mℓ ampoule	Ampoule		A113-10X1AMP	13
	50 mℓ ampoule	HDPE Plastic bottle		A113-50	13
Acetonitrile	500 mℓ	Glass bottle		A955-500	18
	1 L	Glass bottle		A955-1	18
	2.5 L	Glass bottle		A955-212	18
	4 L	Glass bottle		A955-4	18
LCMSKIT	Box	Glass bottle		LCMSKIT	18
Acetonitrile	1 L	Glass bottle		A/0638/15	18
	2.5 L	Glass bottle		A/0638/17	18
Acetonitrile with 0.1% formic acid (v/v)	500 mℓ	Glass bottle		LS120-500	21
	1 L	Glass bottle		LS120-1	21
	2.5 L	Glass bottle		LS120-212	21
	4 L	Glass bottle		LS120-4	21
Acetonitrile with 0.1% trifluoroacetic acid (v/v)	500 mℓ	Glass bottle		LS121-500	22
	1 L	Glass bottle		LS121-1	22
	2.5 L	Glass bottle		LS121-212	22
	4 L	Glass bottle		LS121-4	22
Ammonium acetate	50 g	Glass bottle		A114-50	36
Ammonium formate	50 g	Glass bottle		A115-50	40
Formic acid	0.5 mℓ ampoule	Ampoule		A117-05AMP	132
	1 mℓ ampoule	Ampoule		A117-1AMP	132
	2 mℓ ampoule	Ampoule		A117-2AMP	132
	10x1 mℓ ampoule	Ampoule		A117-10X1AMP	132
	50 mℓ	HDPE Plastic bottle		A117-50	132
Isopropanol	500 mℓ	Glass bottle		A461-500	167
	1 L	Glass bottle		A461-1	167
	2.5 L	Glass bottle		A461-212	167
	4 L	Glass bottle		A461-4	167
Methanol	500 mℓ	Glass bottle		A456-500	199
	1 L	Glass bottle		A456-1	199
	2.5 L	Glass bottle		A456-212	199
	4 L	Glass bottle		A456-4	199
Methanol	1 L	Glass bottle		M/4062/15	199
	2.5 L	Glass bottle		M/4062/17	199
Trifluoroacetic acid	0.5 mℓ ampoule	Ampoule		A116-05AMP	358
	1 mℓ ampoule	Ampoule		A116-1AMP	358
	2 mℓ ampoule	Ampoule		A116-2AMP	358
	10x1 mℓ ampoule	Ampoule		A116-10X1AMP	358
	50 mℓ	HDPE bottle		A116-50	358
Water	500 mℓ	Glass bottle		W6-500	367
	1 L	Glass bottle		W6-1	367
	2.5 L	Glass bottle		W6-212	367
	4 L	Glass bottle		W6-4	367
Water	1 L	Glass bottle		W/0112/15	367
	2.5 L	Glass bottle		W/0112/17	367
Water with 0.1% formic acid (v/v)	500 mℓ	Glass bottle		LS118-500	369
	1 L	Glass bottle		LS118-1	369
	2.5 L	Glass bottle		LS118-212	369
	4 L	Glass bottle		LS118-4	369
Water with 0.1% trifluoroacetic acid (v/v)	500 mℓ	Glass bottle		LS119-500	370
	1 L	Glass bottle		LS119-1	370
	2.5 L	Glass bottle		LS119-212	370
	4 L	Glass bottle		LS119-4	370

UHPLC application - UHPLC gradient grade Solvents NEW

Solvents tested on UHPLC Thermo Scientific instrument to ensure suitability.
Filtered to 0.1µm. Lot analysis on the label.

packsize	package type		Mfr. No	page
1 L	Coated Glass bottle		A/0650/PB15	18
2.5 L	Coated Glass bottle		A/0650/PB17	18
Box	Coated Glass bottle		UHPLCKIT	19
1 L	Coated Glass bottle		M/4070/PB15	199
2.5 L	Coated Glass bottle		M/4070/PB17	199
1 L	Coated Glass bottle		W/0120/PB15	367
2.5 L	Coated Glass bottle		W/0120/PB17	367

HPLC Gradient grade- Solvents, Blends and Reagents NEW PACK. NEW

Solvents tested on gradient analysis conditions. Filtered to 0.2µm. Lot analysis on the label.

designation	packsize	package type		Mfr. No	page
Acetonitrile Advanced gradient grade	1 L	Coated Glass bottle		A/0632/PB15	19
	2.5 L	Coated Glass bottle		A/0632/PB17	19
Acetonitrile HPLC gradient grade	1 L	Glass bottle		A/0627/15	19
	2.5 L	Glass bottle		A/0627/17	19
		Coated Glass bottle		A/0627/PB17	19
	5 L	Aluminium can		A/0627/21	19
	10 L	Returnable Drum		A/0627/10RSS	19
	25 L	Returnable Drum		A/0627/25RSS	19
	30 L	Returnable Drum		A/0627/30RSS	19
Acetonitrile HPLC grade	1 L	Glass bottle		A/0636/15	19
	2.5 L	Glass bottle		A/0636/17	19
Acetonitrile with 0.1% formic acid (v/v)	2.5 L	Glass bottle		FE/1100/17	22
Acetonitrile with 0.1% trifluoroacetic acid (v/v)	2.5 L	Glass bottle		FE/0200/17	22
Isopropanol HPLC gradient grade	2.5 L	Glass bottle		P/7508/17	167
Methanol Advanced gradient grade	1 L	Coated Glass bottle		M/4060/PB15	200
	2.5 L	Coated Glass bottle		M/4060/PB17	200
Methanol HPLC gradient grade	1 L	Glass bottle		M/4058/15	200
	2.5 L	Glass bottle		M/4058/17	200
		Coated Glass bottle		M/4058/PB17	200
	5 L	Aluminium can		M/4058/21	200
	10 L	Returnable Drum		M/4058/10RSS	200
	25 L	Returnable Drum		M/4058/25RSS	200
	30 L	Returnable Drum		M/4058/30RSS	200
Methanol with 0.1% formic acid (v/v)	2.5 L	Glass bottle		FE/1300/17	202
Water Advanced gradient grade	1 L	Coated Glass bottle		W/0110/PB15	368
	2.5 L	Coated Glass bottle		W/0110/PB17	368
Water HPLC gradient grade	1 L	Glass bottle		W/0106/15	368
	2.5 L	Glass bottle		W/0106/17	368
		Coated Glass bottle		W/0106/PB17	368
	10 L	Returnable Drum		W/0106/10RSS	368
	25 L	Returnable Drum		W/0106/25RSS	368
	30 L	Returnable Drum		W/0106/30RSS	368
Water with 0.1% Formic Acid HPLC gradient grade	2.5 L	Glass bottle		FE/1200/17	370
Acetonitrile with 0.1% Formic acid HPLC gradient grade	2.5 L	Glass bottle		FE/0100/17	370

HPLC grade- Solvents and Reagents NEW PACK.

Solvents filtered to 0.2µm. Lot analysis on the label.

designation	packsize	package type		Mfr. No	page
Acetic acid glacial	500 mℓ	Coated Glass bottle		A/0406/PB08	13
	1 L	Coated Glass bottle		A/0406/PB15	13
Acetone	1 L	Glass bottle		A/0606/15	16
	2.5 L	Glass bottle		A/0606/17	16
	10 L	Returnable Drum		A/0606/10RSS	16
	25 L	Returnable Drum		A/0606/25RSS	16
	30 L	Returnable Drum		A/0606/30RSS	16

HPLC grade- Solvents and Reagents NEW PACK.

designation	packsize	package type		Mfr. No	page
Acetonitrile	1 L	Glass bottle		A/0626/15	20
	2.5 L	Glass bottle		A/0626/17	20
		Coated Glass bottle		A/0626/PB17	20
	5 L	Aluminium can		A/0626/21	20
	10 L	Returnable Drum		A/0626/10RSS	20
	25 L	Returnable Drum		A/0626/25RSS	20
	30 L	Returnable Drum		A/0626/30RSS	20
Ammonia solution 35% d=0.88	100 mℓ	Coated Glass bottle		A/3295/PB05	34
Ammonia solution 0.25M	500 mℓ	Coated Glass bottle		J/0100/PB08	35
Ammonium acetate	250 g	Plastic jar		A/3446/50	36
Ammonium acetate solution 0.25M	500 mℓ	HDPE plastic bottle		J/0200/PB08	37
Ammonium carbonate	250 g	Plastic jar		A/3686/50	38
1-Butane sulfonic acid sodium salt	25 g	Plastic jar		B/4791/46	67
tert-Butyl methyl ether	2.5 L	Glass bottle		M/4496/17	71
	10 L	Returnable Drum		M/4496/10RSS	71
	25 L	Returnable Drum		M/4496/25RSS	71
	30 L	Returnable Drum		M/4496/30RSS	71
1-Chlorobutane	1 L	Glass bottle		C/4756/15	85
	2.5 L	Glass bottle		C/4756/17	85
Chloroform stabilized with amylene	1 L	Glass bottle		C/4966/15	85
	2.5 L	Glass bottle		C/4966/17	85
		Coated Glass bottle		C/4966/PB17	85
	10 L	Returnable Drum		C/4966/10RSS	85
	25 L	Returnable Drum		C/4966/25RSS	85
	30 L	Returnable Drum		C/4966/30RSS	85
Cyclohexane	1 L	Glass bottle		C/8936/15	99
	2.5 L	Glass bottle		C/8936/17	99
		Coated Glass bottle		C/8936/PB17	99
	10 L	Returnable Drum		C/8936/10RSS	99
	25 L	Returnable Drum		C/8936/25RSS	99
	30 L	Returnable Drum		C/8936/30RSS	99
Di-n-butylamine	250 mℓ	Coated Glass bottle		D/1338/PB07	103
Di-n-butylamine phosphate	100 mℓ	Glass bottle		D/1341/05	104
1.2-Dichloroethane	1 L	Glass bottle		D/1756/15	105
	2.5 L	Glass bottle		D/1756/17	105
Dichloromethane unstabilized	1 L	Glass bottle		D/1857/15	106
	2.5 L	Glass bottle		D/1857/17	106
		Coated Glass bottle		D/1857/PB17	106
	10 L	Returnable Drum		D/1857/10RSS	106
	25 L	Returnable Drum		D/1857/25RSS	106
	30 L	Returnable Drum		D/1857/30RSS	106
Dichloromethane stabilized with amylene	1 L	Glass bottle		D/1856/15	106
	2.5 L	Glass bottle		D/1856/17	106
		Coated Glass bottle		D/1856/PB17	106
	5 L	Aluminium can		D/1856/21	106
	10 L	Returnable Drum		D/1856/10RSS	106
	25 L	Returnable Drum		D/1856/25RSS	106
	30 L	Returnable Drum		D/1856/30RSS	106
Dichloromethane stabilised with methanol	1 L	Glass bottle		D/1859/15	106
	2.5 L	Glass bottle		D/1859/17	106
Diethyl ether stabilized with ethanol	1 L	Glass bottle		D/2506/15	109
	2.5 L	Glass bottle		D/2506/17	109
		Coated Glass bottle		D/2506/PB17	109
Dimethylformamide	1 L	Glass bottle		D/3846/15	113
	2.5 L	Glass bottle		D/3846/17	113
		Coated Glass bottle		D/3846/PB17	113
	10 L	Returnable Drum		D/3846/10RSS	113
	25 L	Returnable Drum		D/3846/25RSS	113
	30 L	Returnable Drum		D/3846/30RSS	113
Dimethyl sulfoxide	250 mℓ	Coated Glass bottle		D/4125/PB07	115
	500 mℓ	Coated Glass bottle		D/4125/PB08	115
	2.5 L	Coated Glass bottle		D/4125/PB17	115
	10 L	Returnable Drum		D/4125/10RSS	115
	25 L	Returnable Drum		D/4125/25RSS	115
	30 L	Returnable Drum		D/4125/30RSS	115

HPLC grade- Solvents and Reagents NEW PACK.

designation	packsize	package type		Mfr. No	page
1.4-Dioxane stabilised with BHT	1 L	Coated Glass bottle		D/4556/PB15	116
	2.5 L	Coated Glass bottle		D/4556/PB17	116
Ethanol absolute	1 L	Glass bottle		E/0665/15	120
		Glass bottle		E/0665DF/15	120
	2.5 L	Glass bottle		E/0665/17	120
		Glass bottle		E/0665DF/17	120
	10 L	Returnable Drum		E/0665DF/10RS	120
	25 L	Returnable Drum		E/0665DF/25RS	120
	30 L	Returnable Drum		E/0665DF/30RS	120
Ethyl acetate	1 L	Glass bottle		E/0906/15	124
	2.5 L	Glass bottle		E/0906/17	124
		Coated Glass bottle		E/0906/PB17	124
	10 L	Returnable Drum		E/0906/10RSS	124
	25 L	Returnable Drum		E/0906/25RSS	124
	30 L	Returnable Drum		E/0906/30RSS	124
Ethyl acetate	2.5 L	Glass bottle		E/0907/17	124
Formic acid solution 0.25M	500 mℓ	Coated Glass bottle		J/4200/PB08	133
Heptane (approx. 99% n-Heptane)	1 L	Glass bottle		H/0106/15	138
	2.5 L	Glass bottle		H/0106/17	138
		Coated Glass bottle		H/0106/PB17	138
	10 L	Returnable Drum		H/0106/10RSS	138
	25 L	Returnable Drum		H/0106/25RSS	138
	30 L	Returnable Drum		H/0106/30RSS	138
Hexanes (95% n-Hexane approx.)	1 L	Glass bottle		H/0406/15	142
	2.5 L	Glass bottle		H/0406/17	142
		Coated Glass bottle		H/0406/PB17	142
	5 L	Aluminium can		H/0406/21	142
	10 L	Returnable Drum		H/0406/10RSS	142
	25 L	Returnable Drum		H/0406/25RSS	142
	30 L	Returnable Drum		H/0406/30RSS	142
Isohexane (contains <5% n-Hexane)	1 L	Coated Glass bottle		H/0405/PB15	166
	2.5 L	Coated Glass bottle		H/0405/PB17	166
	5 L	Aluminium can		H/0405/21	166
	10 L	Returnable Drum		H/0405/10RSS	166
	25 L	Aluminium can		H/0405/25	166
		Returnable Drum		H/0405/25RSS	166
	30 L	Returnable Drum		H/0405/30RSS	166
Isopropanol	1 L	Glass bottle		P/7507/15	167
	2.5 L	Glass bottle		P/7507/17	167
		Coated Glass bottle		P/7507/PB17	167
	10 L	Returnable Drum		P/7507/10RSS	167
	25 L	Returnable Drum		P/7507/25RSS	167
	30 L	Returnable Drum		P/7507/30RSS	167
Methanol	1 L	Glass bottle		M/4056/15	200
	2.5 L	Glass bottle		M/4056/17	200
		Coated Glass bottle		M/4056/PB17	200
	5 L	Aluminium can		M/4056/21	200
	10 L	Returnable Drum		M/4056/10RSS	200
	25 L	Returnable Drum		M/4056/25RSS	200
	30 L	Returnable Drum		M/4056/30RSS	200
Orthophosphoric acid solution 1M	500 mℓ	Coated Glass bottle		J/5655/PB08	221
Pentane (mixed isomers)	1 L	Glass bottle		P/1006/15	225
	2.5 L	Glass bottle		P/1006/17	225
	10 L	Returnable Drum		P/1006/10RSS	225
	25 L	Returnable Drum		P/1006/25RSS	225
	30 L	Returnable Drum		P/1006/30RSS	225
Perchloric acid 60%	100 mℓ	Coated Glass bottle		P/1290/PB05	228
Potassium dihydrogen orthophosphate	250 g	Plastic jar		P/4806/50	252
	1 kg	Plastic jar		P/4806/60	252
	25 kg	Plastic keg		P/4806/70	252
Propan-1-ol	1 L	Glass bottle		P/7486/15	264
	2.5 L	Glass bottle		P/7486/17	264
Sodium acetate trihydrate	250 g	Plastic jar		S/2046/50	281
	1 kg	Plastic jar		S/2046/60	281
Sodium chloride	500 g	Plastic jar		S/3165/53	285
Sodium dihydrogen orthophosphate 0.25M solution	500 mℓ	Coated Glass bottle		J/7600/PB08	289

HPLC grade- Solvents and Reagents NEW PACK.

designation	packsize	package type		Mfr. No	page
Sodium formate	250 g	Plastic jar		S/4086/50	290
Sodium hydrogen carbonate	250 g	Plastic jar		S/4246/50	291
di-Sodium hydrogen orthophosphate 0.25M solution	500 mℓ	Coated Glass bottle		J/7650/PB08	293
Sodium perchlorate	250 g	Plastic jar		S/5966/50	301
Tetrabutyl ammonium bromide	25 g	Plastic jar		T/0476/46	343
Tetra-n-butyl ammonium hydroxide	250 mℓ	HDPE Plastic bottle		T/0486/07	343
Tetra-n-butyl ammonium hydroxide	250 mℓ	HDPE Plastic bottle		T/0481/07	343
Tetradecyltrimethylammonium bromide	25 g	Plastic jar		T/0611/46	345
Tetraethylammonium bromide	25 g	Plastic jar		T/0621/46	345
Tetrahydrofuran unstabilized	1 L	Coated Glass bottle		T/0706/PB15	345
	2.5 L	Coated Glass bottle		T/0706/PB17	345
	10 L	Returnable Drum		T/0706/10RSS	345
	25 L	Returnable Drum		T/0706/25RSS	345
	30 L	Returnable Drum		T/0706/30RSS	345
Tetramethyl ammonium chloride	25 g	Plastic jar		T/0931/46	346
Tetramethyl ammonium hydrogen sulfate	5 g	Glass jar		T/0935/44	347
Toluene	1 L	Glass bottle		T/2306/15	353
	2.5 L	Glass bottle		T/2306/17	353
	10 L	Returnable Drum		T/2306/10RSS	353
	25 L	Returnable Drum		T/2306/25RSS	353
	30 L	Returnable Drum		T/2306/30RSS	353
Triethylamine	250 mℓ	Glass bottle		T/3203/07	357
Trifluoroacetic acid	25 mℓ	Coated Glass bottle		T/3258/04	358
	100 mℓ	Coated Glass bottle		T/3258/PB05	358
Trifluoroacetic acid solution 1%	500 mℓ	Coated Glass bottle		J/8800/PB08	359
Tri-n-hexylamine	100 mℓ	Coated Glass bottle		T/3296/PB05	359
2.2,4-Trimethylpentane	1 L	Glass bottle		T/3606/15	360
	2.5 L	Glass bottle		T/3606/17	360
	5 L	Aluminium can		T/3606/21	360
	10 L	Returnable Drum		T/3606/10RSS	360
	25 L	Returnable Drum		T/3606/25RSS	360
	30 L	Returnable Drum		T/3606/30RSS	360

Other Applications & Grades- Solvents and Reagents

designation	packsize	package type		Mfr. No	page
Acetic acid glacial	500 mℓ	Coated Glass bottle		A/0407/PB08	13
Acetonitrile HPLC for fluorescence detection	1 L	Coated Glass bottle		A/0630/PB15	20
	2.5 L	Coated Glass bottle		A/0630/PB17	20
Acetonitrile HPLC for electrochemical detection	1 L	Coated Glass bottle		A/0635/PB15	20
	2.5 L	Coated Glass bottle		A/0635/PB17	20
Ammonium acetate	250 g	Plastic jar		A/3450/50	36
Citric acid monohydrate	500 g	Plastic jar		C/6230/53	90
Ethylenediaminetetraacetic acid disodium salt solution 0.2N	2.5 L	Glass bottle		J/3710/17	127
Heptane (approx. 99% n-Heptane)	1 L	Glass bottle		H/0107/15	139
	2.5 L	Glass bottle		H/0107/17	139
Hexanes (95% n-Hexane approx.)	1 L	Coated Glass bottle		H/0409/PB15	142
	2.5 L	Coated Glass bottle		H/0409/PB17	142
Isohexane (contains <5% n-Hexane)	1 L	Coated Glass bottle		H/0410/PB15	166
	2.5 L	Coated Glass bottle		H/0410/PB17	166
Isopropanol	2.5 L	Glass bottle		P/7509/17	168
Methanol HPLC for fluorescence detection	2.5 L	Coated Glass bottle		M/4057/PB17	200
Methanol HPLC for electrochemical detection	2.5 L	Coated Glass bottle		M/4059/PB17	201
Orthophosphoric acid 85%	500 mℓ	Coated Glass bottle		O/0515/PB08	221
Potassium dihydrogen orthophosphate	250 g	Plastic jar		P/4810/50	252
Sodium acetate trihydrate	250 g	Plastic jar		S/2052/50	281
tri-Sodium citrate dihydrate	500 g	Plastic jar		S/3380/53	287
Sodium dihydrogen orthophosphate dihydrate	500 g	Plastic jar		S/3770/53	289
di-Sodium hydrogen orthophosphate dihydrate	500 g	Plastic jar		S/4460/53	292
Sodium hydroxide 46-48% solution	2.5 L	HDPE Plastic bottle		S/4940/17	295
Water HPLC for fluorescence detection	2.5 L	Glass bottle		W/0107/17	368
Water HPLC for electrochemical detection	2.5 L	Glass bottle		W/0108/17	368

Sorbic acid — SLR

specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/7390/48

$C_6H_8O_2$
CAS: 110-44-1
MW: 112.13
Density at 20°C: 1.2
Melting point: 132 to 135°C
Flash point: 127°C

EINECS: 203-768-7
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98.5%

Sorbitol — SLR, Eur.Ph., USP

specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/7400/53
3 kg	Plastic jar	S/7400/63
25 kg	Plastic keg	S/7400/70

$C_6H_{14}O_6$
CAS: 50-70-4
MW: 182.18

Density at 20°C: 1.489
Melting point: 95 to 99°C
EINECS: 200-061-5

Guaranteed analysis

Water ..... <2%
Residue after ignition ..... <0.1%
Melting Point tested ..... 95 to 100°C

Fisher Chemical Standard mono-element solution for AAS

Manufactured to a tolerance of ± 0.5%
See alphabetical entry in the main body of this catalogue for full details

designation	matrix	packsize	package type		Mfr. No	page
Aluminium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8000/05	27
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8000/08	27
Antimony standard metal solution 1000 ppm	HCl 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8002/05	49
	HCl 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8002/08	49
Arsenic standard metal solution 1000 ppm	HCl 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8003/05	50
	HCl 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8003/08	50
Barium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8004/05	52
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8004/08	52
Boron standard metal solution 1000 ppm	H_2O	100 mℓ	HDPE Plastic bottle		J/8006/05	59
	H_2O	500 mℓ	HDPE Plastic bottle		J/8006/08	59
Cadmium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8005/05	71
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8005/08	71
Calcium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8010/05	73
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8010/08	73
Chromium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8015/05	87
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8015/08	87
Cobalt standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8020/05	91
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8020/08	91
Copper standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8025/05	94
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8025/08	94
Gold standard metal solution 1000 ppm	HCl 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8028/08	137
Iron standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8030/05	162
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8030/08	162
Lead standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8035/05	177
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8035/08	177
Lithium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8037/05	182
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8037/08	182
Magnesium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8040/05	186
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8040/08	186
Manganese standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8045/05	191
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8045/08	191
Mercury standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8047/05	194
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8047/08	194
Molybdenum standard metal solution 1000 ppm	HNO_3 0.1 mol/l	100 mℓ	HDPE Plastic bottle		J/8050/05	209
	HNO_3 0.1 mol/l	500 mℓ	HDPE Plastic bottle		J/8050/08	209
Nickel standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8055/05	212
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8055/08	212
Potassium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8060/05	245
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8060/08	245
Selenium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8061/05	273
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8061/08	273
Silicon standard metal solution 1000 ppm	H_2O	100 mℓ	HDPE Plastic bottle		J/8062/05	275
	H_2O	500 mℓ	HDPE Plastic bottle		J/8062/08	275
Silver standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8064/05	276
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8064/08	276
Sodium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8065/05	279
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8065/08	279
Strontium standard metal solution 1000 ppm	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8166/08	331
Tellurium standard metal solution 1000 ppm	HCl 20%	100 mℓ	HDPE Plastic bottle		J/8100/05	342
	HCl 20%	500 mℓ	HDPE Plastic bottle		J/8100/08	342
Tin standard metal solution 1000 ppm	HCl 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8067/05	349
	HCl 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8067/08	349
Titanium standard metal solution 1000 ppm	HCl 2 mol/l	100 mℓ	HDPE Plastic bottle		J/8110/05	351
	HCl 2 mol/l	500 mℓ	HDPE Plastic bottle		J/8110/08	351
Tungsten standard metal solution 1000 ppm	NH3 0.1 mol/l	100 mℓ	HDPE Plastic bottle		J/8120/05	363
	NH3 0.1 mol/l	500 mℓ	HDPE Plastic bottle		J/8120/08	363
Vanadium standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8150/05	366
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8150/08	366
Zinc standard metal solution 1000 ppm	HNO_3 1 mol/l	100 mℓ	HDPE Plastic bottle		J/8070/05	373
	HNO_3 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8070/08	373
Zirconium standard metal solution 1000 ppm	HCl 1 mol/l	500 mℓ	HDPE Plastic bottle		J/8200/08	377

Fisher Chemical Standard mono-element solution for ICP

Manufactured to a tolerance of ± 0.5%
All standards are manufactured from Ultra-pure metals/acids
All standards are guaranteed to contain <10 ppm total metal impurites
See alphabetical entry in the main body of this catalogue for full details

designation	packsize	package type		Mfr. No	page
Aluminium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8206/08	27
Aluminium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8205/05	27
Antimony standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8215/08	49
Antimony standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8210/05	49
Barium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8221/08	52
Barium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8220/05	52
Boron standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8231/08	59
Boron standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8230/05	59
Cadmium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8236/08	71
Cadmium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8235/05	72
Calcium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8241/08	73
Calcium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8240/05	73
Chromium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8246/08	87
Chromium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8245/05	88
Cobalt standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8251/08	91
Cobalt standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8250/05	91
Copper standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8256/08	94
Copper standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8255/05	94
Iron standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8271/08	162
Iron standard metal solution 10000 ppm	100 mℓ	HDPE Plastic bottle		J/8270/05	162
Lead standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8276/08	178
Lead standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8275/05	178
Lithium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8281/08	183
Lithium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8280/05	183
Magnesium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8286/08	186
Magnesium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8285/05	186
Manganese standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8291/08	191
Manganese standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8290/05	191
Mercury standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8293/08	194
Mercury standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8292/05	194
Molybdenum standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8296/08	209
Molybdenum standard metal solution 10000 ppm	100 mℓ	HDPE Plastic bottle		J/8294/05	209
Nickel standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8297/08	212
Nickel standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8295/05	212
Phosphorus standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8299/08	242
Phosphorus standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8298/05	242
Potassium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8301/08	246
Potassium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8300/05	246
Selenium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8306/08	273
Selenium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8305/05	273
Silver standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8310/08	276
Silver standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8309/05	276
Sodium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8316/08	279
Sodium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8315/05	280
Strontium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8321/08	331
Strontium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8320/05	332
Sulfur standard standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8324/08	335
Sulfur standard standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8323/05	335
Tellurium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8327/08	342
Tin standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8326/08	349
Tin standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8325/05	349
Titanium standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8331/08	352
Titanium standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8330/05	352
Tungsten standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8336/08	363
Zinc standard metal solution 1000 ppm	500 mℓ	HDPE Plastic bottle		J/8341/08	373
Zinc standard metal solution 10 000 ppm	100 mℓ	HDPE Plastic bottle		J/8340/05	373

SPEX Standard mono-element solution for ICP & ICP-MS

NIST Certified, manufactured to a tolerance of ± 0.5%
All standards are manufactured from Ultra-pure metals/salts
Actual measured impurities of up to 30 elements
See alphabetical entry in the main body of this catalogue for full details
High purity acids for elemental analysis

designation	matrix	packsize	package type		Mfr. No	page
Aluminium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLAL22Y	28
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLAL22T	28
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLAL22X	28
Aluminium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLAL12X	28
Aluminium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLAL23Y	28
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLAL23X	28
Aluminium standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLAL13X	28
Aluminium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLAL22Y	28
Antimony standard metal solution 1000 ppm	for ICP-MS solution in H_2O/0.6% Tartaric Acid/HNO_3 trace	100 mℓ	Plastic bottle		SPCLSB72Y	49
Antimony standard metal solution 1000 ppm	for ICP solution in H_2O/0.6% Tartaric Acid/HNO_3 trace	100 mℓ	Plastic bottle		SPPLSB72Y	49
	for ICP solution in H_2O/0.6% Tartaric Acid/HNO_3 trace	250 mℓ	Plastic bottle		SPPLSB72T	49
	for ICP solution in H_2O/0.6% Tartaric Acid/HNO_3 trace	500 mℓ	Plastic bottle		SPPLSB72X	49
Antimony standard metal solution 10 000 ppm	for ICP solution in H_2O/0.6% Tartaric Acid/HNO_3 trace	100 mℓ	Plastic bottle		SPPLSB73Y	49
	for ICP solution in H_2O/0.6% Tartaric Acid/HNO_3 trace	500 mℓ	Plastic bottle		SPPLSB73X	49
Antimony standard metal solution 10 000 ppm	for ICP solution in HCL 20%	500 mℓ	Plastic bottle		PLSB53X	50
Arsenic standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLAS22Y	50
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLAS22T	50
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLAS22X	50
Arsenic standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLAS12X	51
Arsenic standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLAS23Y	51
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLAS23X	51
Arsenic standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLAS22Y	51
Barium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLBA22Y	52
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLBA22T	52
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLBA22X	52
Barium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		PLBA12X	53
Barium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLBA23Y	53
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLBA23X	53
Barium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLBA22Y	53
Beryllium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLBE22Y	57
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLBE22T	57
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLBE22X	57

SPEX Standard mono-element solution for ICP & ICP-MS

designation	matrix	packsize	package type		Mfr. No	page
Beryllium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLBE23Y	57
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLBE23X	57
Beryllium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLBE22Y	57
Bismuth standard metal solution 1000 ppm	for ICP solution in HNO_3 10%	100 mℓ	Plastic bottle		SPPLBI42Y	58
	for ICP solution in HNO_3 10%	500 mℓ	Plastic bottle		SPPLBI42X	58
Bismuth standard metal solution 10 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLBI21AY	58
Boron standard metal solution 1000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLB92Y	59
	for ICP solution in H_2O	250 mℓ	Plastic bottle		SPPLB92T	59
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLB92X	59
Boron standard metal solution 10 000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLB93Y	60
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLB93X	60
Cadmium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLCD22Y	72
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLCD22T	72
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLCD22X	72
Cadmium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		PLCD12X	72
Cadmium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLCD23Y	72
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLCD23X	72
Cadmium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLCD22Y	72
Calcium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLCA22Y	73
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLCA22T	73
Calcium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLCA12X	74
Calcium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLCA23Y	74
	for ICP solution in HNO_3 5%	250 mℓ	Plastic bottle		SPPLCA23T	74
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLCA23X	74
Calcium standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLCA13X	74
Calcium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLCA22Y	74
Carbon standard solution 1000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLC92Y	78
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLC92X	78
Cerium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLCE22Y	80
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLCE22X	80
Cerium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLCE23Y	80
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLCE23X	80
Cesium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLCS22Y	81
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLCS22X	81
Cesium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLCS23Y	81
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLCS23X	81
Chromium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLCR22Y	88
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLCR22T	88
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLCR22X	88
Chromium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLCR12X	88
Chromium standard metal solution 1000 ppm	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLCR92X	88
Chromium standard metal solution 10 000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLCR23Y	88
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLCR23X	88
Chromium standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		PLCR13X	88
Chromium standard metal solution 10 000 ppm	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLCR93X	88
Chromium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLCR22Y	88
Cobalt standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLCO22Y	91
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLCO22T	91
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLCO22X	91
Cobalt standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLCO12X	91
Cobalt standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLCO23Y	92
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLCO23X	92
Cobalt standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLCO22Y	92
Copper standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLCU22Y	95
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLCU22T	95
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLCU22X	95
Copper standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLCU12X	95
Copper standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLCU23Y	95
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLCU23X	95
Copper standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLCU13X	95
Copper standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLCU22Y	95
Dysprosium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLDY22Y	119
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLDY22X	119
Erbium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLER22Y	119
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLER22X	119

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designation	matrix	packsize	package type		Mfr. No	page
Erbium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLER23Y	119
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLER23X	119
Europium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLEU22Y	128
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLEU22X	128
Gadolinium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLGD22Y	134
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLGD22X	134
Gadolinium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLGD23Y	134
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLGD23X	134
Gallium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLGA22Y	134
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLGA22X	134
Germanium standard metal solution 1000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLGE92Y	134
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLGE92X	134
Germanium standard metal solution 10 ppm	for ICP-MS solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPCLGE91AY	134
Gold standard metal solution 1000 ppm	for ICP solution in HCL 10%	100 mℓ	Plastic bottle		SPPLAU32Y	137
	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLAU32X	137
Gold standard metal solution 1000 ppm	for ICP-MS solution in HCl 2%	100 mℓ	Plastic bottle		SPCLAU11Y	137
Hafnium standard metal solution 1000 ppm	for ICP solution in HCL 2%	100 mℓ	Plastic bottle		SPPLHF12Y	138
	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLHF12X	138
Hafnium standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLHF13X	
Holmium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLHO22Y	144
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLHO22X	144
Indium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLIN22Y	160
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLIN22X	160
Indium standard metal solution 10 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLIN21AY	160
Iridium standard metal solution 1000 ppm	for ICP solution in HCL 10%	100 mℓ	Plastic bottle		SPPLIR32Y	162
	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLIR32X	162
Iron standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLFE22Y	162
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLFE22T	162
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLFE22X	162
Iron standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLFE12X	162
Iron standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLFE23Y	163
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLFE23X	163
Iron standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLFE13X	163
Iron standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLFE22Y	163
Lanthanum standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLLA22Y	176
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLLA22X	176
Lanthanum standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLLA23Y	177
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLLA23X	177
Lead standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLPB22Y	178
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLPB22T	178
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLPB22X	178
Lead standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLPB23Y	178
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLPB23X	178
Lead standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLPB22Y	178
Lithium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLLI22Y	183
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLLI22X	183
Lithium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLLI12X	183
Lithium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLLI23Y	183
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLLI23X	183
Lithium standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLLI13X	183
Lutetium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLLU22Y	186
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLLU22X	186
Magnesium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLMG22Y	186
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLMG22T	186
Magnesium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLMG12X	186
Magnesium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLMG23Y	186
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLMG23X	186
Magnesium standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLMG13X	187
Magnesium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLMG22Y	187

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designation	matrix	packsize	package type		Mfr. No	page
Manganese standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLMN22Y	191
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLMN22T	191
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLMN22X	191
Manganese standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLMN23Y	191
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLMN23X	191
Manganese standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLMN22Y	191
Mercury standard metal solution 1000 ppm	for ICP solution in HNO_3 10%	100 mℓ	Plastic bottle		SPPLHG42Y	194
	for ICP solution in HNO_3 10%	250 mℓ	Plastic bottle		SPPLHG42T	194
	for ICP solution in HNO_3 10%	500 mℓ	Plastic bottle		SPPLHG42X	194
Mercury standard metal solution 10 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLHG21AY	194
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLHG21AX	194
Mercury standard metal solution 100 ppm	for ICP solution in HNO_3 2%		Plastic bottle		SPPLHG21X	194
Mercury standard metal solution 10 000 ppm	for ICP solution in HNO_3 10%	100 mℓ	Plastic bottle		SPPLHG43Y	194
	for ICP solution in HNO_3 10%	500 mℓ	Plastic bottle		SPPLHG43X	194
Mercury standard metal solution 10 ppm	for ICP-MS solution in HNO_3 5%	100 mℓ	Plastic bottle		SPCLHG21AY	195
Molybdenum standard metal solution 1000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLMO92Y	209
	for ICP solution in H_2O	250 mℓ	Plastic bottle		SPPLMO92T	209
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLMO92X	209
Molybdenum standard metal solution 10 000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLMO93Y	209
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLMO93X	209
Molybdenum standard metal solution 1000 ppm	for ICP-MS solution in H_2O	100 mℓ	Plastic bottle		SPCLMO92Y	209
Neodymium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLND22Y	211
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLND22X	211
Nickel standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLNI22Y	212
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLNI22T	212
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLNI22X	212
Nickel standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLNI23Y	212
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLNI23X	212
Nickel standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLNI22Y	212
Niobium standard metal solution 1000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLNB92Y	215
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLNB92X	215
Niobium standard metal solution 10 000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLNB93Y	215
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLNB93X	215
Palladium standard metal solution 1000 ppm	for ICP solution in HCL 10%	100 mℓ	Plastic bottle		SPPLPD32Y	223
	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLPD32X	223
Phosphorus standard metal solution 1000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLP92Y	243
	for ICP solution in H_2O	250 mℓ	Plastic bottle		SPPLP92T	243
Phosphorus standard metal solution 10 000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLP93Y	243
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLP93X	243
Platinum standard metal solution 1000 ppm	for ICP solution in HCL 10%	100 mℓ	Plastic bottle		SPPLPT32Y	244
	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLPT32X	244
Potassium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLK22Y	246
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLK22T	246
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLK22X	246
Potassium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLK12X	246
Potassium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLK23Y	246
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLK23X	246
Potassium standard metal solution 10 000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLK13X	246
Potassium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLK22Y	246
Praseodymium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLPR22Y	264
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLPR22X	264
Rhenium standard metal solution 1000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLRE92Y	269
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLRE92X	269
Rhodium standard metal solution 1000 ppm	for ICP solution in HCL 10%	100 mℓ	Plastic bottle		SPPLRH32Y	269
	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLRH32X	269
Rhodium standard metal solution 10 ppm	for ICP-MS solution in HCl 2%	100 mℓ	Plastic bottle		SPCLRH11AY	269
Rubidium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLRB22Y	270
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLRB22X	270

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designation	matrix	packsize	package type		Mfr. No	page
Rubidium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		PLRB23Y	270
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		PLRB23X	270
Ruthenium standard metal solution 1000 ppm	for ICP solution in HCL 10%	100 mℓ	Plastic bottle		SPPLRU32Y	270
	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLRU32X	270
Samarium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLSM22Y	271
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLSM22X	271
Scandium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLSC22Y	272
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLSC22T	272
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLSC22X	272
Scandium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLSC23Y	272
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLSC23X	272
Scandium standard metal solution 10 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLSC21AY	272
Selenium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLSE22Y	273
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLSE22T	273
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLSE22X	273
Selenium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLSE23Y	273
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLSE23X	273
Selenium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLSE22Y	273
Silicon standard metal solution 1000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLSI92Y	275
	for ICP solution in H_2O/HF trace	250 mℓ	Plastic bottle		SPPLSI92T	275
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLSI92X	275
Silicon standard metal solution 10 000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLSI93Y	275
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLSI93X	275
Silicon standard metal solution 10 000 ppm	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLSI9A3X	276
Silver standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLAG22Y	276
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLAG22T	276
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLAG22X	276
Silver standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLAG23Y	276
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLAG23X	276
Silver standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLAG22Y	276
Sodium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLNA22Y	280
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLNA22T	280
	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLNA22X	280
Sodium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLNA12X	280
Sodium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLNA23Y	280
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLNA23X	280
Sodium standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLNA13X	280
Sodium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLNA22Y	280
Strontium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLSR22Y	332
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLSR22T	332
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLSR22X	332
Strontium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLSR12X	332
Strontium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLSR23Y	332
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLSR23X	332
Strontium standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		PLSR13X	332
Sulfur standard metal solution 1000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLS92Y	336
	for ICP solution in H_2O	250 mℓ	Plastic bottle		SPPLS92T	336
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLS92X	336
Sulfur standard metal solution 10 000 ppm	for ICP solution in H_2O	100 mℓ	Plastic bottle		SPPLS93Y	336
	for ICP solution in H_2O	500 mℓ	Plastic bottle		SPPLS93X	336
Tantalum standard metal solution 1000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLTA92Y	341
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLTA92X	341
Tantalum standard metal solution 10 000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLTA93Y	341
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLTA93X	341
Tellurium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLTE22Y	342
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLTE22X	342
Tellurium standard metal solution 1000 ppm	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		PLTE32X	342
Tellurium standard metal solution 10 000 ppm	for ICP solution in HCL 40%	500 mℓ	Plastic bottle		PLTE53X	342
Terbium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLTB22Y	343
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLTB22X	343
Terbium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		PLTB23Y	343
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		PLTB23X	343
Terbium standard metal solution 10 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLTB21AY	343

SPEX Standard mono-element solution for ICP & ICP-MS

designation	matrix	packsize	package type		Mfr. No	page
Thallium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLTL22Y	347
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLTL22T	347
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLTL22X	347
Thallium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		PLTL23Y	347
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		PLTL23X	347
Thallium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLTL22Y	347
Thorium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLTH22Y	348
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLTH22X	348
Thorium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLTH22Y	348
Thullium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLTM22Y	348
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLTM22X	348
Tin standard metal solution 1000 ppm	for ICP solution in HNO_3 1%/HF 1%	500 mℓ	Plastic bottle		SPPLSN22X	350
Tin standard metal solution 1000 ppm	for ICP solution in HCL 20%	100 mℓ	Plastic bottle		SPPLSN52Y	350
	for ICP solution in HCL 20%	250 mℓ	Plastic bottle		SPPLSN52T	350
	for ICP solution in HCL 20%	500 mℓ	Plastic bottle		SPPLSN52X	350
Tin standard metal solution 10 000 ppm	for ICP solution in HNO_3 2%/HF 2%	500 mℓ	Plastic bottle		SPPLSN23X	350
Tin standard metal solution 10 000 ppm	for ICP solution in HCL 20%	100 mℓ	Plastic bottle		SPPLSN53Y	350
	for ICP solution in HCL 20%	500 mℓ	Plastic bottle		SPPLSN53X	350
Tin standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 1%/HF 1%	100 mℓ	Plastic bottle		SPCLSN22Y	350
Titanium standard metal solution 1000 ppm	for ICP solution in HCL 20%	500 mℓ	Plastic bottle		SPPLTI52X	352
Titanium standard metal solution 1000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLTI92Y	352
	for ICP solution in H_2O/HF trace	250 mℓ	Plastic bottle		SPPLTI92T	352
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLTI92X	352
Titanium standard metal solution 10 000 ppm	for ICP solution in HCL 40%	500 mℓ	Plastic bottle		SPPLTI53X	352
Titanium standard metal solution 10 000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLTI93Y	352
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLTI93X	352
Titanium standard metal solution 1000 ppm	for ICP-MS solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPCLTI92Y	352
Tungsten standard metal solution 1000 ppm	for ICP solution in HNO_3 1%/HF 2%	500 mℓ	Plastic bottle		SPPLW22X	363
Tungsten standard metal solution 1000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLW92Y	363
Tungsten standard metal solution 10 000 ppm	for ICP solution in HNO_3 2%/HF 5%	500 mℓ	Plastic bottle		SPPLW23X	363
Tungsten standard metal solution 10 000 ppm	for ICP solution in H_2O/HF trace	100 mℓ	Plastic bottle		SPPLW93Y	363
	for ICP solution in H_2O/HF trace	500 mℓ	Plastic bottle		SPPLW93X	363
Uranium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLU22Y	365
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLU22X	365
Uranium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLU23Y	365
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLU23X	365
Uranium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLU22Y	365
Vanadium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLV22Y	366
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLV22X	366
Vanadium standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLV12X	366
Vanadium standard metal solution 10 000 ppm	for ICP solution in HNO_3 15%	100 mℓ	Plastic bottle		SPPLV43Y	366
	for ICP solution in HNO_3 15%	500 mℓ	Plastic bottle		SPPLV43X	366
Vanadium standard metal solution 10 000 ppm	for ICP solution in HCL 15%	500 mℓ	Plastic bottle		SPPLV33X	366
Vanadium standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLV22Y	366
Water blank in HCl 5%	for ICP	500 mℓ	Plastic bottle		SPPLBLKHCL	369
Water blank in HNO_3 5%	for ICP	500 mℓ	Plastic bottle		SPPLBLKHNO3	369
Water blank in HCl 2%	for ICP-MS	100 mℓ	Plastic bottle		SPCLBLKHCL	369
Water blank in HNO_3 2%	for ICP-MS	100 mℓ	Plastic bottle		SPCLBLKHNO3	369
Water Blank	for ICP-MS	100 mℓ	Plastic bottle		SPCLBLKH2O	369
Ytterbium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLY22Y	372
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLY22T	372
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLY22X	372
Ytterbium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLYB22Y	372
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLYB22X	372
Ytterbium standard metal solution 10 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLY21AY	372
Yttrium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLY23Y	372
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLY23X	372
Zinc standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLZN22Y	373
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLZN22T	373
Zinc standard metal solution 1000 ppm	for ICP solution in HCL 2%	500 mℓ	Plastic bottle		SPPLZN12X	373
Zinc standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLZN23Y	373
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLZN23X	373
Zinc standard metal solution 10 000 ppm	for ICP solution in HCL 5%	500 mℓ	Plastic bottle		SPPLZN13X	373
Zinc standard metal solution 1000 ppm	for ICP-MS solution in HNO_3 2%	100 mℓ	Plastic bottle		SPCLZN22Y	373

SPEX Standard mono-element solution for ICP & ICP-MS

designation	matrix	packsize	package type		Mfr. No	page
Zirconium standard metal solution 1000 ppm	for ICP solution in HNO_3 2%	100 mℓ	Plastic bottle		SPPLZR22Y	377
	for ICP solution in HNO_3 2%	250 mℓ	Plastic bottle		SPPLZR22T	377
	for ICP solution in HNO_3 2%	500 mℓ	Plastic bottle		SPPLZR22X	377
Zirconium standard metal solution 1000 ppm	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLZR32X	377
Zirconium standard metal solution 10 000 ppm	for ICP solution in HNO_3 5%	100 mℓ	Plastic bottle		SPPLZR23Y	377
	for ICP solution in HNO_3 5%	500 mℓ	Plastic bottle		SPPLZR23X	377
Zirconium standard metal solution 10 000 ppm	for ICP solution in HCL 10%	500 mℓ	Plastic bottle		SPPLZR33X	377

SPEX Standard Instrument check, Calibration & Multi-element solution for ICP & ICP-MS

NIST Certified

designation	packsize	package type		Mfr. No	page
Standard Instrument Calibration 1	100 mℓ	Plastic bottle		SPCLCAL1	327
Standard Instrument Calibration 2	100 mℓ	Plastic bottle		SPCLCAL2	327
Standard Instrument Calibration 3	100 mℓ	Plastic bottle		SPCLCAL3	327
Standard Instrument check 3	100 mℓ	Plastic bottle		SPCALMIX3100	327
Standard Instrument check 10	500 mℓ	Plastic bottle		SPCALMIX10500	327
Standard Instrument check 3	500 mℓ	Plastic bottle		SPCALMIX3500	327
Standard Instrument check 4	100 mℓ	Plastic bottle		SPCALMIX4100	327
Standard Instrument check 4	500 mℓ	Plastic bottle		SPCALMIX4500	327
Standard Instrument check 7	100 mℓ	Plastic bottle		SPCALMIX7100	327
Standard Instrument check 7	500 mℓ	Plastic bottle		SPCALMIX7500	327
Standard Instrument check 8	100 mℓ	Plastic bottle		SPCALMIX8100	327
Standard Instrument check 8	500 mℓ	Plastic bottle		SPCALMIX8500	327
Standard Instrument check 10	100 mℓ	Plastic bottle		SPCALMIX10100	328
Standard 1 solution Multi-element	100 mℓ	Plastic bottle		SPCLMS1	328
Standard Set of 7 Multi-element solution (no Hg)	100 mℓ	Plastic bottle		SPCLMSSETN	328
Standard 2 solution Multi-element	100 mℓ	Plastic bottle		SPCLMS2	328
Standard 2A solution Multi-element	100 mℓ	Plastic bottle		SPCLMS2A	328
Standard 2A solution Multi-element (no Hg)	100 mℓ	Plastic bottle		SPCLMS2AN	328
Standard 2 solution Multi-element (no Hg)	100 mℓ	Plastic bottle		SPCLMS2N	328
Standard 3 solution Multi-element	100 mℓ	Plastic bottle		SPCLMS3	328
Standard 4 solution Multi-element	100 mℓ	Plastic bottle		SPCLMS4	328
Standard 5 solution Multi-element	100 mℓ	Plastic bottle		SPCLMS5	328
Standard Set of 7 Multi-element solution	100 mℓ	Plastic bottle		SPCLMSSET	328
Standard 1 Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD1100	328
Standard 3 Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD3500	329
Standard 3A Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD3A100	329
Standard 3A Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD3A500	329
Standard 4 Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD4100	329
Standard 4 Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD4500	329
Standard 4A Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD4A100	329
Standard 4A Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD4A500	329
Standard 5 Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD5100	329
Standard 5 Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD5500	329
Standard 5A Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD5A100	329
Standard 1 Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD1500	329
Standard 5A Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD5A500	329
Standard 1A Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD1A100	330
Standard 1A Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD1A500	330
Standard 2 Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD2100	330
Standard 2 Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD2500	330
Standard 2A Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD2A100	330
Standard 2A Mixed Multi-element calibration	500 mℓ	Plastic bottle		SPMIXSTD2A500	330
Standard 3 Mixed Multi-element calibration	100 mℓ	Plastic bottle		SPMIXSTD3100	330
Standard Plasma emission Kit 1 (38 elements)	100 mℓ	Plastic bottle		SPICPKIT1	330
Standard Plasma emission Kit 2 (13 elements)	100 mℓ	Plastic bottle		SPICPKIT2	330
Standard Plasma emission Kit 3 (10 elements)	100 mℓ	Plastic bottle		SPICPKIT3	330
Standard Plasma emission Kit 3 (15 elements)	100 mℓ	Plastic bottle		SPICPKIT4	330
Standard Tuning solution 1	100 mℓ	Plastic bottle		SPCLTUNE1	330

Standard solutions Ready to use for volumetric analysis

designation	comment	NIST	tolerance	packsize	package type		Mfr. No	page
Ammonium iron (II) sulfate solution 0.1M (0.1N)		●	± 0.005	1 L	Glass bottle		J/1101/15	43
		●	± 0.005	2.5 L	HDPE Plastic bottle		J/1101/PB17	43
Ammonium iron(II) sulfate solution 0.025M			± 0.005	2.5 L	Glass bottle		J/1100/17	43
Ammonium thiocyanate solution 0.1M (0.1N)	Eur.Ph. , USP, BP	●	± 0.002	1 L	HDPE Plastic bottle		J/1500/PB15	46
	Eur.Ph. , USP, BP	●	± 0.002	2.5 L	HDPE Plastic bottle		J/1500/PB17	46
Cerium(IV) sulfate solution 0.1M (0.1N)	Eur.Ph. , BP	●	± 0.002	1 L	Glass bottle		J/3000/15	81
	Eur.Ph. , BP	●	± 0.002	2.5 L	Glass bottle		J/3000/17	81
Ethylenediaminetetraacetic acid disodium salt solution 0.2N		●	± 0.003	1 L	HDPE Plastic bottle		J/3720/PB15	127
		●	± 0.003	2.5 L	HDPE Plastic bottle		J/3720/17	127
Ethylenediaminetetraacetic acid disodium salt solution 0.2N	Eur.Ph. , BP	●	± 0.001	1 L	HDPE Plastic bottle		J/3700/15	127
	Eur.Ph. , BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/3700/17	127
	Eur.Ph. , BP	●	± 0.001	10 L	Bag in box		J/3700/24	127
Hydrochloric acid solution 0.2M (0.2N)		●	± 0.001	1 L	HDPE Plastic bottle		J/4340/15	150
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/4340/17	150
Hydrochloric acid solution 0.1M (0.1N)	Eur.Ph. , BP	●	± 0.001	1 L	HDPE Plastic bottle		J/4350/15	150
	Eur.Ph. , BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/4350/17	150
	Eur.Ph. , BP	●	± 0.001	5 L	HDPE Plastic bottle		J/4350/21	150
	Eur.Ph. , BP	●	± 0.001	10 L	Bag in box		J/4350/24	150
Hydrochloric acid solution 0.5M (0.5N)		●	± 0.001	1 L	HDPE Plastic bottle		J/4330/15	150
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/4330/17	150
		●	± 0.001	25 L	HDPE Plastic container		J/4330/25	150
Hydrochloric acid solution 0.02M (0.02N)		●	± 0.003	1 L	HDPE Plastic bottle		J/4360/PB15	151
		●	± 0.003	2.5 L	HDPE Plastic bottle		J/4360/17	151
Hydrochloric acid solution 1M (1N)	Eur.Ph. , USP, BP	●	± 0.001	1 L	HDPE Plastic bottle		J/4320/15	151
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/4320/17	151
	Eur.Ph. , USP, BP	●	± 0.001	5 L	HDPE Plastic bottle		J/4320/21	151
	Eur.Ph. , USP, BP	●	± 0.001	10 L	Bag in box		J/4320/24	151
Hydrochloric acid solution 5M (5N)			± 0.005	1 L	HDPE Plastic bottle		J/4310/15	151
			± 0.005	2.5 L	HDPE Plastic bottle		J/4310/17	151
Hydrochloric acid solution 2M (2N)	Eur.Ph. , BP	●	± 0.001	1 L	HDPE Plastic bottle		J/4315/15	151
	Eur.Ph. , BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/4315/17	151
Iodine solution 0.05M (0.1N)	Eur.Ph. , USP, BP	●	± 0.001	1 L	Glass bottle		J/4410/15	161
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	Glass bottle		J/4410/17	161
Iodine solution 0.5M (1N)	Eur.Ph. , BP	●	± 0.002	500 mℓ	Coated Glass bottle		J/4400/PB08	161
	Eur.Ph. , BP	●	± 0.002	1 L	Coated Glass bottle		J/4400/PB15	161
	Eur.Ph. , BP	●	± 0.002	2.5 L	Coated Glass bottle		J/4400/PB17	161
Nitric acid solution 2M (2N)		●	± 0.005	2.5 L	HDPE Plastic bottle		J/5545/PB17	218
Nitric acid solution 1M (1N)	Eur.Ph. , USP, BP	●	± 0.001	1 L	HDPE Plastic bottle		J/5550/PB15	218
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/5550/PB17	218
	Eur.Ph. , USP, BP	●	± 0.001	10 L	Bag in box		J/5550/24	218
Nitric acid solution 0.1M (0.1N)		●	± 0.001	1 L	HDPE Plastic bottle		J/5600/PB15	218
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/5600/17	218
		●	± 0.001	10 L	Bag in box		J/5600/24	218
Perchloric acid solution 0.1M (0.1N)		●	± 0.002	1 L	HDPE Plastic bottle		J/5820/PB15	229
		●	± 0.002	2.5 L	HDPE Plastic bottle		J/5820/PB17	229
Potassium bromate-bromide solution 0.0167 M (0.1N)		●	± 0.001	1 L	Glass bottle		J/6100/15	247
		●	± 0.001	2.5 L	Glass bottle		J/6100/17	247
Potassium dichromate solution 0.0167M (0.1N)	Eur.Ph. , USP, BP	●	± 0.001	1 L	Glass bottle		J/6212/15	251
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	Glass bottle		J/6212/17	251
Potassium hydroxide solution 0.1M (0.1N), (in methanol)	Eur.Ph. , BP	●	± 0.005	1 L	HDPE Plastic bottle		J/6625/15	256

Standard solutions Ready to use for volumetric analysis

designation	comment	NIST	tolerance	packsize	package type		Mfr. No	page
Potassium hydroxide solution 0.1M (0.1N), (in ethanol)		●	± 0.002	1 L	HDPE Plastic bottle		J/6620/15	256
		●	± 0.002	2.5 L	HDPE Plastic bottle		J/6620/17	256
Potassium hydroxide solution 0.5M (0.5N), (in ethanol)		●	± 0.002	1 L	HDPE Plastic bottle		J/6612/15	257
		●	± 0.002	2.5 L	HDPE Plastic bottle		J/6612/17	257
Potassium hydroxide solution 1M (1N)	Eur.Ph. , BP	●	± 0.001	1 L	HDPE Plastic bottle		J/6630/PB15	257
	Eur.Ph. , BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/6630/17	257
Potassium hydroxide solution 1M (1N), (alcoholic)		●	± 0.001	1 L	HDPE Plastic bottle		J/6610/15	257
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/6610/17	257
Potassium iodate 0.025M solution stabilised with 10 ppm mercury(II) chloride		●	± 0.001	2.5 L	Glass bottle		J/6700/17	258
Potassium iodate 0.05M solution stabilised with 10 ppm mercury(II) chloride	Eur.Ph. , USP, BP	●	± 0.001	1 L	Glass bottle		J/6690/15	258
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	Glass bottle		J/6690/17	258
Potassium permanganate solution 0.02M (0.1N)		●	± 0.001	1 L	Glass bottle		J/6900/15	261
		●	± 0.001	2.5 L	Coated Glass bottle		J/6900/PB17	261
Potassium thiocyanate solution 0.1M (0.1N)		●	± 0.002	1 L	Glass bottle		J/7050/15	264
		●	± 0.002	2.5 L	HDPE Plastic bottle		J/7050/PB17	264
Silver nitrate solution 1M (1N)			± 0.001	1 L	HDPE Plastic bottle		J/7320/PB15	277
			± 0.001	2.5 L	HDPE Plastic bottle		J/7320/PB17	277
Silver nitrate solution 0.1M (0.1N)	Eur.Ph. , USP, BP	●	± 0.001	1 L	HDPE Plastic bottle		J/7330/15	277
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/7330/17	277
	Eur.Ph. , USP, BP	●	± 0.001	10 L	Bag in box		J/7330/24	277
	Eur.Ph. , USP, BP	●	± 0.001	25 L	HDPE Drum		J/7330/25	277
Silver nitrate solution 0.05M (0.05N)		●	± 0.002	1 L	HDPE Plastic bottle		J/7340/15	278
		●	± 0.002	2.5 L	HDPE Plastic bottle		J/7340/17	278
Silver nitrate solution 0.0282M (0.0282N)		●	± 0.003	250 mℓ	Glass bottle		J/7370/07	278
		●	± 0.003	1 L	HDPE Plastic bottle		J/7370/15	278
		●	± 0.003	2.5 L	HDPE Plastic bottle		J/7370/17	278
Silver nitrate solution 0.02M (0.02N)		●	± 0.003	1 L	HDPE Plastic bottle		J/7350/15	278
		●	± 0.003	2.5 L	HDPE Plastic bottle		J/7350/17	278
Sodium arsenite solution 0.05M (0.1N)		●	± 0.002	1 L	HDPE Plastic bottle		J/7510/PB15	282
		●	± 0.002	2.5 L	HDPE Plastic bottle		J/7510/PB17	282
Sodium carbonate solution 0.05M (0.1N)		●	± 0.001	1 L	HDPE Plastic bottle		J/7580/PB15	284
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/7580/17	284
Sodium carbonate solution 0.5M (1N)		●	± 0.001	1 L	HDPE Plastic bottle		J/7520/PB15	285
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/7520/17	285
Sodium hydroxide solution 10M (10N) ca. 40w/v			± 0.005	1 L	HDPE Plastic bottle		J/7800/15	296
			± 0.005	2.5 L	HDPE Plastic bottle		J/7800/17	296
			± 0.005	5 L	HDPE Plastic bottle		J/7800/21	296
			± 0.005	10 L	Bag in box		J/7800/24	296
			± 0.005	25 L	HDPE Plastic container		J/7800/25	296
Sodium hydroxide solution 2M (2N)	BP	●	± 0.001	1 L	HDPE Plastic bottle		J/7610/PB15	296
	BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/7610/17	296
	BP	●	± 0.001	5 L	HDPE Plastic bottle		J/7610/21	296
Sodium hydroxide solution 1M (1N)	Eur.Ph. , USP, BP	●	± 0.001	1 L	HDPE Plastic bottle		J/7620/15	296
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/7620/17	296
	Eur.Ph. , USP, BP	●	± 0.001	5 L	HDPE Plastic bottle		J/7620/21	296
	Eur.Ph. , USP, BP	●	± 0.001	10 L	Bag in box		J/7620/24	296

Standard solutions Ready to use for volumetric analysis

designation	comment	NIST	tolerance	packsize	package type		Mfr. No	page
Sodium hydroxide solution methanolic 1M (1N)		●	± 0.002	1 L	HDPE Plastic bottle		J/7625/PB15	296
		●	± 0.002	2.5 L	HDPE Plastic bottle		J/7625/17	296
Sodium hydroxide solution 0.5M (0.5N)		●	± 0.001	1 L	HDPE Plastic bottle		J/7630/15	296
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/7630/17	296
		●	± 0.001	5 L	HDPE Plastic bottle		J/7630/21	296
		●	± 0.001	10 L	Bag in box		J/7630/24	296
		●	± 0.001	200 L	HDPE Plastic container		J/7630/27	296
Sodium hydroxide solution 0.2M (0.2N)		●	± 0.001	1 L	HDPE Plastic bottle		J/7640/15	297
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/7640/17	297
		●	± 0.001	5 L	HDPE Plastic bottle		J/7640/21	297
		●	± 0.001	10 L	Bag in box		J/7640/24	297
Sodium hydroxide solution 0.1M (0.1N)	Eur.Ph. , BP	●	± 0.001	1 L	HDPE Plastic bottle		J/7660/15	297
	Eur.Ph. , BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/7660/17	297
	Eur.Ph. , BP	●	± 0.001	5 L	HDPE Plastic bottle		J/7660/21	297
	Eur.Ph. , BP	●	± 0.001	10 L	Bag in box		J/7660/24	297
Sodium hydroxide solution (0.01M) 0.01N		●	± 0.001	2.5 L	HDPE Plastic bottle		J/9010/17	297
Sodium nitrite solution 0.5M (0.5N)		●	± 0.003	1 L	Glass bottle		J/7900/15	300
Sodium thiosulfate solution 0.1M (0.1N)	Eur.Ph. , USP, BP	●	± 0.001	1 L	HDPE Plastic bottle		J/7950/15	306
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/7950/17	306
	Eur.Ph. , USP, BP	●	± 0.001	5 L	HDPE Plastic bottle		J/7950/21	306
	Eur.Ph. , USP, BP	●	± 0.001	10 L	Bag in box		J/7950/24	306
Sodium thiosulfate solution 0.01M (0.01N)	Eur.Ph, BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/9011/17	306
Sulfuric acid solution 1M (2N)		●	± 0.001	1 L	HDPE Plastic bottle		J/8420/PB15	339
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/8420/17	339
		●	± 0.001	10 L	Bag in box		J/8420/24	339
		●	± 0.001	25 L	HDPE Drum		J/8420/25	339
Sulfuric acid solution 0.5M (1N)	Eur.Ph. , USP, BP	●	± 0.001	1 L	HDPE Plastic bottle		J/8430/15	339
	Eur.Ph. , USP, BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/8430/17	339
	Eur.Ph. , USP, BP	●	± 0.001	10 L	Bag in box		J/8430/24	339
	Eur.Ph. , USP, BP	●	± 0.001	25 L	HDPE Drum		J/8430/25	339
Sulfuric acid solution 0.25M (0.5N)		●	± 0.001	1 L	HDPE Plastic bottle		J/8440/PB15	339
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/8440/17	339
Sulfuric acid solution 0.1M (0.2N)		●	± 0.001	1 L	HDPE Plastic bottle		J/8450/15	339
		●	± 0.001	2.5 L	HDPE Plastic bottle		J/8450/17	339
		●	± 0.001	10 L	Bag in box		J/8450/24	339
		●	± 0.001	25 L	HDPE Drum		J/8450/25	339
Sulfuric acid solution 0.05M (0.1N)	Eur.Ph. , BP	●	± 0.001	1 L	HDPE Plastic bottle		J/8460/15	340
	Eur.Ph. , BP	●	± 0.001	2.5 L	HDPE Plastic bottle		J/8460/17	340
	Eur.Ph. , BP	●	± 0.001	10 L	Bag in box		J/8460/24	340
	Eur.Ph. , BP	●	± 0.001	25 L	HDPE Drum		J/8460/25	340
Sulfuric acid solution 0.01M (0.2N)		●	± 0.003	1 L	HDPE Plastic bottle		J/8470/PB15	340
		●	± 0.003	2.5 L	HDPE Plastic bottle		J/8470/17	340
		●	± 0.003	10 L	Bag in box		J/8470/24	340
Tetra-n-butyl ammonium hydroxide solution 0.1 M (0.1N) in toluene/methanol			± 0.05	500 mℓ	Glass bottle		J/8750/08	344
			± 0.05	1 L	Glass bottle		J/8750/15	344
			± 0.05	2.5 L	Glass bottle		J/8750/17	344
			± 0.05	10 L	Bag in box		J/8750/24	344
Titanium(III) chloride solution 0.2M (0.2N)			± 0.1	2.5 L	Glass bottle		J/8780/17	353

Standard solutions concentrated for volumetric analysis

designation	each ampoule makes	packsize		Mfr. No	page
Acetic acid solution 0.1M (0.1N)	1ℓ	1 Ampoule		J/0551C/05	15
		6 Ampoules		J/0551C/90	15
Ammonium thiocyanate solution 0.1M (0.1N)	1ℓ	1 Ampoule		J/1500C/05	46
		6 Ampoules		J/1500C/90	46
Cerium(IV) sulfate solution 0.05M (0.05N)		6 Ampoules		J/3010C/90	81
Ethylenediaminetetraacetic acid disodium salt solution 0.01M (0.02N)	1ℓ	1 Ampoule		J/3720C/05	127
		6 Ampoule		J/3720C/90	127
Ethylenediaminetetraacetic acid trisodium salt solution 0.1M (0.2N)	500 mℓ	1 Ampoule		J/3700C/05	127
		6 Ampoules		J/3700C/90	127
Hydrochloric acid solution 0.1M (0.1N)	1ℓ	1 Ampoule		J/4350C/05	150
		6 Ampoules		J/4350C/90	150
Hydrochloric acid solution 0.5M (0.5N)	1ℓ	1 Ampoule		J/4330C/05	151
		6 Ampoules		J/4330C/90	151
Hydrochloric acid solution 1M (1N)	1ℓ	1 Ampoule		J/4320C/05	151
		6 Ampoules		J/4320C/90	151
Nitric acid solution 1M (1N)	1ℓ	1 Ampoule		J/5550C/05	218
		6 Ampoules		J/5550C/90	218
Oxalic acid solution 0.05M (0.1N)	1ℓ	1 Ampoule		J/5650C/05	223
		6 Ampoules		J/5650C/90	223
Potassium bromate-bromide solution 0.0167 M (0.1N)	1ℓ	1 Ampoule		J/6100C/05	247
		6 Ampoules		J/6100C/90	247
Potassium dichromate solution 0.0167M (0.1N)	1ℓ	1 Ampoule		J/6212C/05	252
		6 Ampoules		J/6212C/90	252
Potassium hydroxide solution 0.1M (0.1N)	1ℓ	1 Ampoule		J/6640C/05	257
		6 Ampoules		J/6640C/90	257
Potassium hydroxide solution 1M (1N)	1ℓ	1 Ampoule		J/6630C/05	257
		6 Ampoules		J/6630C/90	257
Silver nitrate solution 0.1M (0.1N)	1ℓ	1 Ampoule		J/7330C/05	278
		6 Ampoules		J/7330C/90	278
Sodium acetate solution 0.1M	1 ℓ	1 Ampoule		J/7440C/05	281
Sodium carbonate solution 0.05M (0.1N)	1ℓ	1 Ampoule		J/7580C/05	285
		6 Ampoules		J/7580C/90	285
Sodium chloride solution 0.1M (0.1N)	1ℓ	1 Ampoule		J/7590C/05	286
		6 Ampoules		J/7590C/90	286
Sodium hydroxide solution 1M (1N)	1ℓ	1 Ampoule		J/7620C/05	296
		6 Ampoules		J/7620C/90	296
Sodium hydroxide solution 0.5M (0.5N)	1ℓ	1 Ampoule		J/7630C/05	296
		6 Ampoules		J/7630C/90	296
Sodium hydroxide solution 0.1M (0.1N)	1ℓ	1 Ampoule		J/7660C/05	297
		6 Ampoules		J/7660C/90	297
Sodium thiosulfate solution 0.1M (0.1N)	1ℓ	1 Ampoule		J/7950C/05	306
		6 Ampoules		J/7950C/90	306
Sodium thiosulfate solution 0.5M (0.5N)	500 mℓ	1 Ampoule		J/7951C/05	306
		6 Ampoules		J/7951C/90	306
Sulfuric acid solution 0.05M (0.1N)	1ℓ	1 Ampoule		J/8460C/05	340
		6 Ampoules		J/8460C/90	340
Sulfuric acid solution 0.5M (1N)	1ℓ	1 Ampoule		J/8430C/05	340
		6 Ampoules		J/8430C/90	340
Zinc sulfate solution 0.05M (0.05N)	1ℓ	1 Ampoule		J/8490C/05	377
		6 Ampoules		J/8490C/90	377

Standard Instrument Calibration 1
for ICP-MS, NIST certified

packaging	Mfr. No
100 mℓ Plastic bottle	SPCLCAL1

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument Calibration 2
for ICP-MS, NIST certified

packaging	Mfr. No
100 mℓ Plastic bottle	SPCLCAL2

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument Calibration 3
for ICP-MS, NIST certified

packaging	Mfr. No
100 mℓ Plastic bottle	SPCLCAL3

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 3
for ICP, NIST certified

packaging	Mfr. No
100 mℓ Plastic bottle	SPCALMIX3100

H314, H318

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 10
for ICP, NIST certified

packaging	Mfr. No
500 mℓ Plastic bottle	SPCALMIX10500

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 3
for ICP, NIST certified

packaging	Mfr. No
500 mℓ Plastic bottle	SPCALMIX3500

H314, H318

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 4
for ICP, NIST certified

packaging	Mfr. No
100 mℓ Plastic bottle	SPCALMIX4100

H315, H320

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 4
for ICP, NIST certified

packaging	Mfr. No
500 mℓ Plastic bottle	SPCALMIX4500

H315, H320

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 7
for ICP, NIST certified

packaging	Mfr. No
100 mℓ Plastic bottle	SPCALMIX7100

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 7
for ICP, NIST certified

packaging	Mfr. No
500 mℓ Plastic bottle	SPCALMIX7500

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 8
for ICP, NIST certified

packaging	Mfr. No
100 mℓ Plastic bottle	SPCALMIX8100

H315, H320

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 8
for ICP, NIST certified

packaging	Mfr. No
500 mℓ Plastic bottle	SPCALMIX8500

H315, H320

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Instrument check 10
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCALMIX10100

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 1 solution Multi-element
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMS1

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Set of 7 Multi-element solution (no Hg)
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMSSETN

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 2 solution Multi-element
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMS2

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 2A solution Multi-element
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMS2A

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 2A solution Multi-element (no Hg)
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMS2AN

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 2 solution Multi-element (no Hg)
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMS2N

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 3 solution Multi-element
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMS3

H315, H319, H335

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 4 solution Multi-element
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMS4

H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 5 solution Multi-element
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMS5

H315, H320

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Set of 7 Multi-element solution
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLMSSET

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 1 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD1100

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 3 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD3500

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 3A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD3A100

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 3A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD3A500

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 4 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD4100

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 4 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD4500

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 4A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD4A100

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 4A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD4A500

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 5 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD5100

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 5 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD5500

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 5A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD5A100

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 1 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD1500

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 5A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD5A500

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 1A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD1A100

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 1A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD1A500

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 2 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD2100

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 2 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD2500

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 2A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD2A100

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 2A Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPMIXSTD2A500

H314

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard 3 Mixed Multi-element calibration
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPMIXSTD3100

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Plasma emission Kit 1 (38 elements)
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPICPKIT1

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Plasma emission Kit 2 (13 elements)
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPICPKIT2

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Plasma emission Kit 3 (10 elements)
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPICPKIT3

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Plasma emission Kit 3 (15 elements)
for ICP, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPICPKIT4

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Standard Tuning solution 1
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLTUNE1

H315, H319

see the complete information (Application, Content & Matrix) in the Standard solution section page 322
Check with your local distributor for availability of Spex product

Starch — Certified AR
for analysis, soluble

packaging		Mfr. No
250 g	Plastic jar	S/8000/50
500 g	Plastic jar	S/8000/53
1 kg	Plastic jar	S/8000/60

$(C_6H_{10}O_5)_n$
CAS: 9005-25-8
Density at 20°C: 1.5
EINECS: 232-679-6

Guaranteed analysis

Loss on drying	<15%	Sensitivity to iodine	: Pass
Reducing substances	: <0.2%	Acidity	<0.01 meq/g
Sulfated ash	<0.5%	Total chloride (Cl)	<0.005%

Lot analysis on the label.

Starch, soluble — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	S/7960/50
500 g	Plastic jar	S/7960/53
1 kg	Plastic jar	S/7960/60

$(C_6H_{10}O_5)_n$
CAS: 9005-25-8
Density at 20°C: 1.5
EINECS: 232-679-6

Guaranteed analysis

Identity test ..... : Pass

Starch, maize — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/7880/60

$(C_6H_{10}O_5)_n$
CAS: 9005-25-8
Density at 20°C: 1.5
EINECS: 232-679-6

Guaranteed analysis

Identity test ..... : Pass

Starch, potato — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/7920/60

$(C_6H_{10}O_5)_n$
CAS: 9005-25-8
Density at 20°C: 1.5
EINECS: 232-679-6

Guaranteed analysis

Loss on drying	<20%	Residue after ignition	<0.5%

Starch, wheat — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/8040/60

$(C_6H_{10}O_5)_n$
CAS: 9005-25-8
Density at 20°C: 1.5
EINECS: 232-679-6

Guaranteed analysis

Residue after ignition	<0.3%	Lead (Pb)	<10 ppm

Stearic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/8130/48
500 g	Plastic jar	S/8130/53

$C_{18}H_{36}O_2$
CAS: 57-11-4
MW: 284.47
Density at 20°C: 0.840
Boiling point: 361°C
Melting point: 67 to 69°C
Flash point: 196°C
ADR/RID: 4.1, III

EINECS: 200-313-4
UN: 1325
GHS: Flam. Sol. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H228, H319, H335, H315
P261, P302+P352, P280, P305+P351+P338, P233, P210

Assay: >97%

The product may contain other chain length fatty acids.

Stearic anhydride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/8144/48

$C_{36}H_{70}O_3$
CAS: 638-08-4
MW: 550.95
Density at 20°C: 0.840
Melting point: 69 to 71°C
ADR/RID: 8, III

EINECS: 211-318-6
UN: 3261
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >97%

In determining the hydroxyl groups in the alcohol and phenols.
Sully, Analyst, 1962.87.

Strontium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8166/05
500 mℓ	HDPE Plastic bottle	J/8166/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Strontium standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8321/08

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
All ICP standards are manufactured from acids, metal & metal salts Ultra pure quality and contain less than <10 ppm total metal impurites.
see also the full range of "Standard solution" in the Standard solution section.

UHPLC
Filtered to 0.1 µm, Fisher Chemical UHPLC gradient grade solvents (Acetonitrile, Methanol and Water) are perfect for those working at high pressure.
See page 309 for more information

Strontium standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8320/05

ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Strontium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSR22Y
250 mℓ	Plastic bottle	SPPLSR22T
500 mℓ	Plastic bottle	SPPLSR22X

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Strontium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLSR12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Strontium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSR23Y
500 mℓ	Plastic bottle	SPPLSR23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Strontium standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	PLSR13X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Strontium carbonate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	S/8160/48
500 g	Plastic jar	S/8160/53

$SrCO_3$
CAS: 1633-05-2
MW: 147.63
Density at 20°C: 3.7
EINECS: 216-643-7

Assay: >98%

Guaranteed analysis

Iron (Fe)	<20 ppm	n-Butyl formate	<0.02%

Strontium chloride — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	S/8320/50
500 g	Plastic jar	S/8320/53

$Cl_2Sr.6H_2O$
CAS: 10025-70-4
MW: 266.62
Density at 20°C: 1.9
Melting point: 115°C
GHS: Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H315, H335, H318
P280, P305+P351+P338

Assay: 99 to 102%

Guaranteed analysis

Acidity	<0.0005 meq/g	Potassium (K)	<100 ppm
Calcium (Ca)	<500 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<2 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<20 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Manganese (Mn)	<5 ppm
Barium (Ba)	<0.002%	Molybdenum (Mo)	<5 ppm
Cadmium (Cd)	<5 ppm	Nickel (Ni)	<5 ppm
Chromium (Cr)	<5 ppm	Silver (Ag)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm

Lot analysis on the label

Strontium chloride hexahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	S/8280/50
500 g	Plastic jar	S/8280/53

$Cl_2Sr.6H_2O$
CAS: 10025-70-4
MW: 266.62
Density at 20°C: 1.92
Melting point: 115°C
EINECS: 233-971-6
GHS: Skin Irrit. 2, Eye Dam. 1, STOT SE 3
H315, H335, H318
P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<1000 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<10 ppm	Sodium (Na)	<500 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<100 ppm

Strontium nitrate anhydrous — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/8402/53

N_2O_6Sr
CAS: 10042-76-9
MW: 211.63
Boiling point: 645°C
Melting point: 570°C
ADR/RID: 5.1, III
EINECS: 233-131-9
UN: 1507
GHS: Ox. Sol. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H335, H319, H302
P220, P261, P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

pH (aqueous solution 5%)	5 to 7	Manganese (Mn)	<5 ppm
Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<0.2%	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Potassium (K)	<54 ppm
Calcium (Ca)	<500 ppm	Propan--1-ol	<5 ppm
Chromium (Cr)	<5 ppm	Sodium (Na)	<50 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Copper (Cu)	<2 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<5 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<2.4 ppm	Total sulphur (S)	<50 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<20 ppm

Strontium nitrate anhydrous — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/8400/53

N_2O_6Sr
CAS: 10042-76-9
MW: 211.63
Density at 20°C: 2.99
Boiling point: 645°C
Melting point: 570°C
ADR/RID: 5.1, III
EINECS: 233-131-9
UN: 1507
GHS: Ox. Sol. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H315, H335, H319, H302
P220, P261, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<1000 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.01%
Iron (Fe)	<20 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<10 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<100 ppm
Potassium (K)	<200 ppm		

Styrene stabilized with 10-15 ppm tert-butylcatechol
pure

packaging		Mfr. No
250 mℓ	Glass bottle	S/8480/07
1 ℓ	Glass bottle	S/8480/15
2.5 ℓ	Glass bottle	S/8480/17
25 ℓ	Metal drum	S/8480/25

C_8H_8
CAS: 100-42-5
MW: 104.15
Density at 20°C: 0.906
Boiling point: 145 to 146°C
Melting point: -31°C
Flash point: 31°C
ADR/RID: 3, III
EINECS: 202-851-5
UN: 2055
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2
H226, H332, H319, H315
P304+P340, P302+P352, P280, P305+P351+P338, P210

Succinic acid — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	S/8522/50
500 g	Plastic jar	S/8522/53
10 kg	Plastic keg	S/8522/68

$C_4H_6O_4$
CAS: 110-15-6
MW: 118.09
Density at 20°C: 1.56
Boiling point: 235°C
Melting point: 185 to 190°C
Flash point: 206°C
EINECS: 203-740-4
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

Aluminium (Al)	<2 ppm	Manganese (Mn)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Potassium (K)	<50 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<50 ppm
Chromium (Cr)	<2 ppm	Titanium (Ti)	<2 ppm
Cobalt (Co)	<2 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<5 ppm	Total nitrogen (N)	<20 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Succinic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/8520/53

$C_4H_6O_4$
CAS: 110-15-6
MW: 118.09
Density at 20°C: 1.56
Boiling point: 235°C
Melting point: 185 to 190°C
Flash point: 206°C
EINECS: 203-740-4
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<200 ppm		

Sucrose
for electrophoresis

packaging		Mfr. No
500 g	Plastic jar	S/P770/53
3 kg	Plastic jar	S/P770/63

$C_{12}H_{22}O_{11}$
CAS: 57-50-1
MW: 342.30
Melting point: 190 to 192°C
EINECS: 200-334-9

Guaranteed analysis

Reducing sugars	: <0.005%	Lead (Pb)	<0.5 ppm
Copper (Cu)	<0.5 ppm	Total chloride (Cl)	<5 ppm
Iron (Fe)	<0.5 ppm		

Sucrose
for analysis — Certified AR, Eur.Ph., BP

packaging		Mfr. No
500 g	Plastic jar	S/8600/53
1 kg	Plastic jar	S/8600/60
3 kg	Plastic jar	S/8600/63
5 kg	Plastic keg	S/8600/65
10 kg	Plastic keg	S/8600/68
25 kg	Fibre Keg	S/8600/70

$C_{12}H_{22}O_{11}$
CAS: 57-50-1
MW: 342.30
Melting point: 190 to 192°C
EINECS: 200-334-9

Guaranteed analysis

Acidity / Alkalinity	<0.0008 meq/g	Magnesium (Mg)	<5 ppm
Loss on drying	<0.03%	Potassium (K)	<20 ppm
Specific rotation	66.4° to 66.6°	Sodium (Na)	<50 ppm
Reducing sugars	: <0.005%	Total chloride (Cl)	<0.001%
Insoluble matter	<0.005%	Total nitrogen (N)	<20 ppm
Invert sugar	: <0.05%	Total phosphorus (P)	<20 ppm
Calcium (Ca)	<10 ppm	Total silicon (Si)	<5 ppm
Copper (Cu)	<1 ppm	Total sulphur (S)	<20 ppm
Iron (Fe)	<1 ppm	Zinc (Zn)	<10 ppm
Lead (Pb)	<1 ppm	Residue after ignition	<0.01%

Typical analysis

Aluminium (Al)	<2 ppm	Lithium (Li)	<2 ppm
Arsenic (As)	<2 ppm	Manganese (Mn)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Titanium (Ti)	<2 ppm
Chromium (Cr)	<2 ppm	Vanadium (V)	<2 ppm
Cobalt (Co)	<2 ppm		

Lot analysis on the label.

Sucrose
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	S/8560/53
1 kg	Plastic jar	S/8560/60
3 kg	Plastic jar	S/8560/63
5 kg	Plastic keg	S/8560/65

$C_{12}H_{22}O_{11}$
CAS: 57-50-1
MW: 342.30
Melting point: 190 to 192°C
EINECS: 200-334-9

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<20 ppm	Total sulphur (S)	<100 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<500 ppm

Sudan black B C.I. 26150
pure

packaging		Mfr. No
25 g	Glass jar	S/8630/46

$C_{29}H_{24}N_6$
CAS: 4197-25-5
MW: 456.54
Melting point: 120 to 124°C
EINECS: 224-087-1

Guaranteed analysis
Complies with standard IR spectrum: Pass

Sudan III, C.I. 26100
technical

packaging		Mfr. No
25 g	Glass jar	S/8620/46

$C_{22}H_{16}N_4O$
CAS: 85-86-9
MW: 352.38
EINECS: 201-638-4

Guaranteed analysis
Complies with standard IR spectrum: Pass

Sudan IV, C.I. 26105
technical

packaging		Mfr. No
25 g	Glass jar	S/8625/46

$C_{24}H_{20}N_4O$
CAS: 85-83-6
MW: 380.45
Melting point: 181.1°C
EINECS: 201-635-8
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P280, P302+P352, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Sulfate standard solution 1000 ppm (1 mg/mℓ)
for Ion pair chromatography, Ready-to-use

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/4564/05

Manufactured to a tolerance of ± 1%.

Sulfate standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASSO492Y
500 mℓ	Plastic bottle	SPASSO492X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Sulfate-sulfur standard 1000 ppm
For Ion chromatography in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPASSO4S92Y
500 mℓ	Plastic bottle	SPASSO4S92X

Manufactured to a tolerance of ± 0.3%.
Check with your local distributor for availability of Spex product

Sulfamic acid
for analysis — Certified AR

packaging		Mfr. No
500 g	Plastic jar	S/8641/53
10 kg	Plastic keg	S/8641/68

H_3SO_3N
CAS: 5329-14-6
MW: 97.09
Density at 20°C: 2.15
Melting point: 200 to 208°C
ADR/RID: 8, III
EINECS: 226-218-8
UN: 2967
GHS: Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 3
H412, H315, H319
P280, P305+P351+P338, P273, P302+P350

Assay: >99.9%

Guaranteed analysis

Cadmium (Cd)	<5 ppm	Potassium (K)	<50 ppm
Calcium (Ca)	<20 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Sulfate (SO_4)	<0.02%
Iron (Fe)	<5 ppm	Total chloride (Cl)	<0.001%
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Chromium (Cr)	<5 ppm	Silver (Ag)	<5 ppm
Cobalt (Co)	<5 ppm	Strontium (Sr)	<5 ppm
Lithium (Li)	<5 ppm	Titanium (Ti)	<5 ppm
Manganese (Mn)	<5 ppm	Vanadium (V)	<5 ppm

Lot analysis on the label.

Sulfamic acid
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	S/8640/53
25 kg	Fibre Keg	S/8640/70

H_3SO_3N
CAS: 5329-14-6
MW: 97.09
Density at 20°C: 2.15
Melting point: 200 to 208°C
ADR/RID: 8, III
EINECS: 226-218-8
UN: 2967
GHS: Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 3
H412, H315, H319
P280, P305+P351+P338, P273, P302+P350

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<20 ppm	Sulfate (SO_4)	<0.05%
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Sulfanilamide
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
250 g	Plastic jar	S/8660/50

$C_6H_8N_2O_2S$
CAS: 63-74-1
MW: 172.21
Melting point: 163 to 167°C
EINECS: 200-563-4
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Iron (Fe)	<40 ppm
Residue after ignition	<0.1%	Lead (Pb)	<10 ppm
Melting Point tested	164.5 to 166.5°C	n-Butyl formate	<0.04%

Sulfanilic acid
for analysis — Certified AR

packaging		Mfr. No
100 g	Plastic jar	S/8720/48

$C_6H_7NO_3S$
CAS: 121-57-3
MW: 173.19
Density at 250°C: 1.485
Melting point: 365°C
EINECS: 204-482-5
GHS: Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1
H319, H317, H315
P280, P302+P352, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Potassium (K)	<50 ppm
Copper (Cu)	<5 ppm	Sodium (Na)	<50 ppm
Iron (Fe)	<5 ppm	Sulfate (SO_4)	<0.005%
Lead (Pb)	<5 ppm	n-Butyl formate	<0.002%
Magnesium (Mg)	<10 ppm	Total silicon (Si)	<20 ppm
Nitrite (NO_2)	<0.00005%	Zinc (Zn)	<10 ppm

Lot analysis on the label.

Sulfanilic acid
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
500 g	Plastic jar	S/8680/53

$C_6H_7NO_3S$
CAS: 121-57-3
MW: 173.19
Density at 20°C: 1.485 to 250 C
Melting point: 365°C
EINECS: 204-482-5
GHS: Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1
H319, H317, H315
P280, P302+P352, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	Sulfate (SO_4)	<0.05%
Iron (Fe)	<20 ppm	n-Butyl formate	<0.02%
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<200 ppm		

5-Sulfosalicylic acid dihydrate
for analysis — Certified AR

packaging		Mfr. No
100 g	Plastic jar	S/8850/48
500 g	Plastic jar	S/8850/53

$C_7H_6O_6S.2H_2O$
CAS: 5965-83-3
MW: 254.21
Melting point: 106 to 110°C
ADR/RID: 8, III
EINECS: 202-555-6
UN: 2585
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H314, H302
P301+P330+P331, P280, P305+P351+P338, P310, P303+P361+P353

Assay: 99.5 to 101.5%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.001%
Iron (Fe)	<10 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<10 ppm	Zinc (Zn)	<10 ppm
Magnesium (Mg)	<20 ppm	Salicylic acid	<0.01%
Potassium (K)	<50 ppm		

Sulfur standard standard metal solution 1000 ppm
for ICP, solution aqueous

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8324/08

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Sulfur standard standard metal solution 10 000 ppm
for ICP, solution aqueous

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8323/05

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Sulfur standard metal solution 1000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLS92Y
250 mℓ	Plastic bottle	SPPLS92T
500 mℓ	Plastic bottle	SPPLS92X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Sulfur standard metal solution 10 000 ppm
for ICP solution in H_2O, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLS93Y
500 mℓ	Plastic bottle	SPPLS93X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Sulfur precipitated — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/8990/53

S
CAS: 7704-34-9
MW: 32.05
Density at 20°C: 2.07
Boiling point: 445°C
Melting point: 113°C
Flash point: 168°C

ADR/RID: 4.1, III
EINECS: 231-722-6
UN: 1350
GHS: Skin Irrit. 2
H315
P280, P302+P352,
P321, P332+P313

Guaranteed analysis

Acidity	<0.01 meq/g	Sulfated ash	<0.025%
Water	<0.2%	Arsenic (As)	<2 ppm

Sulfur flowers — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 kg	Plastic jar	S/8920/60
3 kg	Plastic jar	S/8920/63

S
CAS: 7704-34-9
MW: 32.05
Density at 20°C: 2.07
Boiling point: 445°C
Melting point: 113°C
Flash point: 207.2°C

ADR/RID: 4.1, III
EINECS: 231-722-6
UN: 1350
GHS: Skin Irrit. 2
H315
P264, P280, P302+P352,
P321, P332+P313, P362

Guaranteed analysis

Identity test ..... : Pass

Sulfur roll
pure

packaging		Mfr. No
1 kg	Plastic jar	S/8970/60

S
CAS: 7704-34-9
MW: 32.05
Density at 20°C: 2.07
Boiling point: 445°C
Melting point: 113°C
Flash point: 207.2°C

ADR/RID: 4.1/III
EINECS: 231-722-6
UN: 1350
GHS: Skin Irrit. 2
H315
P264, P280, P302+P352,
P321, P332+P313, P362

Guaranteed analysis

Identity test ..... : Pass

Sulfuric acid 93-98% NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
250 mℓ	Pre-cleaned Teflon FEP bottle	A468-250
500 mℓ	Pre-cleaned Teflon FEP bottle	A468-500
1 ℓ	Pre-cleaned Teflon FEP bottle	A468-1

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.84
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II

EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: 93-98%

Guaranteed analysis

Zirconium (Zr)	<10 ppt	Magnesium (Mg)	<50 ppt
Gallium (Ga)	<10 ppt	Manganese (Mn)	<10 ppt
Terbium (Tb)	<10 ppt	Mercury (Hg)	<100 ppt
Indium (In)	<10 ppt	Molybdenum (Mo)	<10 ppt
Dysprosium (Dy)	<10 ppt	Neodymium (Nd)	<50 ppt
Aluminium (Al)	<50 ppt	Nickel (Ni)	<50 ppt
Antimony (Sb)	<50 ppt	Potassium (K)	<50 ppt
Arsenic (As)	<500 ppt	Praseodymium (Pr)	<10 ppt
Barium (Ba)	<10 ppt	Rhodium (Rh)	<50 ppt
Beryllium (Be)	<10 ppt	Samarium (Sm)	<10 ppt
Bismuth (Bi)	<10 ppt	Scandium (Sc)	<10 ppt
Cadmium (Cd)	<10 ppt	Selenium (Se)	<500 ppt
Calcium (Ca)	<50 ppt	Propan--1-ol	<50 ppt
Cerium (Ce)	<10 ppt	Sodium (Na)	<50 ppt
Cesium (Cs)	<10 ppt	Tantalum (Ta)	<100 ppt
Chromium (Cr)	<10 ppt	Tellurium (Te)	<50 ppt
Cobalt (Co)	<10 ppt	Thallium (Tl)	<10 ppt
Copper (Cu)	<10 ppt	Thorium (Th)	<10 ppt
Erbium (Er)	<10 ppt	Thulium (Tm)	<10 ppt
Europium (Eu)	<10 ppt	Tin (Sn)	<50 ppt
Gadolinium (Gd)	<10 ppt	Titanium (Ti)	<50 ppt
Germanium (Ge)	<100 ppt	Uranium (U)	<10 ppt
Hafnium (Hf)	<10 ppt	Vanadium (V)	<10 ppt
Holmium (Ho)	<10 ppt	Ytterbium (Yb)	<10 ppt
Iron (Fe)	<50 ppt	Yttrium (Y)	<10 ppt
Lanthanum (La)	<10 ppt	Zinc (Zn)	<50 ppt
Lead (Pb)	<10 ppt	Platinum (Pt)	<50 ppt
Lithium (Li)	<10 ppt	Rubidium (Rb)	<10 ppt
Lutetium (Lu)	<10 ppt	Tungsten (W)	<10 ppt

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Sulfuric acid 93-98% NEW — Trace Metal
for trace metal analysis

packaging		Mfr. No
500 mℓ	HDPE plastic bottle	A510-P500
1 ℓ	HDPE plastic bottle	A510-P1
2.5 ℓ	HDPE plastic bottle	A510-P212

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.84
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II

EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: 93-98%

Guaranteed analysis

Colour	<10 APHA	Cobalt (Co)	<0.5 ppm
Aluminium (Al)	<1 ppm	Copper (Cu)	<0.5 ppm
Antimony (Sb)	<1 ppm	Dysprosium (Dy)	<0.1 ppm
Arsenic (As)	<0.5 ppm	Erbium (Er)	<0.1 ppm
Barium (Ba)	<0.1 ppm	Europium (Eu)	<0.1 ppm
Beryllium (Be)	<0.1 ppm	Gadolinium (Gd)	<0.1 ppm
Bismuth (Bi)	<0.1 ppm	Gallium (Ga)	<0.1 ppm
Cadmium (Cd)	<0.5 ppm	Germanium (Ge)	<1 ppm
Calcium (Ca)	<1 ppm	Gold (Au)	<0.5 ppb
Cerium (Ce)	<0.1 ppm	Hafnium (Hf)	<0.1 ppm
Cesium (Cs)	<0.1 ppm	Holmium (Ho)	<0.1 ppm
Chromium (Cr)	<0.5 ppm		

Indium (In)	<0.1 ppm	Silver (Ag)	<1 ppm
Iron (Fe)	<1 ppm	Sodium (Na)	<1 ppm
Lanthanum (La)	<0.1 ppm	Strontium (Sr)	<0.5 ppm
Lead (Pb)	<0.1 ppm	Substances reducing $KMnO_4$	<20 ppm
Lithium (Li)	<0.5 ppm	Tellurium (Te)	<0.1 ppm
Lutetium (Lu)	<0.1 ppm	Terbium (Tb)	<0.1 ppm
Magnesium (Mg)	<1 ppm	Thallium (Tl)	<0.1 ppm
Manganese (Mn)	<0.5 ppm	Thorium (Th)	<0.1 ppm
Mercury (Hg)	<0.1 ppm	Thulium (Tm)	<0.1 ppm
Molybdenum (Mo)	<0.5 ppm	Tin (Sn)	<1 ppm
Neodymium (Nd)	<0.1 ppm	Titanium (Ti)	<1 ppm
Nickel (Ni)	0.5	Total chloride (Cl)	<0.7 ppm
Niobium (Nb)	<0.1 ppm	Total phosphorus (P)	<0.05 ppm
Nitrate (NO_3)	<0.2 ppm	Tungsten (W)	<0.5 ppm
Potassium (K)	<1 ppm	Uranium (U)	<0.1 ppm
Praseodymium (Pr)	<0.1 ppm	Vanadium (V)	<0.5 ppm
Rhodium (Rh)	<0.5 ppm	Ytterbium (Yb)	<0.1 ppm
Rubidium (Rb)	<0.5 ppm	Yttrium (Y)	<0.1 ppm
Samarium (Sm)	<0.1 ppm	Zinc (Zn)	<1 ppm
Scandium (Sc)	<0.1 ppm		
Selenium (Se)	<10 ppm		

Bottled in class 10 cleanroom conditions.
Lot analysis on the label.

Sulfuric acid 95-98% d=1.83 NEW PACK. — Primar plus
for trace metal analysis

packaging		Mfr. No
250 mℓ	HDPE Plastic bottle	S/9231/PB07
500 mℓ	HDPE Plastic bottle	S/9231/PB08
1 ℓ	HDPE Plastic bottle	S/9231/PB15
2.5 ℓ	HDPE Plastic bottle	S/9231/PB17

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.84
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II

EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: >95%

Guaranteed analysis

Aluminium (Al)	<0.02 ppm	Mercury (Hg)	<0.005 ppm
Antimony (Sb)	<0.005 ppm	Molybdenum (Mo)	<0.002 ppm
Arsenic (As)	<0.005 ppm	Nickel (Ni)	<0.002 ppm
Barium (Ba)	<0.02 ppm	Potassium (K)	<0.02 ppm
Beryllium (Be)	<0.005 ppm	Selenium (Se)	<0.005 ppm
Bismuth (Bi)	<0.005 ppm	Silver (Ag)	<0.002 ppm
Boron (B)	<0.005 ppm	Sodium (Na)	<0.2 ppm
Cadmium (Cd)	<0.002 ppm	Strontium (Sr)	<0.002 ppm
Calcium (Ca)	<0.05 ppm	Thallium (Tl)	<0.005 ppm
Chromium (Cr)	<0.005 ppm	Tin (Sn)	<0.005 ppm
Cobalt (Co)	<0.002 ppm	Titanium (Ti)	<0.002 ppm
Copper (Cu)	<0.005 ppm	Total chloride (Cl)	<0.00001%
Gallium (Ga)	<0.005 ppm	Total nitrogen (N)	<5 ppm
Germanium (Ge)	<0.005 ppm	Total phosphorus (P)	<0.05 ppm
Indium (In)	<0.005 ppm	Vanadium (V)	<0.002 ppm
Iron (Fe)	<0.05 ppm	Zinc (Zn)	<0.01 ppm
Lead (Pb)	<0.002 ppm	Zirconium (Zr)	<0.005 ppm
Lithium (Li)	<0.002 ppm	Residue after ignition	<0.0002%
Magnesium (Mg)	<0.02 ppm	Substances reducing $KMnO_4$	<0.0001%
Manganese (Mn)	<0.002 ppm		

Sulfuric acid min 95%
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	S/9222/PB17
2.5 ℓ	Coated Glass bottle	S/9222/PC17

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.84
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II

EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: >95%

Guaranteed analysis

Colour	<10 APHA	Manganese (Mn)	<0.02 ppm
Substances reducing $KMnO_4$	<0.0001%	Molybdenum (Mo)	<0.02 ppm
Aluminium (Al)	<0.1 ppm	Nickel (Ni)	<0.1 ppm
Barium (Ba)	<0.05 ppm	Nitrate (NO_3)	<0.00002%
Cadmium (Cd)	<0.02 ppm	Potassium (K)	<1 ppm
Calcium (Ca)	<1 ppm	Sodium (Na)	<5 ppm
Chromium (Cr)	<0.1 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Copper (Cu)	<0.1 ppm	n-Butyl formate	<0.00002%
Iron (Fe)	<0.5 ppm	Total nitrogen (N)	<5 ppm
Lead (Pb)	<0.1 ppm	Total silicon (Si)	<0.5 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Magnesium (Mg)	<0.5 ppm	Zinc (Zn)	<0.5 ppm

Filtered to 10 µm.

Sulfuric acid 95% NEW SPECS — Certified, Eur.Ph.
for analysis with low Cadmium, Lead & Mercury level

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	S/9220/PB08
1 ℓ	HDPE Plastic bottle	S/9220/PB15
2.5 ℓ	HDPE Plastic bottle	S/9220/PB17

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.84
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II

EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: >95.0%

Guaranteed analysis

Colour	<10 APHA	Lead (Pb)	<0.005 ppm
Substances reducing $KMnO_4$	<2 ppm	Lithium (Li)	<0.01 ppm
Zirconium (Zr)	<0.05 ppm	Magnesium (Mg)	<0.05 ppm
Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.01 ppm
Arsenic (As)	<0.01 ppm	Mercury (Hg)	<0.005 ppm
Barium (Ba)	<0.05 ppm	Molybdenum (Mo)	<0.05 ppm
Beryllium (Be)	<0.01 ppm	Nickel (Ni)	<0.02 ppm
Bismuth (Bi)	<0.1 ppm	Nitrate (NO_3)	<0.2 ppm
Cadmium (Cd)	<0.002 ppm	Phosphate (PO_4)	<1 ppm
Calcium (Ca)	<0.2 ppm	Potassium (K)	<0.1 ppm
Chloride (Cl)	<0.1 ppm	Strontium (Sr)	<0.02 ppm
Chromium (Cr)	<0.05 ppm	Thallium (Tl)	<0.05 ppm
Cobalt (Co)	<0.01 ppm	Titanium (Ti)	<0.05 ppm
Copper (Cu)	<0.02 ppm	Vanadium (V)	<0.01 ppm
Germanium (Ge)	<0.05 ppm	Zinc (Zn)	<0.05 ppm
Iron (Fe)	<0.2 ppm	Residue after ignition	<5 ppm

Lot analysis on the label

Sulfuric acid min 95% d=1.83 — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	S/9240/PB15
1 ℓ	Coated Glass bottle	S/9240/PC15
2.5 ℓ	Glass bottle	S/9240/17
2.5 ℓ	HDPE Plastic bottle	S/9240/PB17
2.5 ℓ	Coated Glass bottle	S/9240/PC17
25 ℓ	HDPE Plastic container	S/9240/25
45 ℓ	Plastic container	S/9240/26

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.84
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II
EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: >95%

Guaranteed analysis

Colour	<10 APHA	Manganese (Mn)	<0.01 ppm
Residue after ignition	<0.0005%	Molybdenum (Mo)	<0.02 ppm
Substances		Nickel (Ni)	<0.05 ppm
reducing $KMnO_4$	<0.0001%	Nitrate (NO_3)	<0.00002%
Aluminium (Al)	<0.05 ppm	Potassium (K)	<0.5 ppm
Arsenic (As)	<0.01 ppm	Selenium (Se)	<0.5 ppm
Barium (Ba)	<0.02 ppm	Sodium (Na)	<1 ppm
Cadmium (Cd)	<0.01 ppm	Strontium (Sr)	<0.02 ppm
Calcium (Ca)	<0.5 ppm	Titanium (Ti)	<0.02 ppm
Chromium (Cr)	<0.1 ppm	Total chloride (Cl)	<0.00002%
Cobalt (Co)	<0.01 ppm	Total nitrogen (N)	<5 ppm
Copper (Cu)	<0.05 ppm	Total silicon (Si)	<0.5 ppm
Iron (Fe)	<0.5 ppm	Vanadium (V)	<0.01 ppm
Lead (Pb)	<0.02 ppm	Zinc (Zn)	<0.2 ppm
Lithium (Li)	<0.01 ppm	Propan--1-ol	<0.05 ppm
Magnesium (Mg)	<0.2 ppm		

Sulfuric acid 95% is equivalent to a strength of 18.0 M (36.80N).
Lot analysis on the label.

Sulfuric acid min 95% d=1.83 — SLR
extra pure , low in nitrogen

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	S/9200/PB08
2.5 ℓ	HDPE Plastic bottle	S/9200/PB17

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.840
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II
EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: >95%

Guaranteed analysis

Colour	<20 APHA	Nitrate (NO_3)	<0.00002%
Calcium (Ca)	<10 ppm	Potassium (K)	<10 ppm
Copper (Cu)	<5 ppm	Sodium (Na)	<50 ppm
Iron (Fe)	<10 ppm	n-Butyl formate	<0.005%
Lead (Pb)	<5 ppm	Total nitrogen (N)	<2 ppm
Magnesium (Mg)	<5 ppm	Zinc (Zn)	<2 ppm

Sulfuric acid 95% is equivalent to a strength of 18.0 M (36.80N).

Sulfuric acid min 95% d=1.83 — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	S/9160/PB15
2.5 ℓ	HDPE Plastic bottle	S/9160/PB17
5 ℓ	HDPE Plastic bottle	S/9160/PB21
25 ℓ	HDPE Plastic container	S/9160/25
45 ℓ	Plastic container	S/9160/26

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.840
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II
EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: >95%

Guaranteed analysis

Colour	<20 APHA	Potassium (K)	<10 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<10 ppm	Total nitrogen (N)	<20 ppm
Lead (Pb)	<5 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<5 ppm		

Sulfuric acid 95% is equivalent to a strength of 18.0 M (36.80N).

Sulfuric acid min 95% d=1.83 — SLR
extra pure, for milk testing, (Gerber test)

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	S/9360/PB17

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.840
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II
EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: 89.5 to 91%

Guaranteed analysis

Colour ..... <20 APHA

Sulfuric acid min 95% d=1.83
Technical

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	S/9120/PB17

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.840
Boiling point: 290°C
Melting point: 10°C
ADR/RID: 8, II
EINECS: 231-639-5
UN: 1830
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331,
P305+P351+P338, P280

Assay: >95%

Sulfuric acid 95% is equivalent to a strength of 18.0 M (36.80N).

Sulfuric acid 50% w/v
pure, for formaldehyde determination

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	S/8350/PB17

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.10 to 1.30
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Corr. 1A
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Sulfuric acid 25% w/v
pure

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	H/0564/21

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.10 to1.30
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Corr. 1A
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Sulfuric acid

packaging		Mfr. No
2.5 ℓ	HDPE Plastic bottle	S/9500/PB17

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.10 to 1.30
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Corr. 1A
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Sulfuric acid fuming
pure

packaging		Mfr. No
500 mℓ	Coated Glass bottle	S/9440/PB08

$H_2SO_4.SO_3$
CAS: 8014-95-7
MW: 178.14
Density at 20°C: 1.92
Boiling point: 138°C
Melting point: 2°C
ADR/RID: 8, 6.1, I
UN: 1831
GHS: Skin Corr. 1A, Eye Dam. 1
H314, EUH014
P301+P330+P331,
P305+P351+P338, P310,
P304+P340, P280, P402+P404

Assay: >104.5%

Sulfuric acid solution 5M approx. (10N)
pure

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/8400/PB15
2.5 ℓ	HDPE Plastic bottle	J/8400/PB17
10 ℓ	HDPE Plastic container	J/8400/24

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.10 to1.30
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Corr. 1A
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Guaranteed analysis

Molarity ..... 5.3 M

Sulfuric acid solution 2M (4N)
pure, Bench Reagent

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/8410/PB15
2.5 ℓ	HDPE Plastic bottle	J/8410/17
10 ℓ	Bag in box	J/8410/24

H_2SO_4
CAS: 7664-93-9
MW: 98.07
Density at 20°C: 1.10 to1.30
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Corr. 1A
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Sulfuric acid solution 1M (2N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/8420/PB15
2.5 ℓ	HDPE Plastic bottle	J/8420/17
10 ℓ	Bag in box	J/8420/24
25 ℓ	HDPE Drum	J/8420/25

CAS: 7664-93-9
Density at 20°C: 1.03 to 1.07
Boiling point: 100°C
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P305+P351+P338, P280

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sulfuric acid solution 0.5M (1N) — Eur.Ph. , USP, BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/8430/15
2.5 ℓ	HDPE Plastic bottle	J/8430/17
10 ℓ	Bag in box	J/8430/24
25 ℓ	HDPE Drum	J/8430/25

CAS: 7664-93-9
Density at 20°C: 1.03 to 1.07
Boiling point: 100°C
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P305+P351+P338, P280

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sulfuric acid solution 0.25M (0.5N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/8440/PB15
2.5 ℓ	HDPE Plastic bottle	J/8440/17

CAS: 7664-93-9
Density at 20°C: 1.01 to 1.03
Boiling point: 100°C
ADR/RID: 8, III
EINECS: 231-639-5
UN: 3264
GHS: Met. Corr. 1
H290
P234, P390

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sulfuric acid solution 0.1M (0.2N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/8450/15
2.5 ℓ	HDPE Plastic bottle	J/8450/17
10 ℓ	Bag in box	J/8450/24
25 ℓ	HDPE Drum	J/8450/25

CAS: 7664-93-9
Density at 20°C: 1.01 to 1.03
Boiling point: 100°C
ADR/RID: 8, III
EINECS: 231-639-5
UN: 3264
GHS: Met. Corr. 1
H290
P234, P390

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sulfuric acid solution 0.05M (0.1N) — Eur.Ph. , BP
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/8460/15
2.5 ℓ	HDPE Plastic bottle	J/8460/17
10 ℓ	Bag in box	J/8460/24
25 ℓ	HDPE Drum	J/8460/25

CAS: 7664-93-9
Density at 20°C: 1.01 to 1.03
Boiling point: 100°C
ADR/RID: 8, III
EINECS: 231-639-5
UN: 3264
GHS: Met. Corr. 1
H290
P234, P390

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Sulfuric acid solution 0.05M (0.1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/8460C/05
6	Ampoule	J/8460C/90

CAS: 7664-93-9
Density at 20°C: 1.03 to 1.07
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P305+P351+P338, P280

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sulfuric acid solution 0.01M (0.2N)
NIST Standard solution ready to use, For Volumetric analysis

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	J/8470/PB15
2.5 ℓ	HDPE Plastic bottle	J/8470/17
10 ℓ	Bag in box	J/8470/24

CAS: 7664-93-9
Density at 20°C: 1.00
Boiling point: 100°C
EINECS: 231-639-5

Manufactured to a tolerance of ± 0.3%.
See the full range of Standard Volumetric solution page 323.

Sulfuric acid solution 0.5M (1N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/8430C/05
6	Ampoule	J/8430C/90

CAS: 7664-93-9
Density at 20°C: 1.10 to 1.30
ADR/RID: 8, II
EINECS: 231-639-5
UN: 2796
GHS: Skin Corr. 1A
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Sulfurous Acid
pure, approx.6% w/v SO2

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/8500/17

H_2SO_3
CAS: 7782-99-2
MW: 82.07
ADR/RID: 8, II
EINECS: 231-973-1
UN: 1833
GHS: Acute Tox. 4, Skin Corr. 1B
H332, H314
P280, P301+P330+P331,
P305+P351+P338, P310,
P302+P352, P304+P340

Sulfuryl chloride
Technical

packaging		Mfr. No
500 mℓ	Coated Glass bottle	S/9560/PB08

SO_2Cl_2
CAS: 7791-25-5
MW: 134.97
Density at 20°C: 1.667
Boiling point: 69.1°C
Melting point: -54.1°C
ADR/RID: 6.1, 8, I
EINECS: 232-245-6
UN: 1834
GHS: Skin Corr. 1B, STOT SE 3
H335, H314, EUH014
P280, P305+P351+P338,
P304+P312, P260

Talc fine powder
pure

packaging		Mfr. No
1 kg	Plastic jar	T/0050/60
2.5 kg	Plastic jar	T/0050/62
10 kg	Plastic keg	T/0050/68

$4MgO_4SiO_2.H_2O$
CAS: 14807-96-6
MW: 379.28
Density at 20°C: 2.5 to 2.8
Melting point: 800°C
EINECS: 238-877-9

Guaranteed analysis
Identity test ..... : Pass

Talc fine powder purified by acids
pure

packaging		Mfr. No
500 g	Plastic jar	T/0100/53

$6MgO_4SiO_2.H_2O$
CAS: 14807-96-6
MW: 379.28
Density at 20°C: 2.5 to 2.8
Melting point: 800°C
EINECS: 238-877-9

Guaranteed analysis
Identity test ..... : Pass

Tannic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	T/0150/53

$C_{76}H_{52}O_{46}$
CAS: 1401-55-4
MW: 170.22
Melting point: 218°C
Flash point: 198°C
EINECS: 215-753-2

Guaranteed analysis
Loss on drying ..... <9% Residue after ignition ..... <0.2%

(+)-Tartaric acid — Certified AR, Eur.Ph.
for analysis

packaging		Mfr. No
500 g	Plastic jar	T/0250/53
1 kg	Plastic jar	T/0250/60

$C_4H_6O_6$
CAS: 87-69-4
MW: 150.09
Density at 20°C: 1.76
Melting point: 168 to 172°C
Flash point: 210°C
EINECS: 201-766-0
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H335, H315, H319
P280, P305+P351+P338,
P310, P302+P352, P261

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<20 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<2 ppm	Total chloride (Cl)	<0.0005%
Iron (Fe)	<2 ppm	Total phosphorus (P)	<20 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<100 ppm
Oxalate (C_2O_4)	<0.01%	Zinc (Zn)	<10 ppm
Potassium (K)	<20 ppm		

Typical analysis

Arsenic (As)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

(+)-Tartaric acid — SLR
extra pure, crystals

packaging		Mfr. No
250 g	Plastic jar	T/0200/50
500 g	Plastic jar	T/0200/53
1 kg	Plastic jar	T/0200/60

$C_4H_6O_6$
CAS: 87-69-4
MW: 150.09
Density at 20°C: 1.76 C
Melting point: 168 to 172°C
Flash point: 210°C
EINECS: 201-766-0
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H335, H315, H319
P280, P305+P351+P338,
P310, P302+P352, P261

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm

Tantalum standard metal solution 1000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTA92Y
500 mℓ	Plastic bottle	SPPLTA92X

H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tantalum standard metal solution 10 000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTA93Y
500 mℓ	Plastic bottle	SPPLTA93X

H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tap, nickel plated brass for 25ℓ metal drum
3/4" BSP, nickel plated brasss body, chrome ball valve PTFE seat

packaging		Mfr. No
Pack	Box	TAP-105-K

(+)-Tartaric acid — SLR
extra pure, powder

packaging		Mfr. No
500 g	Plastic jar	T/0210/53
1 kg	Plastic jar	T/0210/60
5 kg	Plastic keg	T/0210/65

$C_4H_6O_6$
CAS: 87-69-4
MW: 150.09
Density at 20°C: 1.76 C
Melting point: 168 to 172°C
Flash point: 210°C
EINECS: 201-766-0
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H335, H315, H319
P280, P305+P351+P338,
P310, P302+P352, P261

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<100 ppm	Zinc (Zn)	<50 ppm

(+)-Tartaric acid diammonium salt — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	A/6590/53

$(NH_4)_2C_4H_4O_6$
CAS: 3164-29-2
MW: 184.15
Density at 20°C: 1.6
EINECS: 221-618-9

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Potassium (K)	<100 ppm
Copper (Cu)	<50 ppm	Sodium (Na)	<100 ppm
Iron (Fe)	<50 ppm	n-Butyl formate	<0.005%
Lead (Pb)	<50 ppm	Zinc (Zn)	<50 ppm
Magnesium (Mg)	<100 ppm		

Sodium tartrate dihydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	S/6922/53

$C_4H_4Na_2O_6.2H_2O$
CAS: 6106-24-7
MW: 230.08
EINECS: 212-773-2

Assay: 99 to 101%

Guaranteed analysis

pH (aqueous solution 5%)	7.5 to 8.5	Molybdenum (Mo)	<5 ppm
Aluminium (Al)	<5 ppm	Nickel (Ni)	<5 ppm
Arsenic (As)	<5 ppm	Potassium (K)	<20 ppm
Barium (Ba)	<5 ppm	Propan--1-ol	<5 ppm
Cadmium (Cd)	<5 ppm	Strontium (Sr)	<5 ppm
Calcium (Ca)	<50 ppm	Titanium (Ti)	<5 ppm
Chromium (Cr)	<5 ppm	n-Butyl formate	<0.0005%
Cobalt (Co)	<5 ppm	Total nitrogen (N)	<20 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<50 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Magnesium (Mg)	<20 ppm	Zinc (Zn)	<10 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label.

Sodium tartrate dihydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	S/6920/53

$C_4H_4Na_2O_6.2H_2O$
CAS: 6106-24-7
MW: 230.08
EINECS: 212-773-2

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	n-Butyl formate	<0.005%
Copper (Cu)	<20 ppm	Total phosphorus (P)	<200 ppm
Iron (Fe)	<20 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<100 ppm		

Tartaric acid monopotassium salt
See Potassium hydrogen tartrate, page 255

Taurine
pure

packaging		Mfr. No
500 g	Plastic jar	T/0300/53

$C_2H_7NO_3S$
CAS: 107-35-7
MW: 125.15
Melting point: 300°C
EINECS: 203-483-8

GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H319, H335, H315
P261, P302+P352, P280,
P305+P351+P338

Assay: >99%

Tellurium standard metal solution 1000 ppm
for AAS, solution HCl 20%

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8100/05
500 mℓ	HDPE Plastic bottle	J/8100/08

Density at 20°C: 1.03
ADR/RID: 8, III
UN: 3264
GHS: Skin Irrit. 2, Eye Irrit. 2,

STOT SE 3
H319, H335, H315
P280, P305+P351+P338

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Tellurium standard metal solution 1000 ppm
for ICP, solution HCl 20%

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8327/08

Density at 20°C: 1.03
ADR/RID: 8, III
UN: 3264
GHS: Skin Irrit. 2, Eye Irrit. 2,

STOT SE 3
H319, H335, H315
P280, P305+P351+P338

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Tellurium standard metal solution 1000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTE22Y
500 mℓ	Plastic bottle	SPPLTE22X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tellurium standard metal solution 1000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	PLTE32X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tellurium standard metal solution 10 000 ppm
for ICP solution in HCL 40%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	PLTE53X

H314, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

TEMED
technical 99+%, (N,N,N',N'-Tetramethylethylenediamine)

packaging		Mfr. No
25 mℓ	Glass bottle	T/P190/04
2.5 ℓ	Glass bottle	T/P190/17

$C_6H_{16}N_2$
CAS: 110-18-9
MW: 116.21
Density at 20°C: 0.770
Boiling point: 120 to 122°C
Melting point: -55°C
Flash point: 17°C
ADR/RID: 3, II

EINECS: 203-744-6
UN: 2372
GHS: Flam. Liq. 2, Acute
Tox. 4, Skin Corr. 1B, Eye Dam. 1
H225, H314, H302, H332
P301+P330+P331, P280,
P305+P351+P338, P310,
P304+P340, P210, P240

Assay (CG): >99%

This accelerator, used in the polymerisation of acrylamide gels, enhances the formation of oxygen radicals and counters the inhibitory effect of excess ammonium persulfate.

Terbium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTB22Y
500 mℓ	Plastic bottle	SPPLTB22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Terbium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	PLTB23Y
500 mℓ	Plastic bottle	PLTB23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Terbium standard metal solution 10 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLTB21AY

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Terpineol
pure, Mixed Isomers

packaging		Mfr. No
500 mℓ	Glass bottle	T/0420/08

$C_{10}H_{18}O$
CAS: 8000-41-7
MW: 154.25
Density at 20°C: 0.925 to 0.935

Boiling point: 214 to 224°C
Melting point: 31 to 35°C
Flash point: 89.4°C
EINECS: 232-268-1

Tetrabromo (R) fluorescein C.I. 45380
pure

packaging		Mfr. No
10 g	Glass jar	T/0470/45
50 g	Glass jar	T/0470/47

$C_{20}H_6Br_4Na_2O_5$
CAS: 17372-87-1
MW: 691.85
Density at 20°C: 1.018
Melting point: 300°C

EINECS: 241-409-6
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Tetrabutyl ammonium bromide — Certified
for HPLC

packaging		Mfr. No
25 g	Plastic jar	T/0476/46

$C_{16}H_{36}BrN$
CAS: 1643-19-2
MW: 322.36
Density at 20°C: 1.15
Melting point: 100 to 104°C
EINECS: 216-699-2

GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H315, H335, H319
P261, P302+P352, P280,
P305+P351+P338

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.1 M) ..... : <0.05 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Tetrabutylammonium dihydrogen phosphate
See Tetrabutyl ammonium phosphate, page 344

Tetrabutylammonium hydrogen sulfate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	T/0479/46
100 g	Plastic jar	T/0479/48

$C_{16}H_{37}NSO_4$
CAS: 32503-27-8
MW: 339.52
Melting point: 168 to 172°C
EINECS: 251-068-5
GHS: Acute Tox. 4, Skin Irrit.

2, Eye Irrit. 2, STOT SE 3
H315, H319, H335, H302
P261, P301+P312,
P302+P352, P280,
P305+P351+P338

Tetra-n-butyl ammonium hydroxide — Certified
for HPLC, solution 0.1M (phosphate buffered)

packaging		Mfr. No
250 mℓ	HDPE Plastic bottle	T/0486/07

CAS: 2052-49-5
EINECS: 218-147-6
GHS: Skin Irrit. 2, Eye Irrit. 2

H315, H319
P280, P302+P352,
P305+P351+P338

Guaranteed analysis
pH at 20°C ..... : 7 to 7.5 Factor ..... : 0.995 to 1.005

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.005 M) : <0.02 A.U.

Filtered to 0.2 µm.

Tetra-n-butyl ammonium hydroxide — Certified
for HPLC, solution 0.5M

packaging		Mfr. No
250 mℓ	HDPE Plastic bottle	T/0481/07

CAS: 2052-49-5
Flash point: >110°C
ADR/RID: 8, II
EINECS: 218-147-6
UN: 1760

GHS: Skin Corr. 1A, Eye Dam. 1
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Guaranteed analysis
pH at 20°C ..... : 7 to 7.5 Factor ..... : 0.995 to 1.005

Manufactured to a tolerance of ± 0.2%.
Filtered to 0.2 µm.

Tetra-n-butyl ammonium hydroxide solution — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	T/0480/05
250 mℓ	HDPE Plastic bottle	T/0480/07

$C_{16}H_{37}NO$
CAS: 2052-49-5
MW: 259.46
Density at 20°C: 0.995
Boiling point: >100°C
ADR/RID: 8, II
EINECS: 218-147-6

UN: 3267
GHS: Skin Corr. 1A, Eye Dam. 1
H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Assay: 39.5 to 41%

Guaranteed analysis

Residue after ignition	<0.05%	Bromide (Br)	<0.1%
Bromide	: <0.1%	Sulfate (SO_4)	<0.02%

Tetra-n-butyl ammonium hydroxide solution 0.1 M (0.1N) in toluene/methanol
Standard solution ready to use, For volumetric analysis

packaging		Mfr. No
500 mℓ	Glass bottle	J/8750/08
1 ℓ	Glass bottle	J/8750/15
2.5 ℓ	Glass bottle	J/8750/17
10 ℓ	Bag in box	J/8750/24

CAS: 2052-49-5
Density at 20°C: 0.850
Flash point: 4°C
ADR/RID: 3, 6.1, II
EINECS: 218-147-6
UN: 1992
GHS: Flam. Liq. 2, Repr. 2, Acute Tox. 3, Skin Irrit. 2,

Eye Irrit. 2, STOT SE 1, STOT RE 2, Asp. Tox. 1
H225, H331, H311, H301, H370, H361d, H304, H373, H315, H319, H336
P301+P330+P331, P280, P305+P351+P338, P310, P210, P240

Manufactured to a tolerance of 5%.
See the full range of Standard Volumetric solution page 323.

Tetra-n-butylammonium iodide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	T/0490/48

$C_{16}H_{36}IN$
CAS: 311-28-4
MW: 369.38
Melting point: 141 to 150°C
EINECS: 206-220-5

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H302, H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis
Residue after ignition ..... <0.05%

Tetrabutyl ammonium phosphate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
5 g	Glass jar	T/0505/44

$C_{16}H_{38}NPO_4$
CAS: 5574-97-0
MW: 339.45
Melting point: 148 to 151°C
EINECS: 226-947-1

GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P302+P352, P280, P305+P351+P338

Assay: >97%

Tetrachloroethylene — Certified
for UV spectroscopy

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	T/0605/PB17

C_2Cl_4
CAS: 127-18-4
MW: 165.83
Density at 20°C: 1.625
Boiling point: 120 to 122°C
Melting point: -22°C

ADR/RID: 6.1, III
EINECS: 204-825-9
UN: 1897
GHS: Carc. 2, Aquatic Chronic 2
H351, H411
P281, P273, P260

Assay (CG): >99.9%

Guaranteed analysis

Alkalinity	<0.00006 meq/g	Residue after evaporation	<5 ppm
Water	<0.01%	Acidity	<0.0003 meq/g

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

290 nm (sol. aqu. 1%)	: <0.125 A.U.	340 nm	<0.05 A.U.
310 nm	<0.08 A.U.	360 nm	<0.05 A.U.
320 nm	<0.05 A.U.	400 nm	<0.01 A.U.

Tetrachloroethylene — Certified AR
for analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	T/0601/17
2.5 ℓ	Coated Glass bottle	T/0601/PB17
25 ℓ	Metal drum	T/0601/25

C_2Cl_4
CAS: 127-18-4
MW: 165.83
Density at 20°C: 1.625
Boiling point: 120 to 122°C
Melting point: -22°C

ADR/RID: 6.1, III
EINECS: 204-825-9
UN: 1897
GHS: Carc. 2, Aquatic Chronic 2
H351, H411
P281, P273, P260

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0003 meq/g	Iron (Fe)	<0.1 ppm
Colour	<10 APHA	Lead (Pb)	<0.05 ppm
Water	<0.01%	Magnesium (Mg)	<0.2 ppm
Residue after evaporation	<20 ppm	Potassium (K)	<0.5 ppm
Calcium (Ca)	<0.5 ppm	Sodium (Na)	<0.5 ppm
Chloride (Cl)	<0.0001%	Total phosphorus (P)	<0.1 ppm
Chlorine	<0.3 ppm	Total sulphur (S)	<0.5 ppm
Free Chlorine (Cl_2)	<0.3 ppm	Zinc (Zn)	<0.1 ppm
Copper (Cu)	<0.05 ppm	Acetone	<0.02%

Typical analysis

Aluminium (Al)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Total silicon (Si)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Manganese (Mn)	<0.02 ppm		

Lot analysis on the label.

Tetrachloroethylene — NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
2.5 ℓ	Glass bottle	T/0600/17
2.5 ℓ	Coated Glass bottle	T/0600/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	T/0600/21
25 ℓ	Metal drum	T/0600/25

C_2Cl_4
CAS: 127-18-4
MW: 165.83
Density at 20°C: 1.625
Boiling point: 120 to 122°C
Melting point: -22°C

ADR/RID: 6.1, III
EINECS: 204-825-9
UN: 1897
GHS: Carc. 2, Aquatic Chronic 2
H351, H411
P281, P273, P260

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.003 meq/g	Magnesium (Mg)	<2 ppm
Colour	<10 APHA	Potassium (K)	<2 ppm
Water	<0.1%	Sodium (Na)	<5 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm		

Tetrachloroethylene
Technical

packaging		Mfr. No
2.5 ℓ	Glass bottle	T/0550/17
2.5 ℓ	Coated Glass bottle	T/0550/PB17
25 ℓ	Metal drum	T/0550/25

C_2Cl_4
CAS: 127-18-4
MW: 165.83
Density at 20°C: 1.625
Boiling point: 120 to 122°C
Melting point: -22°C

ADR/RID: 6.1, III
EINECS: 204-825-9
UN: 1897
GHS: Carc. 2, Aquatic Chronic 2
H351, H411
P281, P273, P260

Tetrachlorosilane
See Silicon tetrachloride, page 276

Tetradecyltrimethylammonium bromide — Certified
for HPLC

packaging		Mfr. No
25 g	Plastic jar	T/0611/46

$C_{17}H_{38}NBr$
CAS: 1119-97-7
MW: 336.39
Melting point: 245 to 250°C
ADR/RID: 6.1, II
EINECS: 214-291-9

UN: 1759
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm ..... <0.05 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Tetraethylammonium bromide — Certified
for HPLC

packaging		Mfr. No
25 g	Plastic jar	T/0621/46

$C_8H_{20}NBr$
CAS: 71-91-0
MW: 210.16
Melting point: 285°C
EINECS: 200-769-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280,
P305+P351+P338

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.1 M) ..... : <0.05 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Tetraethylammonium bromide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	T/0620/48

$C_8H_{20}NBr$
CAS: 71-91-0
MW: 210.16
Melting point: 285°C
EINECS: 200-769-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280,
P305+P351+P338

Assay: >98%

Tetrahydrofuran unstabilised — NEW PACK. — Certified
For HPLC

packaging		Mfr. No
1 ℓ	Coated Glass bottle	T/0706/PB15
2.5 ℓ	Coated Glass bottle	T/0706/PB17
10 ℓ	Returnable Drum	T/0706/10RSS
25 ℓ	Returnable Drum	T/0706/25RSS
30 ℓ	Returnable Drum	T/0706/30RSS

C_4H_8O
CAS: 109-99-9
MW: 72.11
Density at 20°C: 0.880
Boiling point: 66°C
Melting point: -108.4°C
Flash point: -21°C
ADR/RID: 3, II

EINECS: 203-726-8
UN: 2056
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H335, EUH019
P261, P233, P280,
P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Alkalinity	<0.0006 meq/g	Acidity	<0.0002 meq/g
Water	<0.03%	Peroxide	<0.01%
Residue after evaporation	<2 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

230 nm	<0.5 A.U.	270 nm	<0.04 A.U.
240 nm	<0.26 A.U.	280 nm	<0.02 A.U.
250 nm	<0.1 A.U.	Wavelength at 1 A.U.	: >0 nM
260 nm	<0.05 A.U.		

Tetrahydrofuran stabilised with 0.025% BHT
for Gel Permeation Chromatography (GPC)

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	T/0709/PB17

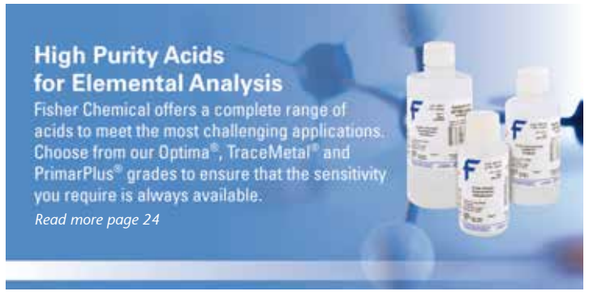
C_4H_8O
CAS: 109-99-9
MW: 72.11
Density at 20°C: 0.880
Boiling point: 66°C
Melting point: -108.4°C
Flash point: -21°C
ADR/RID: 3, II
EINECS: 203-726-8

UN: 2056
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H335, H319, EUH019
P310, P304+P340, P261,
P273, P233, P302+P352,
P280, P305+P351+P338,
P210, P240

Guaranteed analysis

Colour	<10 APHA	Residue after evaporation	<20 ppm
Water	<0.03%	Residue after ignition	<20%

Stabilised with 0.025% BHT.



Tetrahydrofuran unstabilised NEW PACK.
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	T/0702/PB15
2.5 ℓ	Coated Glass bottle	T/0702/PB17

C_4H_8O
CAS: 109-99-9
MW: 72.11
Density at 20°C: 0.880
Boiling point: 66°C
Melting point: -108.4°C
Flash point: -21°C
ADR/RID: 3, II

EINECS: 203-726-8
UN: 2056
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H335, EUH019
P261, P233, P280, P305+P351+P338, P210, P240

Assay (CG): >99.8

Guaranteed analysis
Water ..... <0.01% Residue after evaporation ..... <2 ppm

Recommended for the synthesis of DNA and peptide sequencing.

Tetrahydrofuran stabilised with 0.025% BHT NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	T/0701/15
1 ℓ	Coated Glass bottle	T/0701/PB15
2.5 ℓ	Glass bottle	T/0701/17
2.5 ℓ	Coated Glass bottle	T/0701/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	T/0701/21
25 ℓ	Metal drum	T/0701/25

C_4H_8O
CAS: 109-99-9
MW: 72.11
Density at 20°C: 0.880
Boiling point: 66°C
Melting point: -108.4°C
Flash point: -21°C
ADR/RID: 3, II
EINECS: 203-726-8

UN: 2056
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H335, H319, EUH019
P310, P304+P340, P261, P273, P233, P302+P352, P280, P305+P351+P338, P210, P240

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Magnesium (Mg)	<0.1 ppm
Colour	<10 APHA	Potassium (K)	<0.5 ppm
Water	<0.03%	Sodium (Na)	<1 ppm
Residue after ignition	<0.002%	Total phosphorus (P)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Total sulphur (S)	<0.5 ppm
Copper (Cu)	<0.05 ppm	Zinc (Zn)	<0.2 ppm
Iron (Fe)	<0.1 ppm	Methyl tetrahydrofuran	<0.1%
Lead (Pb)	<0.05 ppm	Peroxide	<0.005%

Typical analysis

Aluminium (Al)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Total silicon (Si)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Manganese (Mn)	<0.02 ppm		

Lot analysis on the label.
Stabilised with 0.025% BHT.

Tetrahydrofuran stabilised with 0.025% BHT NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	T/0700/08
2.5 ℓ	Glass bottle	T/0700/17
2.5 ℓ	Coated Glass bottle	T/0700/PB17
5 ℓ	HDPE Plastic bottle	T/0700/21
5 ℓ	HDPE Plastic bottle	T/0700/PC21
25 ℓ	Metal drum	T/0700/25
200 ℓ	Metal drum	T/0700/27

C_4H_8O
CAS: 109-99-9
MW: 72.11
Density at 20°C: 0.880
Boiling point: 66°C
Melting point: -108.4°C
Flash point: -21°C
ADR/RID: 3, II
EINECS: 203-726-8

UN: 2056
GHS: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
H225, H335, H319, EUH019
P310, P304+P340, P261, P273, P233, P302+P352, P280, P305+P351+P338, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Potassium (K)	<2 ppm
Colour	<10 APHA	Sodium (Na)	<5 ppm
Water	<0.05%	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm	Residue after ignition	<0.005%
Magnesium (Mg)	<2 ppm	Peroxide	<0.01%

Stabilised with 0.025% BHT.

Tetrahydronaphthalene — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	T/0850/08

$C_{10}H_{12}$
CAS: 119-64-2
MW: 132.21
Density at 20°C: 0.973
Boiling point: 207°C
Melting point: -35°C
Flash point: 77°C
ADR/RID: 9, III

EINECS: 204-340-2
UN: 3082
GHS: Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 2
H319, H411, H315, EUH019
P273, P233, P302+P352, P280, P305+P351+P338

Assay (CG): >97%

Tetramethyl ammonium chloride — Certified
for HPLC

packaging		Mfr. No
25 g	Plastic jar	T/0931/46

$C_4H_{12}NCl$
CAS: 75-57-0
MW: 109.60
Melting point: 420°C
ADR/RID: 6.1, II
EINECS: 200-880-8
UN: 2811

GHS: Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H312, H315, H301, H319
P301+P310, P280, P302+P352, P261, P305+P351+P338

Assay: >98%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.1 M) ..... : <0.05 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Tetramethyl ammonium hydrogen sulfate — Certified
for HPLC

packaging		Mfr. No
5 g	Glass jar	T/0935/44

$C_4H_{13}NSO_4$
CAS: 80526-82-5
MW: 171.21
Melting point: 295 to 297°C
EINECS: 279-490-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis
Loss on drying 100°C ..... : <2%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
200 nm ..... <0.3 A.U. 220 nm ..... <0.05 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Tetramethyl ammonium hydroxide solution 25% in water — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 mℓ	HDPE Plastic bottle	T/0940/04
100 mℓ	HDPE Plastic bottle	T/0940/05

$C_4H_{13}NO$
CAS: 75-59-2
MW: 91.15
Density at 20°C: 1.02
Boiling point: 110°C
ADR/RID: 8, II
EINECS: 200-882-9

UN: 1835
GHS: Acute Tox. 3, Skin Corr. 1B
H314, H301, H311
P280, P301+P330+P331, P305+P351+P338, P310, P302+P352

Assay: >24.5%

Guaranteed analysis

Colour	<20 APHA	Halogenated compounds	<0.2%
Halides (Cl)	: <0.2%	Residue after ignition	<0.3%

Polyethylene glycol mono [4-(1.1,3.3-tetra-methylbutyl)phenyl] ether
See Triton X-100®, page 363

N,N,N',N'-Tetramethyl-p-phenylene-diamine dihydrochloride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
5 g	Plastic jar	T/0960/44
10 g	Plastic jar	T/0960/45

$C_{10}H_{16}N_2.2HCl$
CAS: 637-01-4
MW: 237.17
Melting point: 220 to 224°C
ADR/RID: 6.1, III
EINECS: 211-274-8
UN: 2811

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H312, H315, H302, H335, H319, H332
P280, P302+P352, P261, P301+P312, P304+P340, P305+P351+P338

Assay: >97%

TFA
See Trifluoroacetic acid, page 358

Thallium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTL22Y
250 mℓ	Plastic bottle	SPPLTL22T
500 mℓ	Plastic bottle	SPPLTL22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Thallium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	PLTL23Y
500 mℓ	Plastic bottle	PLTL23X

H302, H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Thallium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLTL22Y

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Thermit ignition powder
pure

packaging		Mfr. No
250 g	Glass jar	T/0978/50

ADR/RID: 5.1, II
EINECS: 215-128-4
UN: 1479
GHS: Flam. Sol. 1, Water-react. 2, Ox. Sol. 2, Acute Tox. 4
H228, H261, H272, H302, H332
P210, P220, P221, P301+P312, P304+P340, P240

Guaranteed analysis
Identity test ..... : Pass

Thermit powder
pure

packaging		Mfr. No
500 g	Glass jar	T/0977/53

ADR/RID: 4.1, III
EINECS: 215-168-2
UN: 3178
GHS: Flam. Sol. 1, Water-react. 2

H228, H261
P233, P210, P240, P280, P223, P231+P232

Guaranteed analysis
Identity test ..... : Pass

Thioacetamide SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	T/0980/46

C_2H_5NS
CAS: 62-55-5
MW: 75.13
Density at 20°C: 1.37
Melting point: 112 to 114°C
EINECS: 200-541-4
GHS: Carc. 1B, Acute Tox. 4,

Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 3
H315, H350, H412, H319, H302
P201, P308+P313, P273, P301+P312, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis
Residue after ignition ..... <0.05%

2.2'-Thiodiethanol
for amino acid analysis, (thioglycolic acid)

packaging		Mfr. No
100 g	Coated Glass bottle	T/0998/48

$C_4H_{10}O_2S$
CAS: 111-48-8
MW: 122.19
Density at 20°C: 1.18
Boiling point: 165°C

EINECS: 203-874-3
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Guaranteed analysis
Colour ..... <5 APHA Ninhydrin reaction test ..... : Pass

packed under nitrogen

Thioglycolic acid SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	T/1000/PB05
250 mℓ	Coated Glass bottle	T/1000/PB07
2.5 ℓ	Coated Glass bottle	T/1000/PB17

$C_2H_4O_2S$
CAS: 68-11-1
MW: 92.12
Density at 20°C: 1.325
Boiling point: 220°C
Melting point: -16°C
Flash point: 126°C
ADR/RID: 8, II
EINECS: 200-677-4

UN: 1940
GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H314, H301, H311, H331
P301+P310, P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340

Assay: >97%

Guaranteed analysis
Sensitivity test (iron) ..... : Pass

Thiourea SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	T/1150/50
500 g	Plastic jar	T/1150/53
10 kg	Plastic keg	T/1150/68

CH_4N_2S
CAS: 62-56-6
MW: 76.12
Density at 20°C: 1.405
Melting point: 171 to 175°C
ADR/RID: 6.1, III
EINECS: 200-543-5

UN: 2811
GHS: Carc. 2, Repr. 2, Acute Tox. 4, Aquatic Chronic 2
H351, H361d, H302, H411
P301+P310, P310, P281, P304+P340, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.05%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<100 ppm	Zinc (Zn)	<50 ppm
Potassium (K)	<100 ppm		

Thorium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTH22Y
500 mℓ	Plastic bottle	SPPLTH22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Thorium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLTH22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Thullium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTM22Y
500 mℓ	Plastic bottle	SPPLTM22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Thymol SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	T/1450/48

$C_{10}H_{14}O$
CAS: 89-83-8
MW: 150.22
Density at 20°C: 0.960
Boiling point: 232°C
Freezing point: <49°C
Melting point: 48 to 52°C
Flash point: 102°C
ADR/RID: 8, III

EINECS: 201-944-8
UN: 2430
GHS: Acute Tox. 4, Skin Corr. 1B, Aquatic Chronic 2
H411, H302, H314
P301+P330+P331, P280, P305+P351+P338, P310, P273, P301+P312

Guaranteed analysis
Residue after evaporation ..... <0.05%

Thymol blue solution 0.04%
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	T/1470L/08

Flash point: 32°C
ADR/RID: 3, III
UN: 1170

GHS: Flam. Liq. 3
H226
P210

Guaranteed analysis
pH colour change test ..... : Pass

Thymol blue
pure, indicator grade

packaging		Mfr. No
5 g	Glass jar	T/1470/44

$C_{27}H_{30}O_5S$
CAS: 76-61-9
MW: 466.58

Melting point: 221°C
EINECS: 200-973-3

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

pH 1.2-2.8 red to yellow.
pH 8.0-9.6 yellow to blue.

Thymolphthalein solid
pure, indicator grade

packaging		Mfr. No
5 g	Glass jar	T/1480/44
25 g	Glass jar	T/1480/46

$C_{28}H_{30}O_4$
CAS: 125-20-2
MW: 430.53

Melting point: 251 to 253°C
EINECS: 204-729-7

Guaranteed analysis
pH colour change test ..... : Pass Complies with standard IR spectrum: Pass

pH 9.3-10.5 colorless to blue.
Conforming to the IR spectrum of reference.

Thymolphthalein solution 0.2%
pure, indicator grade

packaging		Mfr. No
500 mℓ	Glass bottle	T/1480L/08

Flash point: 22°C
ADR/RID: 3, II
EINECS: 200-578-6
UN: 1170

GHS: Flam. Liq. 2
H225
P210, P240, P241, P280, P303+P361+P353

Guaranteed analysis
pH colour change test ..... : Pass

Thymolsulfonephthaleindi-(methyl-iminodiacetic acid) sodium salt
pure

packaging		Mfr. No
1 g	Glass jar	T/1500/43

$C_{37}H_{41}N_2Na_3O_{13}S$
CAS: 1945-77-3
MW: 822.78
EINECS: 217-743-3

Guaranteed analysis
Complies with standard IR spectrum: Pass

Tillman's reagent *See Phenol-indo-2, page 240*

Tin standard metal solution 1000 ppm
for AAS, solution HCl 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8067/05
500 mℓ	HDPE Plastic bottle	J/8067/08

GHS: Skin Irrit. 2
H315
P302+P352

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Tin standard metal solution 1000 ppm
for ICP, solution HCl 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8326/08

GHS: Skin Irrit. 2
H315
P302+P352

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Tin standard metal solution 10 000 ppm
for ICP, solution HCl 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8325/05

GHS: Skin Irrit. 2
H315
P302+P352

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Tin standard metal solution 1000 ppm
for ICP solution in HNO_3 1%/HF 1%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLSN22X

H311, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tin standard metal solution 1000 ppm
for ICP solution in HCL 20%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSN52Y
250 mℓ	Plastic bottle	SPPLSN52T
500 mℓ	Plastic bottle	SPPLSN52X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tin standard metal solution 10 000 ppm
for ICP solution in HNO_3 2%/HF 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLSN23X

H311, H314, H333

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tin standard metal solution 10 000 ppm
for ICP solution in HCL 20%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLSN53Y
500 mℓ	Plastic bottle	SPPLSN53X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tin standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 1%/HF 1%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLSN22Y

H311, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tin (metal)
for analysis — Certified AR

packaging		Mfr. No
250 g	Plastic jar	T/1640/50

Sn
CAS: 7440-31-5
MW: 118.69
Density at 20°C: 7.31
Boiling point: 2270°C
Melting point: 231.9°C
EINECS: 231-141-8

Assay: >99.5%

Guaranteed analysis

Antimony (Sb)	<200 ppm	Iron (Fe)	<100 ppm
Bismuth (Bi)	<40 ppm	Lead (Pb)	<50 ppm
Copper (Cu)	<10 ppm	Zinc (Zn)	<20 ppm

The prices applied to the tin and derivatives vary with the price of the raw material.

Tin metal powder fine
pure

packaging		Mfr. No
100 g	Plastic jar	T/1650/48

Sn
CAS: 7440-31-5
MW: 118.69
Density at 20°C: 7.31
Boiling point: 2270°C
Melting point: 231.9°C
EINECS: 231-141-8
GHS: Eye Irrit. 2, STOT SE 3
H319, H335
P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

The prices applied to the tin and derivatives vary with the price of the raw material.

Tin metal foil (0.10 mm)
pure

packaging		Mfr. No
100 g	Plastic jar	T/1560/48
500 g	Plastic jar	T/1560/53

Sn
CAS: 7440-31-5
MW: 118.69
Density at 20°C: 7.31
Boiling point: 2270°C
Melting point: 231.9°C
EINECS: 231-141-8

Guaranteed analysis
Identity test ..... : Pass

The prices applied to the tin and derivatives vary with the price of the raw material.

Tin metal
pure

packaging		Mfr. No
100 g	Plastic jar	T/1600/48
500 g	Plastic jar	T/1600/53

Sn
CAS: 7440-31-5
MW: 118.69
Density at 20°C: 7.31
Boiling point: 2270°C
Melting point: 231.9°C
EINECS: 231-141-8

Guaranteed analysis
Identity test ..... : Pass

The prices applied to the tin and derivatives vary with the price of the raw material.

Tin(II) chloride anhydrous
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	T/1645/48

$SnCl_2$
CAS: 7772-99-8
MW: 189.60
Density at 20°C: 3.95
Boiling point: 652°C
Melting point: 246°C
ADR/RID: 8, III
EINECS: 231-868-0
UN: 3260
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1
H302, H314, H317
P301+P330+P331, P305+P351+P338, P310, P280, P301+P312

Guaranteed analysis
Identity test ..... : Pass

Tin(II) chloride dihydrate
for analysis — Certified AR

packaging		Mfr. No
100 g	Plastic jar	T/1654/48
250 g	Plastic jar	T/1654/50
500 g	Plastic jar	T/1654/53
1 kg	Plastic jar	T/1654/60

$SnCl_2.2H_2O$
CAS: 10025-69-1
MW: 225.63
Boiling point: 652°C
Melting point: 37 to 38°C
ADR/RID: 8, III
EINECS: 231-868-0
UN: 3260
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1
H302, H314, H317
P280, P301+P330+P331, P305+P351+P338, P302+P350, P310

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Potassium (K)	<20 ppm
Copper (Cu)	<50 ppm	Sodium (Na)	<50 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<50 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm

Typical analysis

Aluminium (Al)	<1 ppm	Manganese (Mn)	<1 ppm
Arsenic (As)	<2 ppm	Molybdenum (Mo)	<1 ppm
Barium (Ba)	<1 ppm	Nickel (Ni)	<1 ppm
Cadmium (Cd)	<1 ppm	Silver (Ag)	<1 ppm
Chromium (Cr)	<1 ppm	Strontium (Sr)	<1 ppm
Cobalt (Co)	<1 ppm	Titanium (Ti)	<1 ppm
Lithium (Li)	<1 ppm	Vanadium (V)	<1 ppm

Corrosive when wet.
Lot analysis on the label.

Tin(II) chloride dihydrate
specified reagents for general laboratory work- extra pure — SLR

packaging		Mfr. No
100 g	Plastic jar	T/1652/48
250 g	Plastic jar	T/1652/50
500 g	Plastic jar	T/1652/53
1 kg	Plastic jar	T/1652/60

$SnCl_2.2H_2O$
CAS: 10025-69-1
MW: 225.63
Density at 20°C: 2.71
Boiling point: 652°C
Melting point: 37 to 38°C
ADR/RID: 8, III
EINECS: 231-868-0
UN: 3260
GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1
H302, H314, H317
P280, P301+P330+P331, P305+P351+P338, P302+P350, P310

Assay: >96%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<100 ppm
Copper (Cu)	<200 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<200 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<200 ppm	Total sulphur (S)	<200 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<200 ppm

Corrosive when wet.

Tin(IV) chloride anhydrous
pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	T/1665/PB05

$SnCl_4$
CAS: 7646-78-8
MW: 260.52
Density at 20°C: 2.22
Boiling point: 114°C
Melting point: -33°C
ADR/RID: 8, II
EINECS: 231-588-9
UN: 1827
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3, Aquatic Chronic 3
H412, H314
P301+P330+P331, P280, P305+P351+P338, P342+P311, P261, P273

Tin(IV) chloride pentahydrate
pure

packaging		Mfr. No
100 g	Plastic jar	T/1661/48
500 g	Plastic jar	T/1661/53

$SnCl_2.5H_2O$
CAS: 10026-06-9
MW: 350.58
Density at 20°C: 2.2(H2O=1)
Melting point: 56°C
ADR/RID: 8, III
EINECS: 231-588-9
UN: 2440
GHS: Skin Corr. 1B, Eye Dam. 1, Aquatic Chronic 3
H314, H412
P301+P330+P331, P280, P305+P351+P338, P310, P273

Guaranteed analysis
Identity test ..... : Pass

Tin(IV) oxide
pure

packaging		Mfr. No
100 g	Plastic jar	T/1670/48

SnO_2
CAS: 18282-10-5
MW: 150.69
Density at 20°C: 6.95
Melting point: 1127°C
EINECS: 242-159-0

Guaranteed analysis
Identity test ..... : Pass

TISAB solution
pure

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	F/1325/21

Density at 20°C: 1.04

Guaranteed analysis
pH at 20°C ..... : 5 to 7

Contents per Litre:
Acetic acid glacial: 12.6 mℓ
trans-1.2-Diaminocyclohexane-N,N,N',N'-tetra acetic acid: 0.1 g
Sodium chloride: 58 g
Sodium hydroxyde AR: 8 g

Titanium standard metal solution 1000 ppm
for AAS, solution HCl 2M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8110/05
500 mℓ	HDPE Plastic bottle	J/8110/08

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Titanium standard metal solution 1000 ppm
for ICP, solution HCl 2M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8331/08

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Titanium standard metal solution 10 000 ppm
for ICP, solution HCl 2M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8330/05

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Titanium standard metal solution 1000 ppm
for ICP solution in HCL 20%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLTI52X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Titanium standard metal solution 1000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTI92Y
250 mℓ	Plastic bottle	SPPLTI92T
500 mℓ	Plastic bottle	SPPLTI92X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Titanium standard metal solution 10 000 ppm
for ICP solution in HCL 40%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLTI53X

H314, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Titanium standard metal solution 10 000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLTI93Y
500 mℓ	Plastic bottle	SPPLTI93X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Titanium standard metal solution 1000 ppm
for ICP-MS solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLTI92Y

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Titanium
pure, metal, crushed sponge

packaging		Mfr. No
100 g	Plastic jar	T/1840/48

Ti
CAS: 7440-32-6
MW: 47.88
Density at 20°C: 4.51
Boiling point: 3287°C
Melting point: 1660°C
ADR/RID: 4.2, II
EINECS: 231-142-3
UN: 2546
GHS: Flam. Sol. 2, Pyr. Sol. 1
H228, H250
P210, P222, P280,
P335+P334, P370+P378

Guaranteed analysis
Identity test ..... : Pass

Titanium(III) chloride
for amino acid analysis, 15% solution w/v

packaging		Mfr. No
500 mℓ	Coated Glass bottle	T/1958/PB08

$TiCl_3$
CAS: 7705-07-9
MW: 154.26
Density at 20°C: 1.21
ADR/RID: 8, II
EINECS: 231-728-9
UN: 2869
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H314, H335
P301+P330+P331,
P305+P351+P338, P310,
P280, P402+P404, P302+P350

Titanium(III) chloride solution 12.5 % w/w TiCl3
Technical

packaging		Mfr. No
500 mℓ	Coated Glass bottle	T/1950/PB08

$TiCl_3$
CAS: 7705-07-9
MW: 154.26
Density at 20°C: 1.14 to 1.16
Melting point: 440°C
ADR/RID: 8, II
EINECS: 231-728-9
UN: 2869
GHS: Skin Corr. 1B, Eye Dam. 1, STOT SE 3
H314, H335
P301+P330+P331,
P305+P351+P338, P310,
P280, P402+P404, P302+P350

Titanium(III) chloride solution 0.2M (0.2N)
Standard solution ready to use, For volumetric analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	J/8780/17

ADR/RID: 8, III
UN: 3264
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H315
P261, P280, P302+P352,
P304+P340, P305+P351+P338

Manufactured to a tolerance of ± 0.1%.
See the full range of Standard Volumetric solution page 323.

Titanium(IV) dioxide SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	T/1900/53

TiO_2
CAS: 13463-67-7
MW: 79.88
Density at 20°C: 4.23
Boiling point: 2900°C
Melting point: 1855°C
EINECS: 236-675-5

Assay: >98%

Guaranteed analysis
Loss on ignition ..... <0.5% Iron (Fe) ..... <500 ppm

Titanium(IV) sulfate solution 15 % w/v approx
Technical

packaging		Mfr. No
1 ℓ	Coated Glass bottle	T/1800/PB15

KOH
CAS: 13693-11-3
Density at 20°C: 1.12
ADR/RID: 8, II
EINECS: 237-215-6
UN: 2796
GHS: Skin Corr. 1A
H314
P301+P330+P331, P280,
P305+P351+P338, P310

Assay: 14 to 16%

Titanium(III) sulfate solution approx.15 % w/v Ti2 (SO4)3
Technical

packaging		Mfr. No
500 mℓ	Coated Glass bottle	T/2000/PB08

CAS: 10343-61-0
Density at 20°C: 1.1 to 1.3
ADR/RID: 8, III
EINECS: 233-749-9
UN: 1760
GHS: Met. Corr. 1, Skin Irrit. 2, Eye Irrit. 2
H290, H315, H319
P261, P280, P302+P352,
P305+P351+P338, P390

Titan yellow C.I. 19540
pure, indicator grade

packaging		Mfr. No
25 g	Glass jar	T/2060/46

$C_{28}H_{19}N_3Na_2O_6S_4$
CAS: 1829-00-1
MW: 695.71
EINECS: 217-377-4
GHS: Acute Tox. 4
H312, H332, H302
P280, P302+P352,
P301+P312, P304+P340

Guaranteed analysis
Complies with standard IR spectrum: Pass

pH 12.0-13.0 yellow to red.
Suitable for magnesium determination.

Toluene NEW PACK. Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	T/2306/15
2.5 ℓ	Glass bottle	T/2306/17
10 ℓ	Returnable Drum	T/2306/10RSS
25 ℓ	Returnable Drum	T/2306/25RSS
30 ℓ	Returnable Drum	T/2306/30RSS

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9
UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331,
P301+P310, P304+P340,
P302+P352, P210

Assay (CG): >99.8%

Guaranteed analysis
Acidity / Alkalinity ..... <0.0015 meq/g Residue after evaporation ..... <2 ppm
Water ..... <0.03%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

290 nm	<0.2 A.U.	330 nm	<0.005 A.U.
290 nm (sol. aqu. 1%)	: <0.05 A.U.	340 nm	<0.005 A.U.
310 nm	<0.025 A.U.	350 nm	<0.005 A.U.
320 nm	<0.01 A.U.		

Lot analysis on the label.
Filtered to 0.2 µm.

Toluene
for Gel Permeation Chromatography (GPC)

packaging		Mfr. No
2.5 ℓ	Coated Glass bottle	T/2310/PB17

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9
UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331,
P301+P310, P304+P340,
P302+P352, P210

Guaranteed analysis
Colour ..... <10 APHA Residue after evaporation ..... <2 ppm
Water ..... <0.03%

Toluene — Primar
for trace metal analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	T/2301/17

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9

UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331, P301+P310, P304+P340, P302+P352, P210

Assay (CG): >99.9%

Guaranteed analysis

Acidity / Alkalinity	<0.0002 meq/g	Manganese (Mn)	<0.005 ppm
Colour	<5 APHA	Molybdenum (Mo)	<0.005 ppm
Water	<0.05%	Nickel (Ni)	<0.005 ppm
Residue after evaporation	<2 ppm	Potassium (K)	<0.05 ppm
Aluminium (Al)	<0.02 ppm	Propan--1-ol	<0.005 ppm
Barium (Ba)	<0.005 ppm	Sodium (Na)	<0.2 ppm
Cadmium (Cd)	<0.005 ppm	Strontium (Sr)	<0.005 ppm
Calcium (Ca)	<0.05 ppm	Titanium (Ti)	<0.005 ppm
Chromium (Cr)	<0.005 ppm	Total phosphorus (P)	<0.02 ppm
Cobalt (Co)	<0.005 ppm	Total silicon (Si)	<0.02 ppm
Copper (Cu)	<0.01 ppm	Total sulphur (S)	<0.1 ppm
Iron (Fe)	<0.05 ppm	Vanadium (V)	<0.005 ppm
Lead (Pb)	<0.005 ppm	Zinc (Zn)	<0.01 ppm
Lithium (Li)	<0.005 ppm	Benzene	<0.02%
Magnesium (Mg)	<0.02 ppm	Xylenes	<0.02%

Toluene — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	T/2323/15
2.5 ℓ	Glass bottle	T/2323/17

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9

UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331, P301+P310, P304+P340, P302+P352, P210

Assay (CG): >99.8%

Guaranteed analysis

Water	<0.05%	GC (FID) Analysis	Pass
Residue after evaporation	<2 ppm	GC (NPD) analysis	Pass
GC (ECD) Analysis	Pass		

GC Analysis
Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachlo-réoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile:
(1) 50°C for 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

Toluene
extra dry, for synthesis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	T/2302/PB15
2.5 ℓ	Coated Glass bottle	T/2302/PB17

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9

UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331, P301+P310, P304+P340, P302+P352, P210

Assay (CG): >99.8%

Guaranteed analysis

Water	<0.01%	Residue after evaporation	<2 ppm

Toluene NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	T/2300/15
1 ℓ	Coated Glass bottle	T/2300/PB15
2.5 ℓ	Glass bottle	T/2300/17
2.5 ℓ	Coated Glass bottle	T/2300/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	T/2300/21
25 ℓ	Metal drum	T/2300/25
200 ℓ	Metal drum	T/2300/27

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9

UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331, P301+P310, P304+P340, P302+P352, P210

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Lead (Pb)	<0.02 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.05 ppm
Water	<0.03%	Potassium (K)	<0.5 ppm
Residue after evaporation	<10 ppm	Sodium (Na)	<1 ppm
Substances darkened by (H_2SO_4)	<50 APHA	Total phosphorus (P)	<0.1 ppm
		Total silicon (Si)	<0.05 ppm
Substances reducing $KMnO_4$	<0.0005%	Total sulphur (S)	<10 ppm
Calcium (Ca)	<0.1 ppm	Zinc (Zn)	<0.05 ppm
Copper (Cu)	<0.02 ppm	Benzene	<0.05%
Iron (Fe)	<0.1 ppm	Xylenes	<0.05%

Typical analysis

Aluminium (Al)	<0.02 ppm	Manganese (Mn)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Nickel (Ni)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm

Lot analysis on the label.

Optima LC/MS
Fisher Chemical OPTIMA® LC/MS solvents, blends, additives and modifiers have set the standard of excellence for consistent, reproducible performance in the mobile phase of LC/MS.
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Toluene — SLR
specified reagents for general laboratory work- extra pure, low in sulfur

packaging		Mfr. No
2.5 ℓ	Glass bottle	T/2250/17
2.5 ℓ	Coated Glass bottle	T/2250/PB17
25 ℓ	Metal drum	T/2250/25

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9

UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331, P301+P310, P304+P340, P302+P352, P210

Guaranteed analysis

Residue after evaporation	<50 ppm	Sulfur compounds (SC_2)	<0.0005%

Toluene NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	T/2200/08
2.5 ℓ	Glass bottle	T/2200/17
2.5 ℓ	Coated Glass bottle	T/2200/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	T/2200/21
5 ℓ	Fluorinated HDPE square Drum	T/2200/FP21
25 ℓ	Metal drum	T/2200/25
200 ℓ	Metal drum	T/2200/27

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9

UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331, P301+P310, P304+P340, P302+P352, P210

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Magnesium (Mg)	<2 ppm
Colour	<10 APHA	Potassium (K)	<2 ppm
Water	<0.05%	Sodium (Na)	<5 ppm
Residue after evaporation	<30 ppm	Total phosphorus (P)	<2 ppm
Substances reducing $KMnO_4$	<0.001%	Total silicon (Si)	<2 ppm
		Total sulphur (S)	<50 ppm
Calcium (Ca)	<5 ppm	Zinc (Zn)	<2 ppm
Copper (Cu)	<2 ppm	Substances darkened by H_2SO_4	<50 APHA
Iron (Fe)	<5 ppm		
Lead (Pb)	<2 ppm		

Toluene
Technical

packaging		Mfr. No
1 ℓ	Coated Glass bottle	T/2150/PB15
2.5 ℓ	Glass bottle	T/2150/17
2.5 ℓ	Coated Glass bottle	T/2150/PB17
25 ℓ	Metal drum	T/2150/25
200 ℓ	Metal drum	T/2150/27

C_7H_8
CAS: 108-88-3
MW: 92.14
Density at 20°C: 0.866
Boiling point: 111°C
Melting point: -95°C
Flash point: 4°C
ADR/RID: 3, II
EINECS: 203-625-9

UN: 1294
GHS: Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1
H225, H336, H373, H304, H315, H361d
P281, P260, P331, P301+P310, P304+P340, P302+P352, P210

Toluene-4-sulfonic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	T/2500/48
500 g	Plastic jar	T/2500/53

$C_7H_8SO_3.H_2O$
CAS: 6192-52-5
MW: 190.22
Melting point: 100 to 108°C
Flash point: 180°C
ADR/RID: 8, III
EINECS: 203-180-0

UN: 2585
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >98%

Guaranteed analysis

Calcium (Ca)	<500 ppm	Potassium (K)	<2000 ppm
Copper (Cu)	<50 ppm	Sodium (Na)	<500 ppm
Iron (Fe)	<100 ppm	n-Butyl formate	<0.02%
Lead (Pb)	<50 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<200 ppm	Zinc (Zn)	<100 ppm

p-Toluidine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Glass jar	T/2650/53

C_7H_9N
CAS: 106-49-0
MW: 107.16
Density at 20°C: 1.05
Boiling point: 200°C
Melting point: 41 to 46°C
Flash point: 87°C
ADR/RID: 6.1, II
EINECS: 203-403-1

UN: 3451
GHS: Carc. 2, Acute Tox. 3, Eye Irrit. 2, Skin Sens. 1, Aquatic Acute 1
H311, H351, H319, H317, H331, H400, H301
P280, P312, P302+P350, P304+P340, P273, P305+P351+P338

Assay (CG): >98%

Toluidine blue C.I. 52040
pure

packaging		Mfr. No
25 g	Glass jar	T/2660/46

$C_{15}H_{16}N_3SCl$
CAS: 92-31-9
MW: 305.83
EINECS: 202-146-2

GHS: Acute Tox. 4
H302
P301+P312

Guaranteed analysis
Complies with standard IR spectrum: Pass

Total hardness indicator tablets
pure, indicator grade

packaging		Mfr. No
1000 PC	Glass jar	T/2750/79

Guaranteed analysis
Identity test : Pass

For use as an indicator in conjunction with EDTA solution.

Standard Volumetric solution
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Trichloroacetic acid
for electrophoresis

packaging		Mfr. No
250 g	Plastic jar	T/P500/50
1 kg	Plastic jar	T/P500/60

$C_2HCl_3O_2$
CAS: 76-03-9
MW: 163.39
Density at 20°C: 1.62
Boiling point: 196°C
Melting point: 52 to 58°C
ADR/RID: 8, II
EINECS: 200-927-2

UN: 1839
GHS: Skin Corr. 1A, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H314, H335, H410
P301+P330+P331, P280, P305+P351+P338, P310, P261, P273

Assay: >99.8%

Guaranteed analysis

Iron (Fe)	<5 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<2 ppm	Total sulphur (S)	<200 ppm
n-Butyl formate	<0.001%		

Suitable for use in fixing solutions and as a protein precipitation reagent.

Trichloroacetic acid — Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	T/3000/50
500 g	Plastic jar	T/3000/53
1 kg	Plastic jar	T/3000/60

$C_2HCl_3O_2$
CAS: 76-03-9
MW: 163.39
Density at 20°C: 1.62
Boiling point: 196°C
Melting point: 52 to 58°C
ADR/RID: 8, II
EINECS: 200-927-2

UN: 1839
GHS: Skin Corr. 1A, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H314, H335, H410
P301+P330+P331, P280, P305+P351+P338, P310, P261, P273

Assay: >99.5%

Guaranteed analysis

Substances reducing $KMnO_4$	<0.0002%	Sodium (Na)	<20 ppm
Calcium (Ca)	<10 ppm	Total chloride (Cl)	<0.001%
Copper (Cu)	<2 ppm	Total nitrogen (N)	<50 ppm
Iron (Fe)	<5 ppm	Total phosphorus (P)	<10 ppm
Lead (Pb)	<2 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<10 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<10 ppm	Zinc (Zn)	<5 ppm

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

Trichloroacetic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	T/2950/50
500 g	Plastic jar	T/2950/53
1 kg	Plastic jar	T/2950/60

$C_2HCl_3O_2$
CAS: 76-03-9
MW: 163.39
Density at 20°C: 1.62
Boiling point: 196°C
Melting point: 52 to 58°C
ADR/RID: 8, II
EINECS: 200-927-2

UN: 1839
GHS: Skin Corr. 1A, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H314, H335, H410
P301+P330+P331, P280, P305+P351+P338, P310, P261, P273

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<10 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<10 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<500 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm

Trichloroethylene — Certified AR
for analysis, stabilized with triethylamine

packaging		Mfr. No
500 mℓ	Glass bottle	T/3101/08
2.5 ℓ	Coated Glass bottle	T/3101/PB17

C_2HCl_3
CAS: 79-01-6
MW: 131.39
Density at 20°C: 1.46
Boiling point: 87°C
Melting point: -86°C
ADR/RID: 6.1, III
EINECS: 201-167-4
UN: 1710

GHS: Carc. 1B, Muta. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 3
H336, H412, H350, H341, H319, H315
P201, P261, P273, P302+P352, P280, P305+P351+P338

Assay (CG): >99.8%

Guaranteed analysis

Acidity / Alkalinity	<0.0003 meq/g	Lithium (Li)	<0.02 ppm
Colour	<10 APHA	Magnesium (Mg)	<0.2 ppm
Water	<0.02%	Manganese (Mn)	<0.02 ppm
Residue after evaporation	<10 ppm	Molybdenum (Mo)	<0.02 ppm
Free Chlorine (Cl_2)	<5 ppm	Nickel (Ni)	<0.02 ppm
Aluminium (Al)	<0.02 ppm	Potassium (K)	<0.5 ppm
Barium (Ba)	<0.02 ppm	Sodium (Na)	<0.5 ppm
Cadmium (Cd)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Calcium (Ca)	<0.5 ppm	Titanium (Ti)	<0.02 ppm
Chlorine	<5 ppm	Total phosphorus (P)	<0.1 ppm
Chromium (Cr)	<0.02 ppm	Total silicon (Si)	<0.05 ppm
Cobalt (Co)	<0.02 ppm	Total sulphur (S)	<0.5 ppm
Copper (Cu)	<0.05 ppm	Vanadium (V)	<0.02 ppm
Iron (Fe)	<0.05 ppm	Zinc (Zn)	<0.1 ppm
Lead (Pb)	<0.05 ppm	Triethylamine	0.02 to 0.04%

Lot analysis on the label.
Stabilised with 0.04% Triethylamine

Trichloroethylene — NEW PACK. — SLR
extra pure, stabilized with triethylamine

packaging		Mfr. No
500 mℓ	Glass bottle	T/3100/08
2.5 ℓ	Glass bottle	T/3100/17
2.5 ℓ	Coated Glass bottle	T/3100/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	T/3100/21
25 ℓ	Metal drum	T/3100/25
200 ℓ	Metal drum	T/3100/27

C_2HCl_3
CAS: 79-01-6
MW: 131.39
Density at 20°C: 1.46
Boiling point: 87°C
Melting point: -86°C
ADR/RID: 6.1, III
EINECS: 201-167-4
UN: 1710

GHS: Carc. 1B, Muta. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 3
H336, H412, H350, H341, H319, H315
P201, P261, P273, P302+P352, P280, P305+P351+P338

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.002 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.05%	Potassium (K)	<2 ppm
Residue after evaporation	<50 ppm	Sodium (Na)	<5 ppm
Free Chlorine (Cl_2)	<10 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Chlorine	<10 ppm	Total sulphur (S)	<2 ppm
Copper (Cu)	<2 ppm	Zinc (Zn)	<2 ppm
Iron (Fe)	<2 ppm	Triethylamine	0.02 to 0.03%

Stabilised with 0.04% Triethylamine.

Trichloroethylene
Technical, stabilized

packaging		Mfr. No
500 mℓ	Glass bottle	T/3050/08
2.5 ℓ	Coated Glass bottle	T/3050/PB17
25 ℓ	Metal drum	T/3050/25

C_2HCl_3
CAS: 79-01-6
MW: 131.39
Density at 20°C: 1.46
Boiling point: 87°C
Melting point: -86°C
ADR/RID: 6.1, III
EINECS: 201-167-4
UN: 1710

GHS: Carc. 1B, Muta. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 3
H336, H412, H350, H341, H319, H315
P201, P261, P273, P302+P352, P280, P305+P351+P338

Tricine
for biology ,N-Tris(hydroxymethyl) methyl glycine , 99+%

packaging		Mfr. No
100 g	Plastic jar	T/P505/48

$C_6H_{13}NO_5$
CAS: 5704-04-1
MW: 179.17
Melting point: 182 to 184°C
EINECS: 227-193-6

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Loss on drying	<0.2%	Lead (Pb)	<10 ppm
Iron (Fe)	<5 ppm	Sulfate (SO_4)	<0.01%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
250 nm (sol. aqu. 10%) : <0.1 A.U.

Triethanolamine — Certified AR
for analysis

packaging		Mfr. No
500 mℓ	Glass bottle	T/3160/08
2.5 ℓ	Glass bottle	T/3160/17

$C_6H_{15}NO_3$
CAS: 102-71-6
MW: 149.19
Density at 20°C: 1.125
Boiling point: 360°C
Melting point: 21°C
Flash point: 190°C

ADR/RID: 8/III
EINECS: 203-049-8
UN: 3259
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay (CG): >99%

Guaranteed analysis

Water	<0.2%	Sodium (Na)	<10 ppm
Calcium (Ca)	<2 ppm	Total phosphorus (P)	<0.5 ppm
Chloride (Cl)	<0.0001%	Total silicon (Si)	<5 ppm
Copper (Cu)	<0.5 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<1 ppm	Zinc (Zn)	<0.5 ppm
Lead (Pb)	<0.5 ppm	Diethanolamine	<0.5%
Magnesium (Mg)	<1 ppm	Ethanolamine	<0.1%
Potassium (K)	<5 ppm	Residue after ignition	<0.005%

Typical analysis

Aluminium (Al)	<0.5 ppm	Manganese (Mn)	<0.5 ppm
Barium (Ba)	<0.5 ppm	Molybdenum (Mo)	<0.5 ppm
Cadmium (Cd)	<0.5 ppm	Nickel (Ni)	<0.5 ppm
Chromium (Cr)	<0.5 ppm	Strontium (Sr)	<0.5 ppm
Cobalt (Co)	<0.5 ppm	Titanium (Ti)	<0.5 ppm
Lithium (Li)	<0.5 ppm	Vanadium (V)	<0.5 ppm

Lot analysis on the label.

Triethanolamine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	T/3150/08
2.5 ℓ	Glass bottle	T/3150/17
25 ℓ	Metal drum	T/3150/25

$C_6H_{15}NO_3$
CAS: 102-71-6
MW: 149.19
Density at 20°C: 1.125
Boiling point: 360°C
Melting point: 21°C
Flash point: 190°C

ADR/RID: 8/III
EINECS: 203-049-8
UN: 3259
GHS: Eye Irrit. 2
H319
P280, P305+P351+P338

Assay (CG): >97%

Guaranteed analysis

Water	<1%	Potassium (K)	<20 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<50 ppm
Chloride (Cl)	<0.0005%	Total phosphorus (P)	<2 ppm
Copper (Cu)	<2 ppm	Total silicon (Si)	<2 ppm
Iron (Fe)	<5 ppm	Total sulphur (S)	<5 ppm
Lead (Pb)	<2 ppm	Zinc (Zn)	<2 ppm
Magnesium (Mg)	<5 ppm	Residue after ignition	<0.05%

Triethylamine — Certified
for HPLC

packaging		Mfr. No
250 mℓ	Glass bottle	T/3203/07

$C_6H_{15}N$
CAS: 121-44-8
MW: 101.19
Density at 20°C: 0.728
Boiling point: 90°C
Melting point: -115°C
Flash point: -11°C
ADR/RID: 3, 8, II
EINECS: 204-469-4
UN: 1296

GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1, STOT SE 3
H225, H311, H302, H332, H314, H335
P280, P302+P350, P305+P351+P338, P304+P340, P308+P313, P261, P210

Assay (CG): >99.5%

Guaranteed analysis

Water	<0.05%	Iron (Fe)	<0.2 ppm
Residue after evaporation	<100 ppm	Lead (Pb)	<0.02 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
254 nm (sol. aqu. 0.1 M) : <0.125 A.U.

Lot analysis on the label.
Filtered to 0.2 µm.

Triethylamine — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	T/3201/15
2.5 ℓ	Metal drum	T/3201/25
2.5 ℓ	Coated Glass bottle	T/3201/PB17

$C_6H_{15}N$
CAS: 121-44-8
MW: 101.19
Density at 20°C: 0.728
Boiling point: 90°C
Melting point: -115°C
Flash point: -11°C
ADR/RID: 3, 8, II
EINECS: 204-469-4
UN: 1296

GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1, STOT SE 3
H225, H311, H302, H332, H314, H335
P280, P302+P350, P305+P351+P338, P304+P340, P308+P313, P261, P210

Assay (CG): >99.5%

Guaranteed analysis

Colour	<10 APHA	Potassium (K)	<0.5 ppm
Water	<0.05%	Sodium (Na)	<1 ppm
Residue after evaporation	<50 ppm	Total phosphorus (P)	<0.2 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.1 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<0.5 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.05 ppm	Diethylamine	<0.1%
Magnesium (Mg)	<0.2 ppm		

Typical analysis

Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.05 ppm
Barium (Ba)	<0.05 ppm	Molybdenum (Mo)	<0.05 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.05 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.05 ppm
Lithium (Li)	<0.05 ppm	Vanadium (V)	<0.05 ppm

Lot analysis on the label.

Triethylamine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	T/3200/08
500 mℓ	Coated Glass bottle	T/3200/PB08
2.5 ℓ	Glass bottle	T/3200/17
2.5 ℓ	Coated Glass bottle	T/3200/PB17
25 ℓ	Metal drum	T/3200/25

$C_6H_{15}N$
CAS: 121-44-8
MW: 101.19
Density at 20°C: 0.728
Boiling point: 90°C
Melting point: -115°C
Flash point: -11°C
ADR/RID: 3, 8, II
EINECS: 204-469-4
UN: 1296

GHS: Flam. Liq. 2, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1, STOT SE 3
H225, H311, H302, H332, H314, H335
P280, P302+P350, P305+P351+P338, P304+P340, P308+P313, P261, P210

Assay (CG): >99%

Guaranteed analysis

Colour	<20 APHA	Potassium (K)	<2 ppm
Water	<0.2%	Sodium (Na)	<5 ppm
Residue after evaporation	<100 ppm	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<5 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm
Lead (Pb)	<2 ppm	Diethylamine	<0.5%
Magnesium (Mg)	<2 ppm		

UHPLC
Filtered to 0.1 µm, Fisher Chemical UHPLC gradient grade solvents (Acetonitrile, Methanol and Water) are perfect for those working at high pressure.
See page 309 for more information

Triethylene glycol — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	T/3270/08
2.5 ℓ	Glass bottle	T/3270/17

$C_6H_{14}O_4$
CAS: 112-27-6
MW: 150.18
Density at 20°C: 1.12

Boiling point: 285°C
Melting point: -7°C
Flash point: 165°C
EINECS: 203-953-2

Assay (CG): >95%

Guaranteed analysis

Acidity ..... <0.005 meq/g

Trifluoroacetic acid — NEW — Optima
for LC/MS analysis

packaging		Mfr. No
0.5 mℓ	Ampoule	A116-05AMP
1 mℓ	Ampoule	A116-1AMP
2 mℓ	Ampoule	A116-2AMP
10x1 mℓ	Ampoule	A116-10X1AMP
50 mℓ	HDPE bottle	A116-50

$C_2HF_3O_2$
CAS: 76-05-1
MW: 114.02
Density at 20°C: 1.535
Boiling point: 72°C
Melting point: -15°C
ADR/RID: 8, I
EINECS: 200-929-3

UN: 2699
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, Aquatic Chronic 3
H314, H332, H412
P301+P330+P331, P280, P305+P351+P338, P310, P273, P304+P340

Assay: <99.5%

Guaranteed analysis

Colour	<10 APHA	Lead (Pb)	<10 ppb
Water	<5%	Magnesium (Mg)	<10 ppb
Reside after evaporation (at 0.1% aqueous)	: <1 ppm	Manganese (Mn)	<10 ppb
		Nickel (Ni)	<10 ppb
Fluoride (F)	<10 ppm	Potassium (K)	<20 ppb
Aluminium (Al)	<20 ppb	Propan--1-ol	<10 ppb
Calcium (Ca)	<50 ppb	Sodium (Na)	<50 ppb
Chloride (Cl)	<5 ppm	Sulfate (SO_4)	<2 ppm
Copper (Cu)	<10 ppb	Zinc (Zn)	<20 ppb
Iron (Fe)	<10 ppb		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<0.55 A.U.	275 nm	: <0.06 A.U.
220 nm	<0.18 A.U.	300 nm	<0.03 A.U.
230 nm	<0.06 A.U.	LC/MS Gradient Suitability (at 0.1% aqueous)	: Pass test
254 nm	<0.003 A.U.		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.

Trifluoroacetic acid — Certified
for HPLC

packaging		Mfr. No
25 mℓ	Coated Glass bottle	T/3258/04
100 mℓ	Coated Glass bottle	T/3258/PB05

$C_2HF_3O_2$
CAS: 76-05-1
MW: 114.02
Density at 20°C: 1.535
Boiling point: 72°C
Melting point: -15°C
ADR/RID: 8, I
EINECS: 200-929-3

UN: 2699
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, Aquatic Chronic 3
H314, H332, H412
P301+P330+P331, P280, P305+P351+P338, P310, P273, P304+P340

Assay: >99%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<0.6 A.U.	240 nm	<0.05 A.U.
220 nm	<0.2 A.U.	250 nm	<0.01 A.U.
230 nm	<0.1 A.U.		

Lot analysis on the label.
Filtered to 0.2 µm.

Trifluoroacetic acid solution 1% — Certified
HPLC for gradient analysis

packaging		Mfr. No
500 mℓ	Coated Glass bottle	J/8800/PB08

$C_2HF_3O_2$
CAS: 76-05-1
MW: 114.02
EINECS: 200-929-3

GHS: Skin Irrit. 2, Eye Irrit. 2
H319, H315
P280, P261, P302+P352, P305+P351+P338

Assay: 0.98 to 1.02%

Conditions:
Column: C18 Reverse Phase
Flow Rate: 3ml/min
Wavelength: 254nm
Solvent A: Water + 10%Buffer
Solvent B: Acetonitrile + 10% Buffer
Gradient: 10 min. At 5% solvent B followed by a linear gradient to 95% solvent B over 15min.

Trifluoroacetic acid
for peptide sequencing

packaging		Mfr. No
100 mℓ	Coated Glass bottle	T/3255/PB05
500 mℓ	Coated Glass bottle	T/3255/PB08

$C_2HF_3O_2$
CAS: 76-05-1
MW: 114.02
Density at 20°C: 1.535
Boiling point: 72°C
Melting point: -15°C
ADR/RID: 8, I
EINECS: 200-929-3

UN: 2699
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, Aquatic Chronic 3
H314, H332, H412
P301+P330+P331, P280, P305+P351+P338, P310, P273, P304+P340

Assay: >99.9%

Guaranteed analysis

Water	<0.05%	Chloride (Cl)	<0.001%
Residue after evaporation	<0.0002%	Iron (Fe)	<1 ppm
Trifluoroacetic anhydride test	: Pass	n-Butyl formate	<0.001%
Fluoride (F)	<10 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
230 nm (sol. aqu. 0.1 M) ..... : <0.15 A.U. 254 nm (sol. aqu. 0.1%) ..... : <0.01 A.U.

Trifluoroacetic acid — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	T/3256/PB05

$C_2HF_3O_2$
CAS: 76-05-1
MW: 114.02
Density at 20°C: 1.535
Boiling point: 72°C
Melting point: -15°C
ADR/RID: 8, I
EINECS: 200-929-3

UN: 2699
GHS: Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, Aquatic Chronic 3
H314, H332, H412
P301+P330+P331, P280, P305+P351+P338, P310, P273, P304+P340

Assay: >99.5%

Trifluoroacetic anhydride — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	T/3257/PB05

$C_4F_6O_3$
CAS: 407-25-0
MW: 210.03
Density at 20°C: 1.51
Boiling point: 39.1°C
Melting point: -63.5°C
ADR/RID: 8, I
EINECS: 206-982-9

UN: 3265
GHS: Acute Tox. 4, Skin Corr. 1A, Aquatic Chronic 3
H332, H412, H314, EUH014
P301+P330+P331, P305+P351+P338, P280, P260, P273, P304+P340

Assay: >99%

Tri-n-hexylamine — Certified
for HPLC

packaging		Mfr. No
100 mℓ	Coated Glass bottle	T/3296/PB05

$(CH_3(CH_2)_5)_3N$
CAS: 102-86-3
MW: 269.52
ADR/RID: 9, III
EINECS: 203-062-9
UN: 3082

GHS: Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 2
H319, H315, H302, H411
P280, P301+P312, P302+P352, P305+P351+P338, P273

Assay (CG): > 97%

HPLC reagent suitable for HPLC analysis.

1.2,3-Trihydroxybenzene
See Pyrogallol, page 267

1.3,5-Trihydroxybenzene dihydrate
See Phloroglucinol dihydrated, page 242

3.4,5-Trihydroxybenzoic acid
pure

packaging		Mfr. No
100 g	Plastic jar	T/3300/48

$C_7H_6O_5.H_2O$
CAS: 149-91-7
MW: 188.14
Density at 20°C: 1.694
Melting point: 253°C
EINECS: 205-749-9

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H315, H335, H319
P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Triiodomethane
See Iodoform, page 161

3-Trimethoxysilyl-propyl-methacrylate
pure

packaging		Mfr. No
100 g	Plastic jar	T/3350/48

$C_{10}H_{20}O_5Si$
CAS: 2530-85-0
MW: 248.35
Density at 20°C: 1.04
Boiling point: 190°C
Flash point: 92°C
ADR/RID: 3/III

EINECS: 219-785-8
GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H335, H315
P280, P261, P302+P352, P304+P340, P305+P351+P338, P312

Guaranteed analysis
Complies with standard IR spectrum: Pass

Trimethylanilinium hydroxide solution 0.1 M
for gas chromatography

packaging		Mfr. No
50 mℓ	Glass bottle	T/3510/10

$C_9H_{15}NO$
CAS: 1899-02-1
MW: 153.23
Density at 20°C: 0.8
Flash point: 10°C
ADR/RID: 3, 6.1, II
EINECS: 217-592-3
UN: 1230

GHS: Flam. Liq. 2, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 1
H225, H315, H319, H370, H301, H311, H331
P307+P311, P304+P340, P302+P352, P280, P305+P351+P338, P210

Guaranteed analysis
Complies with standard IR spectrum: Pass

Trimethylchlorosilane
See Chlorotrimethylsilane, page 87

Trimethylene glycol *See Propane-1, page 264*

2.2,4-Trimethylpentane NEW PACK. — Certified
for HPLC

packaging		Mfr. No
1 ℓ	Glass bottle	T/3606/15
2.5 ℓ	Glass bottle	T/3606/17
5 ℓ	Aluminium can	T/3606/21
10 ℓ	Returnable Drum	T/3606/10RSS
25 ℓ	Returnable Drum	T/3606/25RSS
30 ℓ	Returnable Drum	T/3606/30RSS

C_8H_{18}
CAS: 540-84-1
MW: 114.23
Density at 20°C: 0.690
Boiling point: 98 to 99°C
Melting point: -107°C
Flash point: -12°C
ADR/RID: 3, II
EINECS: 208-759-1

UN: 1262
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H410, H336, H315
P261, P301+P310, P331, P273, P302+P352, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Magnesium (Mg)	<0.2 ppm
Colour	<10 APHA	Potassium (K)	<0.2 ppm
Water	<0.02%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<20<20 ppm	Total phosphorus (P)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.1 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.1 ppm		

Typical analysis

Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.05 ppm
Barium (Ba)	<0.05 ppm	Molybdenum (Mo)	<0.05 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.05 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.05 ppm
Lithium (Li)	<0.05 ppm	Vanadium (V)	<0.05 ppm

Lot analysis on the label.

2.2,4-Trimethylpentane — Distol
for residue and pesticide analysis

packaging		Mfr. No
1 ℓ	Glass bottle	T/3608/15
2.5 ℓ	Glass bottle	T/3608/17

C_8H_{18}
CAS: 540-84-1
MW: 114.23
Density at 20°C: 0.690
Boiling point: 98 to 99°C
Melting point: -107°C
Flash point: -12°C
ADR/RID: 3, II
EINECS: 208-759-1

UN: 1262
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H410, H336, H315
P261, P301+P310, P331, P273, P302+P352, P210, P240

Assay (CG): >95%

Guaranteed analysis

Water	<0.02%	GC (ECD) Analysis	Pass
Residue after evaporation	<2 ppm	GC (FID) Analysis	Pass
GC (NPD) analysis	Pass		

Analysis of pesticides: *from the retention time of Lindane, after concentration of 2500 times, no impurity peak higher than that obtained with 10 pg / mℓ héptachlo-réoxide (ECD) and 5 pg / mℓ Parathion (NPD).*
Analysis of hydrocarbons: *no impurity chain longer than the dodecane is present at a concentration greater than 0.01 ppm (FID).*
Conditions :
Column: J&W DB 5: 30m x 0.32mm x 0.1µm df.
Temperature profile:
(1) 50°C for 2 min
(2) 40°C / min until 320°C
(3) 320°C for 30 min
Injection: 5µℓ cold on the column.

2.2,4-Trimethylpentane — Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	T/3601/15
2.5 ℓ	Glass bottle	T/3601/17
25 ℓ	Metal drum	T/3601/25

C_8H_{18}
CAS: 540-84-1
MW: 114.23
Density at 20°C: 0.690
Boiling point: 98 to 99 to 99°C
Melting point: -107°C
Flash point: -12°C
ADR/RID: 3, II
EINECS: 208-759-1

UN: 1262
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H410, H336, H315
P261, P301+P310, P331, P273, P302+P352, P210, P240

Assay (CG): >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Magnesium (Mg)	<0.2 ppm
Colour	<10 APHA	Potassium (K)	<0.2 ppm
Water	<0.02%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<20<20 ppm	Total phosphorus (P)	<0.1 ppm
Calcium (Ca)	<0.5 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.1 ppm	Total sulphur (S)	<1 ppm
Iron (Fe)	<0.2 ppm	Zinc (Zn)	<0.2 ppm
Lead (Pb)	<0.1 ppm		

Typical analysis

Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.05 ppm
Barium (Ba)	<0.05 ppm	Molybdenum (Mo)	<0.05 ppm
Cadmium (Cd)	<0.05 ppm	Nickel (Ni)	<0.05 ppm
Chromium (Cr)	<0.05 ppm	Strontium (Sr)	<0.05 ppm
Cobalt (Co)	<0.05 ppm	Titanium (Ti)	<0.05 ppm
Lithium (Li)	<0.05 ppm	Vanadium (V)	<0.05 ppm

Lot analysis on the label.

2.2,4-Trimethylpentane NEW PACK. — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	T/3600/08
2.5 ℓ	Glass bottle	T/3600/17
2.5 ℓ	Coated Glass bottle	T/3600/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	T/3600/21
25 ℓ	Metal drum	T/3600/25
200 ℓ	Metal drum	T/3600/27

C_8H_{18}
CAS: 540-84-1
MW: 114.23
Density at 20°C: 0.690
Boiling point: 98 to 99°C
Melting point: -107°C
Flash point: -12°C
ADR/RID: 3, II
EINECS: 208-759-1

UN: 1262
GHS: Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1
H225, H304, H410, H336, H315
P261, P301+P310, P331, P273, P302+P352, P210, P240

Assay (CG): >99%

Guaranteed analysis

Acidity / Alkalinity	<0.001 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.1%	Potassium (K)	<2 ppm
Residue after evaporation	<100 ppm	Sodium (Na)	<5 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<10 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

NO-Bis (Trimethylsilyl) acetamide (BSA)
for gas chromatography

packaging		Mfr. No
10 mℓ	Glass bottle	B/3640/03

$C_8H_{21}NOSi_2$
CAS: 10416-59-8
MW: 203.43
Density at 20°C: 0.820
Boiling point: 71 to 73°C
Melting point: 24°C
Flash point: 42°C
ADR/RID: 4.1, 8, II
EINECS: 233-892-7

UN: 2925
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H226, H314, H302, EUH014
P301+P330+P331, P280, P305+P351+P338, P310, P402+P404, P301+P312, P210, P240

Assay (CG): >90%

Trimethylsilyl chloride
See Chlorotrimethylsilane, page 87

N-Trimethylsilylimidazole
for gas chromatography

packaging		Mfr. No
25 g	Glass bottle	T/3622/46

$C_6H_{12}N_2Si$
CAS: 18156-74-6
MW: 140.26
Density at 20°C: 0.950
Boiling point: 93 to 94°C
Melting point: -42°C
Flash point: 5°C
ADR/RID: 3, II

EINECS: 242-040-3
UN: 1993
GHS: Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H225, H319, H335, H315, EUH014
P210, P261, P264, P280, P305+P351+P338

Assay (CG): >98%

N,N-Bis(Trimethylsilyl) trifluoroacetamide
for gas chromatography

packaging		Mfr. No
10 g	Glass bottle	B/3647/45

$C_8H_{18}F_3NOSi_2$
CAS: 21149-38-2
MW: 257.40
ADR/RID: 3, III
EINECS: 244-242-7

UN: 1993
GHS: Flam. Liq. 3
H226
P210

Assay (CG): >98%

Triphenyl phosphate
pure

packaging		Mfr. No
500 g	Plastic jar	T/3650/53

$C_{18}H_{15}PO_4$
CAS: 115-86-6
MW: 326.29
Density at 20°C: 1.3
Boiling point: 370°C
Melting point: 47 to 53°C
Flash point: 220°C

ADR/RID: 6.1, III
EINECS: 204-112-2
UN: 2811
GHS: Aquatic Acute 1, Aquatic Chronic 1
H410
P273

Guaranteed analysis
Complies with standard IR spectrum: Pass

Triphenyl phosphine
pure

packaging		Mfr. No
100 g	Plastic jar	T/3652/48

$C_{18}H_{15}P$
CAS: 603-35-0
MW: 262.29
Boiling point: 377°C
Melting point: 78.5 to 81.5°C
Flash point: 181°C

ADR/RID: 6.1/II
EINECS: 210-036-0
GHS: Acute Tox. 4, Skin Sens. 1, STOT RE 2
H317, H302, H373
P280, P301+P312

Guaranteed analysis
Melting Point tested ..... 78 to 82°C

2.3,5-Triphenyltetrazolium chloride
technical, (tetrazolium salt)

packaging		Mfr. No
10 g	Plastic jar	T/3700/45
25 g	Plastic jar	T/3700/46
100 g	Plastic jar	T/3700/48

$C_{19}H_{15}ClN_4$
CAS: 298-96-4
MW: 334.81
Melting point: >235°C
EINECS: 206-071-6

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H319, H315, H335
P261, P280, P302+P352, P305+P351+P338

Guaranteed analysis
Complies with standard IR spectrum: Pass

Tris-Borate-EDTA buffer
for electrophoresis,(10x concentration)

packaging		Mfr. No
1 ℓ	Glass bottle	T/P050/15
10 ℓ	Bag in box	T/P050/24

CAS: 610769-35-2
Boiling point: 219 to 220°C
Melting point: 170°C
GHS: Repr. 1B, Skin Irrit. 2,

Eye Irrit. 2
H360FD, H315, H319
P280, P305+P351+P338, P308+P313, P201

Guaranteed analysis
Identity test ..... : Pass

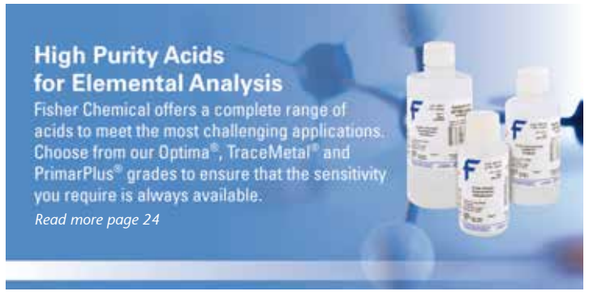
A pre-mixed concentrate prepared from high purity reagents.Each 1ℓ contains 121.1gr Tris buffer, 61.8g boric acid and 7.4g EDTA in filtered deionised water.

Tris-Glycine-SDS buffer
for electrophoresis,(10x concentration)

packaging		Mfr. No
1 ℓ	HDPE Plastic bottle	T/P010/15

Guaranteed analysis
Identity test ..... : Pass

To use - dilute 1:1



Tris(hydroxymethyl)methylamine
Tris Buffer, biological buffer

packaging		Mfr. No
100 g	Plastic jar	T/P630/48
500 g	Plastic jar	T/P630/53
1 kg	Plastic jar	T/P630/60

$C_4H_{11}NO_3$
CAS: 77-86-1
MW: 121.14
Boiling point: 219 to 220°C
Melting point: 168.5°C
EINECS: 201-064-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P280, P305+P351+P338, P261, P302+P352

Assay: >99.8%

Guaranteed analysis

Loss on drying	<0.1%	Sodium (Na)	<50 ppm
Calcium (Ca)	<20 ppm	n-Butyl formate	<0.001%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<1 ppm	Total silicon (Si)	<20 ppm
Lead (Pb)	<1 ppm	Total sulphur (S)	<50 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<10 ppm
Potassium (K)	<50 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
280 nm (sol. aqu. 1 M) : <0.05 A.U.

Tris(hydroxymethyl)methylamine hydrochloride
Tris-HCl, for biochemistry

packaging		Mfr. No
100 g	Plastic jar	T/P631/48
500 g	Plastic jar	T/P631/53
1 kg	Plastic jar	T/P631/60

$C_4H_{11}NO_3.HCl$
CAS: 1185-53-1
MW: 157.60
Melting point: 150 to 153°C
EINECS: 214-684-5

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Arsenic (As)	<0.1 ppm	Lead (Pb)	<5 ppm
Copper (Cu)	<5 ppm	Zinc (Zn)	<5 ppm
Iron (Fe)	<5 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
260 nm (sol. aqu. 0.5 M) : <0.015 A.U. 280 nm (sol. aqu. 0.5 M) : <0.01 A.U.

N-Tris(hydroxymethyl)methyl-2-aminoethanesulfonic acid
for HPLC, biological buffer

packaging		Mfr. No
100 g	Plastic jar	T/3720/48

$C_6H_{15}NO_6S$
CAS: 7365-44-8
MW: 229.25
Melting point: 223 to 225°C
EINECS: 230-906-3

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Water	<0.2%	Sulfate (SO_4)	<0.01%
pKa at 37°C	: 7.15 to 7.17	n-Butyl formate	<0.02%
Iron (Fe)	<5 ppm	Residue after ignition	<0.2%
Lead (Pb)	<10 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
250 nm (sol. aqu. 10%) : <0.1 A.U.

iso-Valeric acid SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 mℓ	Coated Glass bottle	V/0011/PB05

$C_5H_{10}O_2$
CAS: 503-74-2
MW: 102.13
Density at 20°C: 0.926
Boiling point: 176°C
Melting point: -35°C
Flash point: 70°C
ADR/RID: 8, 6.1, II
EINECS: 207-975-3

UN: 1760
GHS: Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1
H302, H311, H314
P280, P312, P302+P350, P301+P330+P331, P305+P351+P338, P310, P301+P312

Assay: >98%

Tris(hydroxymethyl) methylamine, 'Tris buffer' SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	T/3710/48
250 g	Plastic jar	T/3710/50
1 kg	Plastic jar	T/3710/60

$C_4H_{11}NO_3$
CAS: 77-86-1
MW: 121.14
Boiling point: 219 to 220°C
Melting point: 168.5°C
EINECS: 201-064-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H315, H319
P280, P305+P351+P338, P261, P302+P352

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<5 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<200 ppm	Zinc (Zn)	<50 ppm

Triton Kaowool® epsilon ceramic fibre
pure

packaging		Mfr. No
100 g	Plastic jar	T/3740/48
500 g	Plastic jar	T/3740/53

Melting point: .1650°C
GHS: Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H351, H332, H315, H319, H335
P261, P280, P308+P313, P302+P352, P305+P351+P338, P304+P340

Guaranteed analysis
Identity test : Pass

Triton X-100® reduced
for biochemistry

packaging		Mfr. No
5 g	Glass bottle	T/3753/44

$C_{34}H_{62}O_{11}$
CAS: 9002-93-1
MW: 646.85
Density at 20°C: 1.067
Boiling point: 270°C
Melting point: 6°C
Flash point: 274°C

ADR/RID: 9, III
UN: 3082
GHS: Acute Tox. 4, Eye Dam. 1, Aquatic Chronic 3
H412, H318, H302
P280, P305+P351+P338, P310, P273, P301+P312

Guaranteed analysis
Refractive index 1.465 to 1.478

Low fluorescence and UV absorption.

Triton X-100® SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	T/3751/08
2.5 ℓ	HDPE Plastic bottle	T/3751/17

$C_{34}H_{62}O_{11}$
CAS: 9002-93-1
MW: 646.85
Density at 20°C: 1.067
Boiling point: 270°C
Melting point: 6°C
Flash point: 274°C

ADR/RID: 9, III
UN: 3082
GHS: Acute Tox. 4, Eye Dam. 1, Aquatic Chronic 3
H412, H318, H302
P280, P305+P351+P338, P310, P273, P301+P312

Triton X-114®
pure

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	T/3757/08

$C_{30}H_{54}O_9$
CAS: 9036-19-5
MW: 558.75

Density at 20°C: <1.05 UN: 3082

Trypsin
pure, from beef pancreas

packaging		Mfr. No
100 g	Plastic jar	T/3760/48

CAS: 9002-07-7
EINECS: 232-650-8
GHS: Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, STOT SE 3

H319, H334, H315, H335
P304+P341, P342+P311, P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Activity 0.4 to 0.6 U Anson

L-Tryptophan SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	T/3770/46

$C_{11}H_{12}N_2O_2$
CAS: 73-22-3
MW: 204.23

Melting point: 280 to 285°C
EINECS: 200-795-6

Assay: >99%

Guaranteed analysis

Loss on drying	<0.5%	Iron (Fe)	<10 ppm
Specific rotation	-33° to -30°	Lead (Pb)	<10 ppm
Residue after ignition	<0.1%		

Tungsten standard metal solution 1000 ppm
for AAS, solution NH3 0.1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8120/05
500 mℓ	HDPE Plastic bottle	J/8120/08

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Tungsten standard metal solution 1000 ppm
for ICP, solution NH3 0.1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8336/08

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
All ICP standards are manufactured from acids, metal & metal salts Ultra pure quality and contain less than <10 ppm total metal impurites
.

Tungsten standard metal solution 1000 ppm
for ICP solution in HNO_3 1%/HF 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLW22X

H311, H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tungsten standard metal solution 1000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLW92Y

Density at 20°C: 1

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Tungsten standard metal solution 10 000 ppm
for ICP solution in HNO_3 2%/HF 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLW23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tungsten standard metal solution 10 000 ppm
for ICP solution in H_2O/HF trace, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLW93Y
500 mℓ	Plastic bottle	SPPLW93X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Tungstophosphoric acid hydrate — Certified AR
for analysis

packaging		Mfr. No
100 g	Plastic jar	T/3902/48

$H_3PO_4.12WO_3$+aq
CAS: 12501-23-4
MW: 2880.17
ADR/RID: 8, II
EINECS: 235-087-6

UN: 3260
GHS: Skin Corr. 1B
H314
P301+P330+P331,
P305+P351+P338, P310, P280

Guaranteed analysis

Aluminium (Al)	<5 ppm	Potassium (K)	<500 ppm
Barium (Ba)	<5 ppm	Propan--1-ol	<5 ppm
Cadmium (Cd)	<5 ppm	Sodium (Na)	<500 ppm
Calcium (Ca)	<50 ppm	Strontium (Sr)	<5 ppm
Copper (Cu)	<10 ppm	Titanium (Ti)	<5 ppm
Iron (Fe)	<20 ppm	n-Butyl formate	<0.001%
Lead (Pb)	<10 ppm	Total nitrogen (N)	<20 ppm
Lithium (Li)	<5 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<50 ppm	Zinc (Zn)	<50 ppm
Nickel (Ni)	<5 ppm		

Lot analysis on the label.

Tungstosilicic acid hydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	T/3940/48

$SiO_2.12WO_3.XH_2O$
CAS: 12027-43-9
EINECS: 234-719-8

Guaranteed analysis
Identity test ..... : Pass

Turpentine oil — SLR
extra pure, rectified

packaging		Mfr. No
1 ℓ	Glass bottle	T/4050/15

$C_{10}H_{16}$
CAS: 8006-64-2
MW: 136112.00
Density at 20°C: 0.86
Boiling point: 154 to 170°C
Melting point: -50--60°C
Flash point: 35°C
ADR/RID: 3, III
EINECS: 232-350-7
UN: 1299

GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Asp. Tox. 1, Aquatic Chronic 2
H226, H315, H411, H304, H302, H317, H319, H312, H332
P280, P302+P352,
P301+P310, P331, P273,
P301+P312, P304+P340,
P305+P351+P338, P210

Turpentine substitute — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
1 ℓ	Coated Glass bottle	T/4200/PB15
2.5 ℓ	Glass bottle	T/4200/17
2.5 ℓ	HDPE Plastic bottle	T/4200/PB17
25 ℓ	Metal drum	T/4200/25

CAS: 64742-88-7
Density at 20°C: 0.770 to 0.806
Boiling point: 149 to 204°C
Flash point: 35°C
ADR/RID: 3, III
EINECS: 265-191-7
UN: 1300

GHS: Flam. Liq. 3, Acute Tox. 4, Asp. Tox. 1, Aquatic Chronic 2
H226, H304, H302, H411
P304+P340, P301+P310,
P331, P210

Tween® 20
pure

packaging		Mfr. No
1 kg	Glass bottle	T/4206/60

$C_{58}H_{114}O_{26}$
CAS: 9005-64-5
Density at 20°C: 1.1
Boiling point: 100°C

Melting point: 0.1°C
Flash point: >150°C
EINECS: 500-018-3

Guaranteed analysis
Complies with standard IR spectrum: Pass

Tween® 40
pure

packaging		Mfr. No
1 kg	Glass bottle	T/4205/60

CAS: 9005-66-7
Density at 20°C: 1.05
Melting point: 0.1°C
Flash point: >200°C

Guaranteed analysis
Complies with standard IR spectrum: Pass

Tween® 80
pure

packaging		Mfr. No
1 kg	Glass bottle	T/4203/60

CAS: 9005-65-6
MW: approx. 1300
Density at 20°C: 1.073 to 1080

Flash point: >110°C
EINECS: 500-019-9

L-Tyrosine — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	T/4210/48

$C_9H_{11}NO_3$
CAS: 60-18-4
MW: 181.19
Melting point: 290°C
Flash point: 176°C
EINECS: 200-460-4

GHS: Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H335, H319, H315
P261, P302+P352, P280,
P305+P351+P338

Assay: >98.5%

Guaranteed analysis

Water	<0.5%	Residue after ignition	<0.1%
Loss on drying	<0.5%	Iron (Fe)	<50 ppm
Specific rotation	-11.2° to -9.8°	Lead (Pb)	<10 ppm

n-Undecane
pure

packaging		Mfr. No
100 mℓ	Glass bottle	U/0005/05

$C_{11}H_{24}$
CAS: 1120-21-4
MW: 156.31
Density at 20°C: 0.740
Boiling point: 196°C
Melting point: -26°C
Flash point: 60°C

ADR/RID: 3, III
EINECS: 214-300-6
UN: 2330
GHS: Flam. Liq. 3, Asp. Tox. 1
H226, H304, EUH066
P310, P304+P340,
P301+P310, P331, P210

Assay (CG): >99%

Uracil — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
25 g	Plastic jar	U/0030/46

$C_4H_4N_2O_2$
CAS: 66-22-8
MW: 112.09

Melting point: 335°C
EINECS: 200-621-9

Guaranteed analysis
Complies with standard IR spectrum: Pass

Uranium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLU22Y
500 mℓ	Plastic bottle	SPPLU22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Uranium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLU23Y
500 mℓ	Plastic bottle	SPPLU23X

H302, H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Uranium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLU22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Urea
for biochemistry

packaging		Mfr. No
250 g	Plastic jar	U/P610/50
1 kg	Plastic jar	U/P610/60

CH_4N_2O
CAS: 57-13-6
MW: 60.06

Melting point: 131 to 135°C
EINECS: 200-315-5

Assay: >99.5%

Guaranteed analysis

Insolubles (5M aq. Soln)	: <0.005%	Lead (Pb)	<0.5 ppm
Cadmium (Cd)	<0.5 ppm	Magnesium (Mg)	<0.2 ppm
Cobalt (Co)	<0.5 ppm	Potassium (K)	<5 ppm
Copper (Cu)	<0.2 ppm	n-Butyl formate	<0.0005%
Iron (Fe)	<0.2 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
260 nm (sol. aqu. 5 M) ..... : <0.06 A.U. 280 nm (sol. aqu. 5 M) ..... : <0.04 A.U.

For denaturation and solubilisation of proteins or nucleic acids.

Urea — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	U/0500/53
3 kg	Plastic jar	U/0500/63
5 kg	Plastic keg	U/0500/65
25 kg	Fibre Keg	U/0500/70

CH_4N_2O
CAS: 57-13-6
MW: 60.06
Melting point: 131 to 135°C

EINECS: 200-315-5
GHS: Skin Irrit. 2
H315
P302+P352

Assay: >99.5%

Guaranteed analysis

Acidity / Alkalinity	<0.0005 meq/g	Sodium (Na)	<20 ppm
Calcium (Ca)	<20 ppm	Total chloride (Cl)	<0.0005%
Copper (Cu)	<1 ppm	Total phosphorus (P)	<10 ppm
Iron (Fe)	<2 ppm	Total silicon (Si)	<5 ppm
Lead (Pb)	<1 ppm	Total sulphur (S)	<10 ppm
Magnesium (Mg)	<10 ppm	Zinc (Zn)	<5 ppm
Potassium (K)	<10 ppm	Biuret	<0.1%

Typical analysis

Aluminium (Al)	<2 ppm	Molybdenum (Mo)	<2 ppm
Barium (Ba)	<2 ppm	Nickel (Ni)	<2 ppm
Cadmium (Cd)	<2 ppm	Silver (Ag)	<2 ppm
Chromium (Cr)	<2 ppm	Strontium (Sr)	<2 ppm
Cobalt (Co)	<2 ppm	Titanium (Ti)	<2 ppm
Lithium (Li)	<2 ppm	Vanadium (V)	<2 ppm
Manganese (Mn)	<2 ppm		

Lot analysis on the label.

Urea — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	U/0450/53
1 kg	Plastic jar	U/0450/60
3 kg	Plastic jar	U/0450/63

CH_4N_2O
CAS: 57-13-6
MW: 60.06
Melting point: 131 to 135°C

EINECS: 200-315-5
GHS: Skin Irrit. 2
H315
P302+P352

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<5 ppm	n-Butyl formate	<0.002%
Iron (Fe)	<10 ppm	Total phosphorus (P)	<50 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<20 ppm
Magnesium (Mg)	<50 ppm	Total sulphur (S)	<50 ppm
Potassium (K)	<50 ppm	Zinc (Zn)	<20 ppm

Urease-active meal
pure, from Jack beans

packaging		Mfr. No
25 g	Plastic jar	U/0655/46

Guaranteed analysis
Identity test ..... : Pass

Urease tablets

packaging		Mfr. No
60 PC	Glass jar	U/0650/78

Guaranteed analysis
Identity test ..... : Pass

Each tablet hydrolyses approx. 400mg in 3 hours at 37°C.

Vanadium standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8150/05
500 mℓ	HDPE Plastic bottle	J/8150/08

Density at 20°C: 1.0
ADR/RID: 8, II
UN: 2031
GHS: Skin Corr. 1B
H314
P280, P301+P330+P331,
P310, P305+P351+P338,
P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Vanadium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLV22Y
500 mℓ	Plastic bottle	SPPLV22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Vanadium standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLV12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Vanadium standard metal solution 10 000 ppm
for ICP solution in HNO_3 15%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLV43Y
500 mℓ	Plastic bottle	SPPLV43X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Vanadium standard metal solution 10 000 ppm
for ICP solution in HCL 15%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLV33X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Vanadium standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLV22Y

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Vanadium pentoxide
pure

packaging		Mfr. No
100 g	Plastic jar	V/0100/48
500 g	Plastic jar	V/0100/53
25 kg	Fibre Keg	V/0100/70

V_2O_5
CAS: 1314-62-1
MW: 181.88
Density at 20°C: 3.35
Boiling point: 1750°C
Melting point: 690°C
ADR/RID: 6.1, III
EINECS: 215-239-8
UN: 2862
GHS: Muta. 2, Repr. 2,
Acute Tox. 4, STOT SE 3,
STOT RE 1, Aquatic Chronic 2
H361d, H341, H302, H332,
H335, H372, H411
P281, P304+P340, P260, P273

Guaranteed analysis
Identity test ..... : Pass

Vanadyl sulfate hydrate SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	V/0105/48

$VOSO_4.H_2O$
CAS: 12439-96-2
MW: 163.00
ADR/RID: 6.1, II
UN: 2931
GHS: Skin Irrit. 2, Eye Irrit. 2,
STOT SE 3
H335, H319, H315
P261, P302+P352, P280,
P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Vinyl alcohol
pure, polymerized

packaging		Mfr. No
500 g	Plastic jar	V/0200/53

CAS: 9002-89-5
MW: approx. 25 000
Density at 20°C: 1.26
Melting point: 200°C
Flash point: >113°C

Guaranteed analysis
Degree of hydrolysis ..... >84% Viscosity ..... 4.5 to 6.5 cP

Water NEW Optima
for LC/MS analysis

packaging		Mfr. No
500 mℓ	Glass bottle	W6-500
1 ℓ	Glass bottle	W6-1
2.5 ℓ	Glass bottle	W6-212
4 ℓ	Glass bottle	W6-4

H_2O
CAS: 7732-18-5
MW: 18.02
Density at 20°C: 1
Boiling point: 100°C
EINECS: 231-791-2

Guaranteed analysis

Total Halogens (as chloride)	: Not detected	Lead (Pb)	<10 ppb
Aluminium (Al)	<10 ppb	Magnesium (Mg)	<10 ppb
Barium (Ba)	<10 ppb	Manganese (Mn)	<10 ppb
Cadmium (Cd)	<10 ppb	Nickel (Ni)	<10 ppb
Calcium (Ca)	<20 ppb	Potassium (K)	<10 ppb
Chromium (Cr)	<10 ppb	Propan--1-ol	<10 ppb
Cobalt (Co)	<10 ppb	Sodium (Na)	<20
Copper (Cu)	<10 ppb	Tin (Sn)	<10 ppm
Iron (Fe)	<10 ppb	Zinc (Zn)	<10 ppm

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<0.01 A.U.	50 ppb	
220 nm	<0.01 A.U.	LC/MS at Positive Mode as Reserpine	: <
230 nm	<0.01 A.U.	50 ppb	
240 nm	<0.01 A.U.	LC/UV Gradient (single max peak) at	
254 nm	<0.005 A.U.	210nm	: <0.005 A.U.
260 nm	<0.005 A.U.	LC/UV Gradient (single max peak) at	
280 nm	<0.005 A.U.	254nm	: <0.0005 A.U.
LC/MS at Negative Mode as Aldicarb	: <		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.
Filtered to 0.2µm.

Water Certified
for HPLC-MS

packaging		Mfr. No
1 ℓ	Glass bottle	W/0112/15
2.5 ℓ	Glass bottle	W/0112/17

H_2O
CAS: 7732-18-5
MW: 18.02
Density at 20°C: 1
Boiling point: 100°C
EINECS: 231-791-2

Guaranteed analysis

Residue after evaporation	<1 ppm	Lead (Pb)	<0.01 ppm
LC-MS analysis	Conform	Magnesium (Mg)	<0.01 ppm
Aluminium (Al)	<0.05 ppm	Manganese (Mn)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Potassium (K)	<0.1 ppm
Calcium (Ca)	<0.05 ppm	Propan--1-ol	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Sodium (Na)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Tin (Sn)	<0.01 ppm
Copper (Cu)	<0.01 ppm	Zinc (Zn)	<0.01 ppm
Iron (Fe)	<0.01 ppm		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

200 nm	<0.005 A.U.	Gradient (max eluted peak)	<0.2 mA.U.
230 nm	<0.005 A.U.	LC/MS Gradient Suitability	: Pass test

Gradient analysis:
Absorbance of the largest eluted peak: <0.2 mA.U.
Wavelength 254 nm
This product has been tested on an LC-MS instrument to ensure suitability.
Lot analysis on the label.
Filtered to 0.2 µm.
All water by Fisher Chemical is deionised not distilled.

Water NEW Certified UHPLC
for UHPLC gradient grade analysis

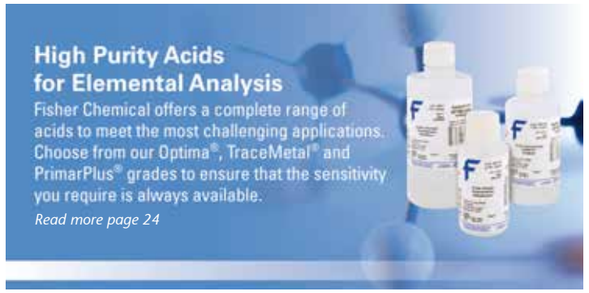
packaging		Mfr. No
1 ℓ	Coated Glass bottle	W/0120/PB15
2.5 ℓ	Coated Glass bottle	W/0120/PB17

H_2O
CAS: 7732-18-5
MW: 18.02
Density at 20°C: 1
Boiling point: 100°C
EINECS: 231-791-2

Guaranteed analysis

Residue after evaporation	<1 ppm	Residue after ignition	<0.0001%
Conductivity	<1 µS		

Gradient analysis
Absorbance of the largest eluted peak at 220nm: <0.1mA.U.
Absorbance of the largest eluted peak at 254nm: <0.1mA.U.
Conditions
Column: C18 reverse phase
Wavelenght: 220nm
Wavelenght: 254nm
Solvent A: Water
Solvent B: Acetonitrile
Gradient: 10 minutes at 100% solvent A followed by a linear gradient 95% solvent B
Suitable for UHPLC instrument.
Lot analysis on the label.
Filtered to 0.1µm.



Water — Certified Advanced HPLC
HPLC for gradient analysis

packaging		Mfr. No
1 ℓ	Coated Glass bottle	W/0110/PB15
2.5 ℓ	Coated Glass bottle	W/0110/PB17

H_2O — Density at 20°C: 1
CAS: 7732-18-5 — Boiling point: 100°C
MW: 18.02 — EINECS: 231-791-2

Guaranteed analysis
Residue after evaporation ..... <5 ppm Residue after ignition ..... <0.002%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Gradient (max eluted peak). <0.1 mA.U.

Gradient analysis (5% to 95% of the solvent)
Absorbance of the largest eluted peak: <0.1 mA.U.
Absorbance of the largest eluted peak <0.1 mA.U.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 3 mℓ / min
Wavelength 220 nm
Solvent A: Water
Solvent B: Acetonitrile
10 min solvent A to 100% linear gradient until then 95% solvent for B 15 min.
All water by Fisher Chemical is deionised not distilled.
Lot analysis on the label.
Filtered to 0.2µm

Water NEW PACK. — Certified
HPLC for gradient analysis

packaging		Mfr. No
1 ℓ	Glass bottle	W/0106/15
2.5 ℓ	Glass bottle	W/0106/17
2.5 ℓ	Coated Glass bottle	W/0106/PB17
10 ℓ	Returnable Drum	W/0106/10RSS
25 ℓ	Returnable Drum	W/0106/25RSS
30 ℓ	Returnable Drum	W/0106/30RSS

H_2O — Density at 20°C: 1
CAS: 7732-18-5 — Boiling point: 100°C
MW: 18.02 — EINECS: 231-791-2

Guaranteed analysis
Residue after evaporation ..... <5 ppm Conductivity ..... <5 µS
Residue after ignition ..... <0.0003%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Gradient (max eluted peak). . <0.002 A.U.

Gradient analysis
Absorbance of the largest eluted peak:<0.002A.U.
Conditions :
Column: C18 Reverse Phase.
Flow rate: 2 mℓ / min
Wavelength 254 nm
Absorbance range: 0-0.04 AU.
Solvent A: Water
Solvent B: Acetonitrile
20 min solvent was followed by a linear gradient 100% A solvent 100%
All water by Fisher Chemical is deionised not distilled.
Lot analysis on the label.
Filtered to 0.2 µm.

Water — Certified
HPLC for fluorescence detection

packaging		Mfr. No
2.5 ℓ	Glass bottle	W/0107/17

H_2O — Density at 20°C: 1
CAS: 7732-18-5 — Boiling point: 100°C
MW: 18.02 — EINECS: 231-791-2

Guaranteed analysis
Residue after evaporation ..... <5 ppm Residue after ignition ..... <0.0003%

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)
Fluorescence ..... Pass

Excitation in the range 250-750nm produces no fluorescence emission greater than the solvents natural Raman signal at 350nm excittation.This is equivalent to the emission maximum of approximately 1ppb quinine sulfate.
All water by Fisher Chemical is deionised not distilled.
Lot analysis on the label (excluding fluorescence scan).
Filtered to 0.2 µm.

Water — Certified
HPLC for electrochemical detection

packaging		Mfr. No
2.5 ℓ	Glass bottle	W/0108/17

H_2O — Density at 20°C: 1
CAS: 7732-18-5 — Boiling point: 100°C
MW: 18.02 — EINECS: 231-791-2

Guaranteed analysis
Residue after evaporation ..... <5 ppm Electrochemical test ..... Pass
Residue after ignition ..... <0.0003%

Tested by HPLC-EC to ensure low electrochemical response.
Detector - ESA Coulochem II
Mode-oxidative
Graphite Electrode.
All water by Fisher Chemical is deionised not distilled.
Lot analysis on the label.
Filtered to 0.2 µm.

Water NEW — Optima
for ultra trace elemental analysis

packaging		Mfr. No
500 mℓ	LDPE bottle	W9-500
1 ℓ	LDPE bottle	W9-1
2 ℓ	LDPE bottle	W9-2

H_2O — Density at 20°C: 1
CAS: 7732-18-5 — Boiling point: 100°C
MW: 18.02 — EINECS: 231-791-2

Guaranteed analysis

Colour	<10 APHA	Gadolinium (Gd)	<1 ppt
Sulfate (SO_4)	<1 ppb	Germanium (Ge)	<10 ppt
Total chloride (Cl)	<1 ppb	Gold (Au)	<10 ppt
Total phosphorus (P)	<1 ppb	Hafnium (Hf)	<1 ppt
Zirconium (Zr)	<10 ppt	Holmium (Ho)	<1 ppt
Gallium (Ga)	<10 ppt	Iron (Fe)	<20 ppt
Terbium (Tb)	<10 ppt	Lanthanum (La)	<1 ppt
Indium (In)	<1 ppt	Lead (Pb)	<10 ppt
Dysprosium (Dy)	<1 ppt	Lithium (Li)	<10 ppt
Aluminium (Al)	<20 ppt	Lutetium (Lu)	<1 ppt
Antimony (Sb)	<10 ppt	Magnesium (Mg)	<10 ppt
Arsenic (As)	<10 ppt	Manganese (Mn)	<10 ppt
Barium (Ba)	<10 ppt	Mercury (Hg)	<20 ppt
Beryllium (Be)	<10 ppt	Molybdenum (Mo)	<10 ppt
Bismuth (Bi)	<10 ppt	Neodymium (Nd)	<1 ppt
Boron (B)	<50 ppt	Nickel (Ni)	<10 ppt
Cadmium (Cd)	<10 ppt	Niobium (Nb)	<10 ppt
Calcium (Ca)	<20 ppt	Palladium (Pd)	<10 ppt
Cerium (Ce)	<10 ppt	Potassium (K)	<10 ppt
Cesium (Cs)	<10 ppt	Praseodymium (Pr)	<10 ppt
Chromium (Cr)	<10 ppt	Rhenium (Re)	<10 ppt
Cobalt (Co)	<10 ppt	Rhodium (Rh)	<10 ppt
Copper (Cu)	<10 ppt	Ruthenium (Ru)	<10 ppt
Erbium (Er)	<1 ppt	Samarium (Sm)	<10 ppt
Europium (Eu)	<1 ppt		

Scandium (Sc)	<10 ppt	Tin (Sn)	<10 ppt
Selenium (Se)	<50 ppt	Titanium (Ti)	<10 ppt
Propan--1-ol	<10 ppt	Uranium (U)	<1 ppt
Sodium (Na)	<10 ppt	Vanadium (V)	<10 ppt
Strontium (Sr)	<10 ppt	Ytterbium (Yb)	<10 ppt
Tantalum (Ta)	<10 ppt	Yttrium (Y)	<1 ppt
Tellurium (Te)	<1 ppt	Zinc (Zn)	<10 ppt
Thallium (Tl)	<10 ppt	Platinum (Pt)	<10 ppt
Thorium (Th)	<1 ppt	Rubidium (Rb)	<10 ppt
Thulium (Tm)	<10 ppt		

Bottled in class 10 cleanroom conditions.Individually double-bagged in class 100 cleanroom conditions. Each bottle is individually packaged.
Certificate of analysis delivered with each bottle.

Water blank in HCl 5%
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLBLKHCL

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Water blank in HNO_3 5%
for ICP, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLBLKHNO3

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Water blank in HCl 2%
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLBLKHCL

H314, H318

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Water blank in HNO_3 2%
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLBLKHNO3

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Water Blank
for ICP-MS, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLBLKH2O

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurities.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Water NEW PACK. — Certified AR
for analysis

packaging		Mfr. No
5 ℓ	HDPE Plastic bottle	W/0100/21
5 ℓ	Fluorinated HDPE square Drum	W/0100/FP21
10 ℓ	Bag in box	W/0100/24
25 ℓ	HDPE Plastic container	W/0100/25
200 ℓ	HDPE Plastic container	W/0100/27

H_2O — Density at 20°C: 1
CAS: 7732-18-5 — Boiling point: 100°C
MW: 18.02 — EINECS: 231-791-2

Guaranteed analysis

pH at 20°C	: 4.5 to 7.5	Substances	
Conductivity	><5 µS	reducing $KMnO_4$	<0.00001%
Calcium (Ca)	<0.05 ppm	Total chloride (Cl)	<0.00001%
Copper (Cu)	<0.01 ppm	Total nitrogen (N)	<0.1 ppm
Iron (Fe)	<0.01 ppm	Total phosphorus (P)	<0.01 ppm
Lead (Pb)	<0.005 ppm	Total silicon (Si)	<0.2 ppm
Magnesium (Mg)	<0.05 ppm	Total sulphur (S)	<0.5 ppm
Potassium (K)	<0.05 ppm	Zinc (Zn)	<0.01 ppm
Sodium (Na)	<0.2 ppm		

Typical analysis

Aluminium (Al)	<0.01 ppm	Molybdenum (Mo)	<0.01 ppm
Barium (Ba)	<0.01 ppm	Nickel (Ni)	<0.01 ppm
Cadmium (Cd)	<0.01 ppm	Silver (Ag)	<0.01 ppm
Chromium (Cr)	<0.01 ppm	Strontium (Sr)	<0.01 ppm
Cobalt (Co)	<0.01 ppm	Tin (Sn)	<0.01 ppm
Lithium (Li)	<0.01 ppm	Titanium (Ti)	<0.01 ppm
Manganese (Mn)	<0.01 ppm	Vanadium (V)	<0.01 ppm

All water by Fisher Chemical is deionised not distilled.
Lot analysis on the label.

Water with 0.1% formic acid (v/v) NEW — Optima
for LC/MS analysis

packaging		Mfr. No
500 mℓ	Glass bottle	LS118-500
1 ℓ	Glass bottle	LS118-1
2.5 ℓ	Glass bottle	LS118-212
4 ℓ	Glass bottle	LS118-4

Density at 20°C: 1
Boiling point: 100°C

Guaranteed analysis

Assay (v/v)	: 0.095 to0.105%	Magnesium (Mg)	<10 ppb
Colour	<10 APHA	Manganese (Mn)	<10 ppb
Residue after evaporation	<1 ppm	Nickel (Ni)	<10 ppb
Aluminium (Al)	<20 ppb	Potassium (K)	<20 ppb
Calcium (Ca)	<50 ppb	Propan--1-ol	<10 ppb
Copper (Cu)	<10 ppb	Sodium (Na)	<50 ppb
Iron (Fe)	<10 ppb	Zinc (Zn)	<20 ppb
Lead (Pb)	<10 ppb		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<1.25 A.U.	254 nm	<0.01 A.U.
220 nm	<0.85 A.U.	LC/MS Gradient Suitability	: Pass test
230 nm	<0.55 A.U.		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.
Filtered to 0.2µm.

Water with 0.1% formic acid (v/v) NEW Certified
HPLC for gradient analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	FE/1200/17

Density at 20°C: 1.00
Boiling point: 100°C

Guaranteed analysis

Residue after evaporation	<=1 ppm	Gradient analysis at 254 nm	: <0.01 A.U.
Formic acid (% v/v)	: 0.095 to 0.105%		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<1.25 A.U.	250 nm	<0.015 A.U.
220 nm	<0.85 A.U.	254 nm	<0.005 A.U.
230 nm	<0.35 A.U.	260 nm	<0.005 A.U.
240 nm	<0.085 A.U.		

Lot analysis on the label.
Filtered to 0.2µm.

Water with 0.1% trifluoroacetic acid (v/v) NEW Optima
for LC/MS analysis

packaging		Mfr. No
500 mℓ	Glass bottle	LS119-500
1 ℓ	Glass bottle	LS119-1
2.5 ℓ	Glass bottle	LS119-212
4 ℓ	Glass bottle	LS119-4

CAS: 76-05-1
Density at 20°C: 1
EINECS: 200-929-3

Guaranteed analysis

Assay (v/v)	: 0.095 to0.105%	Magnesium (Mg)	<10 ppb
Colour	<10 APHA	Manganese (Mn)	<10 ppb
Residue after evaporation	<1 ppm ppm	Nickel (Ni)	<10 ppb
Aluminium (Al)	<20 ppb	Potassium (K)	<20 ppb
Calcium (Ca)	<50 ppb	Propan--1-ol	<10 ppb
Copper (Cu)	<10 ppb	Sodium (Na)	<50 ppb
Iron (Fe)	<10 ppb	Zinc (Zn)	<20 ppb
Lead (Pb)	<10 ppb		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

210 nm	<0.55 A.U.	254 nm	<0.003 A.U.
220 nm	<0.18 A.U.	LC/MS Gradient Suitability	: Pass test
230 nm	<0.06 A.U.		

This product has been tested on an LC-MS Thermo Scientific instrument to ensure suitability.
Filtered to 0.2µm.

Water with 0.1% trifluoroacetic acid (v/v) NEW Certified
HPLC for gradient analysis

packaging		Mfr. No
2.5 ℓ	Glass bottle	FE/0100/17

CAS: 76-05-1
Density at 20°C: 1
EINECS: 200-929-3

Guaranteed analysis

Residue after evaporation	<=1 ppm	Trifluoroacetic acid (% v/v)	: 0.095 to 0.105%
Gradient analysis at 254 nm	: <0.01 A.U.		

Absorbance specification
Max. Absorbance (1cm cell v HPLC water)

205 nm	<1 A.U.	240 nm	<0.03 A.U.
210 nm	<0.7 A.U.	250 nm	<0.005 A.U.
220 nm	<0.2 A.U.	254 nm	<0.005 A.U.
230 nm	<0.07 A.U.	260 nm	<0.005 A.U.

Lot analysis on the label.
Filtered to 0.2µm.

Wax Beeswax White
pure

packaging		Mfr. No
500 g	Plastic jar	W/0150/53

CAS: 8012-89-3
Melting point: 61 to 65°C
EINECS: 232-383-7

Guaranteed analysis
Identity test ..... : Pass

Wax Beeswax
pure

packaging		Mfr. No
250 g	Plastic jar	W/0200/50

CAS: 8012-89-3
Melting point: 61 to 65°C
EINECS: 232-383-7

Guaranteed analysis
Complies with standard IR spectrum: Pass

Wax Carnauba yellow
pure

packaging		Mfr. No
100 g	Plastic jar	W/0255/48

CAS: 8015-86-9
Melting point: 81 to 86°C
EINECS: 232-399-4

Guaranteed analysis
Identity test ..... : Pass

Wax Ceresin white
technical

packaging		Mfr. No
250 g	Plastic jar	W/0300/50

CAS: 8001-75-0
Melting point: 61 to 78°C
EINECS: 232-290-1

Guaranteed analysis
Complies with standard IR spectrum: Pass

Wax lanette emulsifying
pure

packaging		Mfr. No
500 g	Plastic jar	W/0320/53

Melting point: 52°C

Guaranteed analysis
Identity test ..... : Pass

Wood's metal
pure, m.p. ca. 70°C

packaging		Mfr. No
100 g	Plastic container	W/0350/48
500 g	Plastic jar	W/0350/53

CAS: 76093-98-6
Melting point: 70°C
ADR/RID: 6.1, II
UN: 2570
GHS: Carc. 1B, Muta. 2, Repr. 1A, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1
H410, H302, H360Df, H350, H330, H372, H341
P280, P260, P273, P301+P312, P304+P340, P201, P307+P311

Guaranteed analysis
Identity test ..... : Pass

o-Xylene
pure

packaging		Mfr. No
500 mℓ	Glass bottle	X/0300/08
2.5 ℓ	Glass bottle	X/0300/17
200 ℓ	Metal drum	X/0300/27

C_8H_{10}
CAS: 95-47-6
MW: 106.17
Density at 20°C: 0.878
Boiling point: 143 to 145°C
Melting point: -25°C
Flash point: 31°C
ADR/RID: 3, III
EINECS: 202-422-2
UN: 1307
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Asp. Tox. 1
H226, H304, H312, H315, H332
P280, P301+P310, P331, P305+P351+P338, P210

Assay (CG): >98%

m-Xylene
pure

packaging		Mfr. No
500 mℓ	Glass bottle	X/0350/08

C_8H_{10}
CAS: 108-38-3
MW: 106.17
Density at 20°C: 0.864
Boiling point: 139 to 139°C
Melting point: -48°C
Flash point: 25°C
ADR/RID: 3, III
EINECS: 203-576-3
UN: 1307
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2
H226, H315, H312, H332
P280, P305+P351+P338, P210

Assay (CG): >98%

p-Xylene
pure

packaging		Mfr. No
500 mℓ	Glass bottle	X/0400/08

C_8H_{10}
CAS: 106-42-3
MW: 106.17
Density at 20°C: 0.866
Boiling point: 138°C
Melting point: 13°C
Flash point: 25°C
ADR/RID: 3, III
EINECS: 203-396-5
UN: 1307
GHS: Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2
H226, H315, H312, H332
P280, P210, P305+P351+P338

Assay (CG): >98%

Xylene
for electronic use (MOS)

packaging		Mfr. No
2.5 ℓ	Glass bottle	X/0255/17
5 ℓ	Aluminium can	X/0255/21
200 ℓ	Metal drum	X/0255/27

C_8H_{10}
CAS: 1330-20-7
MW: 106.17
Density at 20°C: 0.865
Boiling point: 136 to 140°C
Melting point: -34°C
Flash point: 21°C
ADR/RID: 3, II
EINECS: 215-535-7
UN: 1307
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Irrit. 2
H225, H332, H315, H312
P280, P302+P352, P304+P340, P210, P240

Assay (CG): >98%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Molybdenum (Mo)	<0.02 ppm
Colour	<10 APHA	Nickel (Ni)	<0.02 ppm
Water	<0.05%	Potassium (K)	<0.5 ppm
Aluminium (Al)	<0.02 ppm	Sodium (Na)	<0.5 ppm
Barium (Ba)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Tin (Sn)	<0.02 ppm
Calcium (Ca)	<0.5 ppm	Titanium (Ti)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Total phosphorus (P)	<0.1 ppm
Cobalt (Co)	<0.02 ppm	Total silicon (Si)	<0.05 ppm
Copper (Cu)	<0.05 ppm	Total sulphur (S)	<2 ppm
Iron (Fe)	<0.1 ppm	Vanadium (V)	<0.02 ppm
Lead (Pb)	<0.05 ppm	Zinc (Zn)	<0.1 ppm
Lithium (Li)	<0.02 ppm	Benzene	<0.05%
Magnesium (Mg)	<0.2 ppm	n-Propyl benzene	<1%
Manganese (Mn)	<0.02 ppm	Toluene	<1%

Filtered to 0.2 µm.

Xylene NEW PACK. Certified AR
for analysis

packaging		Mfr. No
1 ℓ	Glass bottle	X/0250/15
2.5 ℓ	Glass bottle	X/0250/17
2.5 ℓ	Coated Glass bottle	X/0250/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	X/0250/21
25 ℓ	Metal drum	X/0250/25
200 ℓ	Metal drum	X/0250/27

C_8H_{10}
CAS: 1330-20-7
MW: 106.17
Density at 20°C: 0.865
Boiling point: 136 to 136 to 140 °C
Melting point: -34°C
Flash point: 21°C
ADR/RID: 3, II
EINECS: 215-535-7
UN: 1307
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Irrit. 2
H225, H332, H315, H312
P280, P302+P352, P304+P340, P210, P240

Assay (CG): >98%

Guaranteed analysis

Acidity / Alkalinity	<0.0001 meq/g	Nickel (Ni)	<0.02 ppm
Colour	<10 APHA	Potassium (K)	<0.5 ppm
Water	<0.05%	Sodium (Na)	<0.5 ppm
Residue after evaporation	<20 ppm	Total phosphorus (P)	<0.1 ppm
Substances reducing $KMnO_4$	<0.0005%	Total silicon (Si)	<0.05 ppm
Calcium (Ca)	<0.5 ppm	Total sulphur (S)	<2 ppm
Copper (Cu)	<0.05 ppm	Zinc (Zn)	<0.1 ppm
Iron (Fe)	<0.1 ppm	Benzene	<0.05%
Lead (Pb)	<0.05 ppm	n-Propyl benzene	<1%
Magnesium (Mg)	<0.2 ppm	Toluene	<1%

Typical analysis

Aluminium (Al)	<0.02 ppm	Molybdenum (Mo)	<0.02 ppm
Barium (Ba)	<0.02 ppm	Selenium (Se)	<0.02 ppm
Cadmium (Cd)	<0.02 ppm	Strontium (Sr)	<0.02 ppm
Chromium (Cr)	<0.02 ppm	Tin (Sn)	<0.02 ppm
Cobalt (Co)	<0.02 ppm	Titanium (Ti)	<0.02 ppm
Lithium (Li)	<0.02 ppm	Vanadium (V)	<0.02 ppm
Manganese (Mn)	<0.02 ppm		

Lot analysis on the label.

Xylene NEW PACK SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 mℓ	Glass bottle	X/0200/08
2.5 ℓ	Glass bottle	X/0200/17
2.5 ℓ	Coated Glass bottle	X/0200/PB17
5 ℓ	Fluorinated HDPE Plastic bottle	X/0200/21
25 ℓ	Metal drum	X/0200/25
200 ℓ	Metal drum	X/0200/27

C_8H_{10}
CAS: 1330-20-7
MW: 106.17
Density at 20°C: 0.865
Boiling point: 136 to 140°C
Melting point: -34°C
Flash point: 21°C
ADR/RID: 3, II

EINECS: 215-535-7
UN: 1307
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Irrit. 2
H225, H332, H315, H312
P280, P302+P352, P304+P340, P210, P240

Assay (CG): >97%

Guaranteed analysis

Acidity / Alkalinity	<0.003 meq/g	Lead (Pb)	<2 ppm
Colour	<10 APHA	Magnesium (Mg)	<2 ppm
Water	<0.05%	Potassium (K)	<2 ppm
Residue after evaporation	<100 ppm	Sodium (Na)	<5 ppm
Substances reducing $KMnO_4$	<0.001%	Total phosphorus (P)	<2 ppm
Calcium (Ca)	<5 ppm	Total silicon (Si)	<2 ppm
Copper (Cu)	<2 ppm	Total sulphur (S)	<10 ppm
Iron (Fe)	<5 ppm	Zinc (Zn)	<2 ppm

Xylene
Technical

packaging		Mfr. No
1 ℓ	Metal can	X/0100/MC15
2.5 ℓ	Glass bottle	X/0100/17
2.5 ℓ	Coated Glass bottle	X/0100/PB17
25 ℓ	Metal drum	X/0100/25
200 ℓ	Metal drum	X/0100/27

C_8H_{10}
CAS: 1330-20-7
MW: 106.17
Density at 20°C: 0.865
Boiling point: 136 to 140°C
Melting point: -34°C
Flash point: 21°C
ADR/RID: 3, II

EINECS: 215-535-7
UN: 1307
GHS: Flam. Liq. 2, Acute Tox. 4, Skin Irrit. 2
H225, H332, H315, H312
P280, P302+P352, P304+P340, P210, P240

Assay: > 97%
Assay (CG): >97%

Xylenol Orange
See o-Cresolsulfonphthaleindi-(methyl-iminodiacetic acid) sodium salt, page 99

Yeast extract powder
pure

packaging		Mfr. No
100 g	Plastic jar	Y/0200/48

Guaranteed analysis
Identity test ..... : Pass

Ytterbium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLY22Y
250 mℓ	Plastic bottle	SPPLY22T
500 mℓ	Plastic bottle	SPPLY22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Ytterbium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLYB22Y
500 mℓ	Plastic bottle	SPPLYB22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Ytterbium standard metal solution 10 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLY21AY

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Yttrium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLY23Y
500 mℓ	Plastic bottle	SPPLY23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zinc standard metal solution 1000 ppm
for AAS, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8070/05
500 mℓ	HDPE Plastic bottle	J/8070/08

ZnO
MW: 81.38
ADR/RID: 8, II
EINECS: 231-943-8
UN: 2031

GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Zinc standard metal solution 1000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8341/08

ZnO
CAS: 7779-88-6
MW: 81.38
ADR/RID: 8, II
EINECS: 231-943-8

UN: 2031
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P280, P305+P351+P338, P301+P330+P331, P310

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Zinc standard metal solution 10 000 ppm
for ICP, solution HNO_3 1M

packaging		Mfr. No
100 mℓ	HDPE Plastic bottle	J/8340/05

ZnO
MW: 81.38
ADR/RID: 8, III
UN: 3264
GHS: Skin Corr. 1B, Eye Dam. 1

H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Zinc standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLZN22Y
250 mℓ	Plastic bottle	SPPLZN22T

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zinc standard metal solution 1000 ppm
for ICP solution in HCL 2%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLZN12X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zinc standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLZN23Y
500 mℓ	Plastic bottle	SPPLZN23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zinc standard metal solution 10 000 ppm
for ICP solution in HCL 5%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLZN13X

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zinc standard metal solution 1000 ppm
for ICP-MS solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPCLZN22Y

H315, H320

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zinc granulated (metal) Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	Z/0300/53
1 kg	Plastic jar	Z/0300/60
25 kg	Plastic keg	Z/0300/70

Zn
CAS: 7440-66-6
MW: 65.36
Density at 20°C: 7.14
Boiling point: 907°C
Melting point: 419°C
ADR/RID: 9, III

EINECS: 231-175-3
UN: 3077
GHS: Aquatic Acute 1, Aquatic Chronic 1
H410
P273

Assay: >99.9%

Guaranteed analysis

Arsenic (As)	<0.05 ppm	Lead (Pb)	<40 ppm
Cadmium (Cd)	<20 ppm	Sulfide (S)	<0.00001%
Copper (Cu)	<30 ppm	Tin (Sn)	<10 ppm
Iron (Fe)	<20 ppm		

Lot analysis on the label.

Zinc powder (metal)
Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	Z/0500/53
1 kg	Plastic jar	Z/0500/60

Zn
CAS: 7440-66-6
MW: 65.36
Density at 20°C: 7.14
Boiling point: 907°C
Melting point: 420°C
ADR/RID: 4.3, 4.2, II

EINECS: 231-175-3
UN: 1436
GHS: Pyr. Sol. 1, Water-react. 1, Aquatic Acute 1, Aquatic Chronic 1
H260, H250, H410 P273

Assay: >90%

Guaranteed analysis

Substances reducing $KMnO_4$	<0.002%	Iron (Fe)	<50 ppm
		Total nitrogen (N)	<100 ppm

Lot analysis on the label.

Zinc metal granulated
SLR
extra pure, activated with copper

packaging		Mfr. No
500 g	Plastic jar	Z/0400/53

Zn
CAS: 7440-66-6
MW: 65.36
Density at 20°C: 7.14
Boiling point: 907°C
Melting point: 419°C
ADR/RID: 9, III

EINECS: 231-175-3
UN: 3077
GHS: Aquatic Acute 1, Aquatic Chronic 1
H410
P273

Guaranteed analysis

Arsenic (As)	<1 ppm	Insoluble Acids	<0.05%

For the determination of Arsenic.

Zinc metal granulated
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	Z/0250/53
2 kg	Plastic jar	Z/0250/61

Zn
CAS: 7440-66-6
MW: 65.36
Density at 20°C: 7.14
Boiling point: 907°C
Melting point: 419°C
ADR/RID: 9, III

EINECS: 231-175-3
UN: 3077
GHS: Aquatic Acute 1, Aquatic Chronic 1
H410
P273

Guaranteed analysis

Identity test ..... : Pass

Zinc metal powder
pure

packaging		Mfr. No
500 g	Plastic jar	Z/0450/53
1 kg	Plastic jar	Z/0450/60
2 kg	Plastic jar	Z/0450/61

Zn
CAS: 7440-66-6
MW: 65.36
Density at 20°C: 7.14
Boiling point: 907°C
Melting point: 420°C
ADR/RID: 4.3, 4.2, II

EINECS: 231-175-3
UN: 1436
GHS: Pyr. Sol. 1, Water-react. 1, Aquatic Acute 1, Aquatic Chronic 1
H260, H250, H410 P273

Assay: >90%

Zinc metal stick
pure, low in arsenic

packaging		Mfr. No
500 g	Plastic jar	Z/0550/53

Zn
CAS: 7440-66-6
MW: 65.36
Density at 20°C: 7.14
Boiling point: 907°C
Melting point: 419°C
ADR/RID: 9, III

EINECS: 231-175-3
UN: 3077
GHS: Aquatic Acute 1, Aquatic Chronic 1
H410
P273

Guaranteed analysis

Identity test ..... : Pass

Zinc metal foil, about 0.3 mm
pure

packaging		Mfr. No
500 g	Plastic jar	Z/0160/53

Zn
CAS: 7440-66-6
MW: 65.36
Density at 20°C: 7.14
Boiling point: 907°C
Melting point: 419°C
ADR/RID: 9, III

EINECS: 231-175-3
UN: 3077
GHS: Aquatic Acute 1, Aquatic Chronic 1
H410
P273

Guaranteed analysis

Identity test ..... : Pass

Zinc acetate dihydrate
Certified AR
for analysis

packaging		Mfr. No
250 g	Plastic jar	Z/0700/50
500 g	Plastic jar	Z/0700/53
1 kg	Plastic jar	Z/0700/60

$C_4H_6O_4Zn.2H_2O$
CAS: 5970-45-6
MW: 219.49
Density at 20°C: 1.84
Melting point: 100°C
ADR/RID: 9, III
EINECS: 209-170-2

UN: 3077
GHS: Acute Tox. 4, Eye Irrit. 2, Aquatic Acute 1
H319, H302, H400
P273, P301+P312, P280, P305+P351+P338

Assay: >99.5%

Guaranteed analysis

Calcium (Ca)	<10 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.001%
Iron (Fe)	<5 ppm	Total nitrogen (N)	<20 ppm
Lead (Pb)	<5 ppm	Total phosphorus (P)	<20 ppm
Magnesium (Mg)	<10 ppm	Total silicon (Si)	<100 ppm
Potassium (K)	<10 ppm	Total sulphur (S)	<50 ppm

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label.

Zinc acetate dihydrate
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	Z/0650/53

$C_4H_6O_4Zn.2H_2O$
CAS: 5970-45-6
MW: 219.49
Density at 20°C: 1.84
Melting point: 100°C
ADR/RID: 9, III
EINECS: 209-170-2

UN: 3077
GHS: Acute Tox. 4, Eye Irrit. 2, Aquatic Acute 1
H319, H302, H400
P273, P301+P312, P280, P305+P351+P338

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<100 ppm	Sodium (Na)	<100 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<20 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<100 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<100 ppm		

Zinc bromide
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	Z/0750/48

$ZnBr_2$
CAS: 7699-45-8
MW: 225.19
Density at 20°C: 4.22
Boiling point: 697°C
Melting point: 394°C
ADR/RID: 8, II

EINECS: 231-718-4
UN: 3260
GHS: Skin Corr. 1B, Aquatic Acute 1
H314, H400
P301+P330+P331, P280, P305+P351+P338, P310, P273

Assay: >98%

Guaranteed analysis

Iron (Fe)	<10 ppm	Sulfate (SO_4)	<0.02%

Zinc carbonate
pure, basic

packaging		Mfr. No
500 g	Plastic jar	Z/0800/53

$Zn(CO_3)$
CAS: 5263-02-5
MW: 549.01

Density at 20°C: 4.39
EINECS: 226-076-7

Guaranteed analysis

Identity test ..... : Pass

Zinc chloride
Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	Z/0870/53
1 kg	Plastic jar	Z/0870/60

$ZnCl_2$
CAS: 7646-85-7
MW: 136.29
Boiling point: 732°C
Melting point: 293°C
ADR/RID: 8, III
EINECS: 231-592-0
UN: 2331

GHS: Acute Tox. 4, Skin Corr. 1B, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H314, H335, H302, H410
P301+P330+P331, P280, P305+P351+P338, P261, P273, P301+P312

Assay: >98%

Guaranteed analysis

Basic salt	: <1%	Potassium (K)	<10 ppm
Calcium (Ca)	<10 ppm	Sodium (Na)	<10 ppm
Copper (Cu)	<5 ppm	Total phosphorus (P)	<20 ppm
Iron (Fe)	<10 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<5 ppm	Total sulphur (S)	<20 ppm
Magnesium (Mg)	<10 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Lot analysis on the label.

Zinc chloride
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	Z/0850/53
1 kg	Plastic jar	Z/0850/60
10 kg	Plastic keg	Z/0850/68

$ZnCl_2$
CAS: 7646-85-7
MW: 136.29
Boiling point: 732°C
Melting point: 293°C
ADR/RID: 8, III
EINECS: 231-592-0
UN: 2331

GHS: Acute Tox. 4, Skin Corr. 1B, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1
H314, H335, H302, H410
P301+P330+P331, P280, P305+P351+P338, P261, P273, P301+P312

Assay: >97%

Guaranteed analysis

Basic salt	: <5%	Potassium (K)	<2000 ppm
Calcium (Ca)	<2000 ppm	Sodium (Na)	<5000 ppm
Copper (Cu)	<20 ppm	Total phosphorus (P)	<100 ppm
Iron (Fe)	<50 ppm	Total silicon (Si)	<100 ppm
Lead (Pb)	<20 ppm	Total sulphur (S)	<100 ppm
Magnesium (Mg)	<1000 ppm		

Zinc iodide
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
100 g	Plastic jar	Z/1100/48

ZnI_2
CAS: 10139-47-6
MW: 319.18
Density at 20°C: 4.74
Melting point: 446°C
ADR/RID: 8, III

EINECS: 233-396-0
UN: 3260
GHS: Skin Corr. 1B, Eye Dam. 1
H314
P301+P330+P331, P280, P305+P351+P338, P310

Assay: >98%

Guaranteed analysis

Iron (Fe)	<100 ppm	Sulfate (SO_4)	<0.05%

Zinc nitrate hexahydrate
SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	Z/1150/50
500 g	Plastic jar	Z/1150/53

$Zn(NO_3)_2.6H_2O$
CAS: 10196-18-6
MW: 297.47
Density at 20°C: 2.06
Melting point: 36°C
ADR/RID: 5.1, II
EINECS: 231-943-8

UN: 1514
GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H335, H315, H319, H302
P210, P261, P302+P352, P280, P305+P351+P338

Assay: >97%

Guaranteed analysis

Calcium (Ca)	<50 ppm	Sodium (Na)	<1000 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.005%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<100 ppm
Lead (Pb)	<50 ppm	Total silicon (Si)	<100 ppm
Magnesium (Mg)	<100 ppm	Total sulphur (S)	<200 ppm
Potassium (K)	<50 ppm		

Zinc nitrate hexahydrate
Technical

packaging		Mfr. No
250 g	Plastic jar	Z/1145/50
500 g	Plastic jar	Z/1145/53

$N_2O_6Zn.6H_2O$
CAS: 10196-18-6
MW: 297.47
Density at 20°C: 2.06
Melting point: 36°C
ADR/RID: 5.1, II
EINECS: 231-943-8

UN: 1514
GHS: Ox. Sol. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3
H272, H335, H315, H319, H302
P210, P261, P302+P352, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Zinc oxide — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	Z/1350/53
1 kg	Plastic jar	Z/1350/60
25 kg	Fibre Keg	Z/1350/70

ZnO
CAS: 1314-13-2
MW: 81.38
Density at 20°C: 5.6
Melting point: 1975°C
ADR/RID: 9, III

EINECS: 215-222-5
UN: 3077
GHS: Aquatic Acute 1, Aquatic Chronic 1
H410
P273

Assay: >99.5%

Guaranteed analysis

Loss on drying 600°C	: <0.5%	Manganese (Mn)	<5 ppm
Reducing substances	: <0.002%	Molybdenum (Mo)	<5 ppm
Aluminium (Al)	<5 ppm	Nickel (Ni)	<5 ppm
Barium (Ba)	<5 ppm	Potassium (K)	<50 ppm
Cadmium (Cd)	<5 ppm	Propan--1-ol	<5 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<50 ppm
Carbonate (Na_2CO_3)	<0.2%	Strontium (Sr)	<5 ppm
Chromium (Cr)	<5 ppm	Titanium (Ti)	<5 ppm
Cobalt (Co)	<5 ppm	n-Butyl formate	<0.002%
Copper (Cu)	<5 ppm	Total phosphorus (P)	<50 ppm
Iron (Fe)	<5 ppm	Total silicon (Si)	<200 ppm
Lead (Pb)	<50 ppm	Total sulphur (S)	<100 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Magnesium (Mg)	<50 ppm		

Lot analysis on the label.

Zinc oxide — SLR, Eur.Ph.,BP, USP
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	Z/1300/53
1 kg	Plastic jar	Z/1300/60

ZnO
CAS: 1314-13-2
MW: 81.38
Density at 20°C: 5.6
Melting point: 1975°C
ADR/RID: 9, III

EINECS: 215-222-5
UN: 3077
GHS: Aquatic Acute 1, Aquatic Chronic 1
H410
P273

Assay: >99%

Guaranteed analysis

Loss on ignition	<1%	Potassium (K)	<200 ppm
Calcium (Ca)	<200 ppm	Sodium (Na)	<200 ppm
Copper (Cu)	<20 ppm	n-Butyl formate	<0.02%
Iron (Fe)	<20 ppm	Total phosphorus (P)	<200 ppm
Lead (Pb)	<200 ppm	Total silicon (Si)	<500 ppm
Magnesium (Mg)	<200 ppm	Total sulphur (S)	<500 ppm

Zinc stearate
Technical

packaging		Mfr. No
500 g	Plastic jar	Z/1400/53

$C_{36}H_{70}O_4Zn$
CAS: 557-05-1
MW: 632.34

Melting point: 118 to 128°C
Flash point: 100°C
EINECS: 209-151-9

Guaranteed analysis
Identity test ..... : Pass

Zinc sulfate heptahydrate — Certified AR
for analysis

packaging		Mfr. No
500 g	Plastic jar	Z/1600/53
5 kg	Plastic keg	Z/1600/65
25 kg	Plastic keg	Z/1600/70

$ZnSO_4.7H_2O$
CAS: 7446-20-0
MW: 287.53
Density at 25°C: 3.54
Melting point: 100°C
ADR/RID: 9, III
EINECS: 231-793-3

UN: 3077
GHS: Acute Tox. 4, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H318, H410, H302
P280, P305+P351+P338, P310, P273, P301+P312

Assay: 99.5 to 104%

Guaranteed analysis

pH (aqueous solution 5%)	4.5 to 6	Potassium (K)	<50 ppm
Calcium (Ca)	<50 ppm	Sodium (Na)	<50 ppm
Copper (Cu)	<5 ppm	Total chloride (Cl)	<0.001%
Iron (Fe)	<5 ppm	Total nitrogen (N)	<20 ppm
Lead (Pb)	<5 ppm	Total silicon (Si)	<50 ppm
Magnesium (Mg)	<50 ppm		

Typical analysis

Aluminium (Al)	<5 ppm	Molybdenum (Mo)	<5 ppm
Barium (Ba)	<5 ppm	Nickel (Ni)	<5 ppm
Cadmium (Cd)	<5 ppm	Silver (Ag)	<5 ppm
Chromium (Cr)	<5 ppm	Strontium (Sr)	<5 ppm
Cobalt (Co)	<5 ppm	Titanium (Ti)	<5 ppm
Lithium (Li)	<5 ppm	Vanadium (V)	<5 ppm
Manganese (Mn)	<5 ppm		

Zinc sulfate heptahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	Z/1550/53
1 kg	Plastic jar	Z/1550/60
2 kg	Plastic jar	Z/1550/61
5 kg	Plastic keg	Z/1550/65

$ZnSO_4.7H_2O$
CAS: 7446-20-0
MW: 287.53
Density at 20°C: 3.54 to 25°C
Melting point: 100°C
ADR/RID: 9, III
EINECS: 231-793-3

UN: 3077
GHS: Acute Tox. 4, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1
H318, H410, H302
P280, P305+P351+P338, P310, P273, P301+P312

Assay: >99%

Guaranteed analysis

Calcium (Ca)	<200 ppm	Potassium (K)	<200 ppm
Copper (Cu)	<20 ppm	Sodium (Na)	<200 ppm
Iron (Fe)	<20 ppm	n-Butyl formate	<0.005%
Lead (Pb)	<20 ppm	Total silicon (Si)	<200 ppm
Magnesium (Mg)	<200 ppm		

Zinc sulfate solution 0.05M (0.05N)
NIST Standard Concentrate, For Volumetric analysis

packaging		Mfr. No
1	Ampoule	J/8490C/05
6	Ampoule	J/8490C/90

Boiling point: 100°C
Melting point: 0
GHS: Eye Dam. 1, Aquatic Chronic 2

H411, H318
P280, P305+P351+P338, P310, P273

Each ampoule makes 1 ℓ of solution.
See the full range of Standard Volumetric solution page 323.

Zinc sulfide
pure

packaging		Mfr. No
500 g	Plastic jar	Z/1700/53

ZnS
CAS: 1314-98-3
MW: 97.44
Density at 20°C: 4.1

EINECS: 215-251-3
EUH031
P233

Guaranteed analysis
Identity test ..... : Pass

Zirconium standard metal solution 1000 ppm
for AAS, solution HCl 1M

packaging		Mfr. No
500 mℓ	HDPE Plastic bottle	J/8200/08

ADR/RID: 8,
III UN: 1789

Manufactured to a tolerance of ± 0.5%.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.

Zirconium standard metal solution 1000 ppm
for ICP solution in HNO_3 2%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLZR22Y
250 mℓ	Plastic bottle	SPPLZR22T
500 mℓ	Plastic bottle	SPPLZR22X

H315, H319

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zirconium standard metal solution 1000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLZR32X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zirconium standard metal solution 10 000 ppm
for ICP solution in HNO_3 5%, NIST certified

packaging		Mfr. No
100 mℓ	Plastic bottle	SPPLZR23Y
500 mℓ	Plastic bottle	SPPLZR23X

H314

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zirconium standard metal solution 10 000 ppm
for ICP solution in HCL 10%, NIST certified

packaging		Mfr. No
500 mℓ	Plastic bottle	SPPLZR33X

H315, H319, H335

Manufactured to a tolerance of ± 0.5%.
All standards are manufactured from acids, metals & metal salts and contain less than <10 ppm total metal impurites.
See also the full range in the Standard Elemental solution for Trace metal analysis section see page 314.
Check with your local distributor for availability of Spex product

Zirconium dioxide — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
250 g	Plastic jar	Z/1850/50

ZrO_2
CAS: 1314-23-4
MW: 123.22
Density at 20°C: 5.6
Boiling point: 4300°C

Melting point: >2700°C
EINECS: 215-227-2
GHS: Eye Irrit. 2, STOT SE 3
H335, H319
P261, P280, P305+P351+P338

Guaranteed analysis
Identity test ..... : Pass

Zirconyl chloride octahydrate — SLR
specified reagents for general laboratory work- extra pure

packaging		Mfr. No
500 g	Plastic jar	Z/1900/53

$ZrCl_2O.8H_2O$
CAS: 13520-92-8
MW: 322.25
Density at 20°C: 1.91
ADR/RID: 8, II
EINECS: 231-717-9
UN: 3260

GHS: Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1
H314, H302
P301+P330+P331, P280, P305+P351+P338, P310, P301+P312

Guaranteed analysis
Identity test ..... : Pass

Standard Volumetric solution
For your convenience we offer a range of NIST traceable solutions. A full list of our products can be found on page 323. Can't see what you need? Please email your contact details and a brief description of your requirements to begel.sha.quotes@thermofisher.com

Fisher BioReagents®

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- **Protein Chemistry** p. 438
- **Cell Biology** p. 452
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Fisher BioReagents®

End-to-end solutions for molecular biology, protein chemistry and cell biology

Agar
Agarose
Amino Acids
Antibiotics: Bacterial Selection
Antibiotics: Cell Culture
Biological Buffers
Cell Regulation Compounds
DNA Electrophoresis Buffers
DNA Electrophoresis Products
DNA Ladders
DNA Modifying Enzymes
DNA Precipitation Products
dNTPs
Microbial Media
Northern Blot Products
Nucleic Acid Purification
Nucleic Acid Sequencing
Peptide Sequencing Products
Peptide Synthesis Products
PCR Enzymes
Protein Electrophoresis Buffers
Protein Purification
Protein Stains
Restriction Enzymes
Reverse Transcriptases
RNA Purification Kits
RNA Purification
Southern Blot
Sugar Additives
Tissue Stains
Vitamins
Water
Western Blot

Vital reagents for life science research

- Ultra-high purity
- Prequalified for the life science application
- Fisher BioReagents are among the finest in the industry

Over 1,000 products

Our extensive line includes products for:

- Nucleic Acid Electrophoresis, Purification, Hybridisation and Sequencing
- Polymerase Chain Reaction (PCR)
- Protein Purification and Electrophoresis
- Buffers and Detergents
- Cell Biology/Cell Culture
- Microbiology/Immunology

Purity grades to meet your specific needs
Reagents are prequalified and guaranteed to be suitable for the designated technique.

Stringent specifications
Address critical factors such as purity, water content, levels of contaminants and absence of DNase, RNase or protease activity.

Innovative packaging design
Packaging designed for safety, convenient handling and storage, and preservation of product integrity.

Manufacturing quality
Rigorous QA standards, supplier certification process, customer site audit, cGMP-certified manufacturing facilities, ISO 9001:2008 Quality Management System.

Bench to batch
Fisher BioReagents are packaged in sizes to meet your needs.

Fisher BioReagents®

Fisher BioReagents®: Purity Grades for Every Application

Material Grade	Definition
Certified	Reagent chemicals for which the purity standard is established by Fisher Chemical. Purity is guaranteed to meet published maximum limits of impurities.
DNA Grade	Designates reagents suitable for use in molecular biology applications involving the manipulation of DNA. Tested for specific contaminants, such as DNase and protease.
DNA Synthesis	Designates reagents suitable for use with automated DNA synthesis instrumentation.
Electrophoresis	Material used specifically for electrophoresis applications.
Genetic Analysis Grade	Material that is specially prepared for various molecular cloning applications. Tested for specific contaminants, such as DNase and RNase.
IEF Grade	Material suitable for use with isoelectric focusing of proteins.
Islet Isolation Grade	Material suitable for isolation of pancreatic islets.
Molecular Biology Grade	Designates reagents suitable for use in molecular biology applications. Tested for specific contaminants, such as nucleases and bacteria, where appropriate.
Molecular Genetics	Reagent chemicals that have been specifically purified and assayed for molecular genetics applications.
PCR Grade	Material suitable for use in Polymerase Chain Reaction (PCR).
Peptide Synthesis	Designates reagents suitable for use with protein synthesis instrumentation.
Protein Electrophoresis Grade	Material used specifically for protein electrophoresis applications.
Sequencing	Material designed for use with automated DNA or protein sequencing equipment.
Super Pure	Material with a purity level exceeding the various monograph grades.
Tissue Culture Grade	Materials of superior quality where there are no published standards and that are suitable for use in tissue culture applications.

Packaging for safety, convenience and product quality

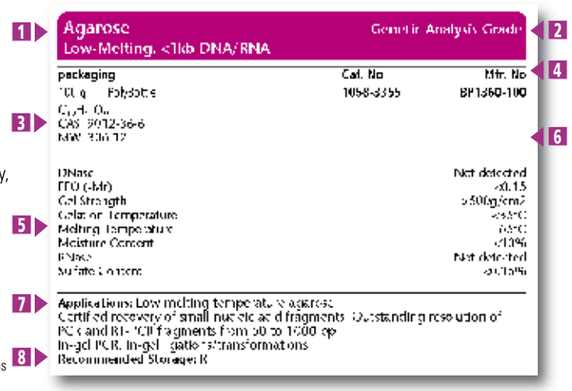
Fisher BioReagents come in a wide variety of innovative packaging designed for safety, environmental protection, convenient handling and storage, and preservation of product integrity. The primary container is included in the product description of most chemicals in this catalogue.

Primary containers include:

- Plastic and glass bottles, jars
- Specialised acid containers
- Square poly bottles
- Sterility proof sachets
- Poly pails
- Polypac™ containers
- Compact, laminated boxes

How to use this catalogue

Refer to the index page: "BioReagents by Product Name" to look for the page number of the product you're interested in. Products are also Categorised by application: Molecular Biology, Protein Chemistry, Cell Biology and Core BioReagents (used for multiple applications). Refer to the appropriate chapter to look for the product you're interested in.



1 Product name
2 Quality grade
3 CAS number
4 Packaging and ordering information
5 Product specifications
6 GHS code
7 Application information
8 Recommended storage conditions

Fisher BioReagents®

Your source for high purity products for nucleic acid electrophoresis

All Fisher BioReagents agaroses are DNase- and RNase-free to ensure optimal results for your nucleic acid application.

Fisher BioReagents offers 3 different grades of agarose that are functionally tested and pre-qualified for specific applications:

- **Genetic Analysis Grade** – Agarose that yields biologically active DNA or RNA. Testing includes enzymatic performance measurements.
- **Molecular Biology Grade** – Agarose that is suitable for analytical separation of DNA or RNA.
- **PCR Grade** – Agarose that is suitable for the analytical separation of PCR amplicons (<1kb).

Agarose Selection Guide

Type of Agarose	Low EEO	Low Melting (>200bp)	Low Melting (<1kb)	Wide Separation Range	PCR Grade
Cat. No	**BP160**	**BP165**	**BP1360**	**BP1356**	**BP2410**
Recovery of DNA or RNA	●	●	●	●	●
Southern and Northern Blots	●				
DNA/RNA separation 50bp to 1kb			●		●
DNA/RNA separation >1kb	●	●		●	
PCR fragment analysis	●	●	●	●	●
In-gel reactions (ligation, transformations, PCR)			●		
Colony lifts	●				
Available pack sizes	100g and 500g	25g	100g	100g and 500g	100g
Agarose grade	Molecular Biology	Molecular Biology	Genetic Analysis	Genetic Analysis	PCR Grade

Buffers for DNA Electrophoresis Applications

Two buffers commonly used for DNA electrophoresis are Tris-acetate with EDTA and Tris-borate with EDTA. Because the pH of these buffers is neutral, the phosphate backbone of DNA has a net negative charge and migrates to the anode. TAE and TBE have different properties which makes one more suitable than the other for a specific purpose.

TAE: DNase-, RNase- and Protease-free

Cat. No.	Concentration	Size
BP2434-4	1X	4L
BP2434-20	1X	20L
BP1335-500	10X	500mL
BP1335-1	10X	1L
BP1335-4	10X	4L
BP1335-20	10X	20L
BP1330-1	25X	1L
BP1332-500	50X	500mL
BP1332-1	50X	1L
BP1332-4	50X	4L
BP1332-20	50X	20L
BP1331-1	25X	1L**

TBE: DNase- and RNase-free

Cat. No.	Concentration	Size
BP2430-1	1X	1L
BP2430-4	1X	4L
BP2430-20	1X	20L
BP1396-86	5X	1L*
BP1333-1	10X	1L
BP1333-4	10X	4L
BP1333-20	10X	20L
BP1334-1	10X	1L**

*Pre-weighed powder in poly bottle. Dissolve in water.
**Pre-weighed powder in foil pack. Dissolve in water.

Buffer Components for DNA Electrophoresis

Buffer Component

	Size	Cat. No.
Tris Base	500g	BP152-500
	1kg	BP152-1
	5kg	BP152-5
	10kg	BP152-10
	25kg	BP152-25
Boric Acid	500g	BP168-500
	1kg	BP168-1
EDTA Disodium Salt	500g	BP120-500
	1kg	BP120-1

Fisher BioReagents®

Fisher BioReagents®

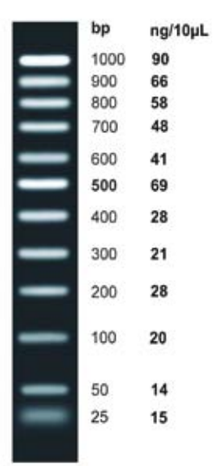
Buffers for RNA Electrophoresis Applications

MOPS is a commonly used buffer system for RNA electrophoresis using formaldehyde or formamide-denatured RNA. It is important to use RNase-free chemicals, water and containers when preparing the buffer solution. The typical formulation of 10X MOPS running buffer is 0.4M MOPS (pH 7.0), 0.1M sodium acetate and 0.01M EDTA.

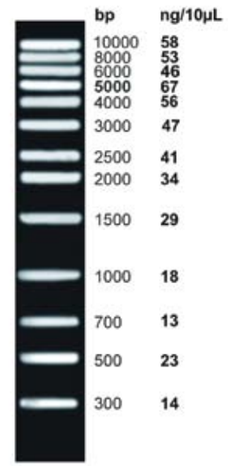
MOPS: DNase-, RNase- and Protease-free		
Cat. No.	**Description**	**Size**
BP308-100	Powder	100g
BP308-500	Powder	500g
BP2900-500	10X Buffer Solution	500mL
BP2900-1	10X Buffer Solution	1L
Water		
BP2484-50	Nuclease-Free	50mL
BP2484-100	Nuclease-Free	100mL
BP2470-1	DNA Grade	1L
BP561-1	RNA Grade	1L
Formaldehyde		
BP531-25	37% by weight	25mL
BP531-500	37% by weight	500mL

NEW!
Ethanol, Molecular Biology Grade, is an ultrapure molecular biology grade ethanol used for the purification and precipitation of biomolecules such as nucleic acids and proteins.

Cat. No.	Size
BP2818-100	100mL
BP2818-500	500mL
BP2818-4	4 L



BP2571



BP2578

exACTGene® and routine DNA ladders

Ready-to-use (pre-mixed with loading dye), room temperature stable DNA ladders are available for all common electrophoresis applications.

exACTGene DNA ladders are ideal for qualitative analysis, quantitative estimation and size assessment

Cat. No.	Application	Size Range	Number of Bands	Number of Loadings
BP2570-100	PCR fragment analysis	25 to 650bp	14	100/10µL
BP2571-100	PCR fragment analysis, small DNA digests	25 to 1,000bp	12	100/10µL
BP2572-100	Quick check of PCR or enzyme digestion results	50 to 2,000bp	8	100/10µL
BP2573-100	General purpose, small DNA fragments	100 to 1,000bp	10	100/10µL
BP2574-100	Fast run times, small DNA fragments	100 to 2,000bp	11	100/10µL
BP2575-100	Clone identification	100 to 2,686bp	14	100/10µL
BP2576-100	Large size PCR or cloning	300 to 5,000bp	10	100/10µL
BP2577-100	Small and large cloning application	100 to 5,000bp	16	100/10µL
BP2578-100	General purpose, large digested DNA	300 to 10,000bp	13	100/10µL
BP2579-100	General purpose, wide separation range	100 to 10,000bp	19	100/10µL
BP2580-100	General purpose, extra large DNA fragments	300 to 24,000bp	15	100/10µL

Fisher BioReagents® Proteomics Products

Convenience, Quality and Consistency

EZ-Run™ Protein Gel Solution

- Ready to use
- Superior resolution
- Wide separation range on same mini-gel
- No stacking gel required
- Proprietary gel chemistry
- Stable for two years at room temperature
- Compatible with all conventional staining methods
- Suitable for post-electrophoresis applications such as Western Blot transfer and MALDI analysis

EZ-Run™ Protein Gel Solutions		
Description	**Quantity**	**Cat. No.**
10% EZ-Run Protein Gel Solution	100mL	BP7710-100
	500mL	BP7710-500
12.5% EZ-Run Protein Gel Solution	100mL	BP7712-100
	500mL	BP7712-500
15% EZ-Run Protein Gel Solution	100mL	BP7715-100
	500mL	BP7715-500
20X Running Buffer for EZ-Run Protein Gel Solution	500mL	BP7700-500

Acrylamide, Bis-Acrylamide and Catalysts		
Description	**Quantity**	**Cat. No.**
Acrylamide	100g	BP170-100
	500g	BP170-500
	5kg	BP170-500
Acrylamide Solution, 40%	1L	BP1402-1
Bis-Acrylamide	25g	BP171-25
	100g	BP171-100
Bis-Acrylamide Solution, 2%	250mL	BP1404-250
Acrylamide:Bis-Acrylamide, 19:1, Powder	100g	BP1364-100
Acrylamide:Bis-Acrylamide, 29:1, Powder	100g	BP1366-100
Acrylamide:Bis-Acrylamide, 37.5:1, Powder	100g	BP1368-100
Acrylamide:Bis-Acrylamide, 19:1, 40% Solution	1L	BP1406-1
Acrylamide:Bis-Acrylamide, 29:1, 40% Solution	1L	BP1408-1
Acrylamide:Bis-Acrylamide, 37.5:1, 40% Solution	1L	BP1410-1
Ammonium Persulfate	25g	BP179-25
	100g	BP179-100
Sodium Persulfate	1kg	BP2637-1
TEMED	20g	BP150-20
	100g	BP150-100

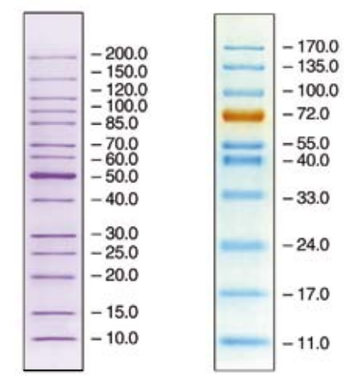
Buffers for Protein Electrophoresis		
Description	**Quantity**	**Cat. No.**
Tris-Glycine, 10X Solution	1L	BP1306-1
	4L	BP1306-4
	1L*	BP1307-1
Tris-Glycine-SDS, 10X Solution	1L	BP1341-1
	4L	BP1341-4
Tris-Glycine-SDS, 5X Solution, Pre-Weighed Powder*	1L	BP1398-92
Tris-Glycine-SDS, 10X Solution, Pre-Weighed Powder*	1L	BP1342-1
PBS, 10X Solution	500mL	BP399-500
PBS, 10X Solution	1L	BP399-1
PBS, 10X Solution	4L	BP399-4
PBS, 10X Solution	20L	BP399-20
PBS Tablets, 1X Solution	100 tabs**	BP2944-100
PBS with Tween 20, 1X Solution, Pre-Weighed Powder*	10 foil pouches	BP2938-10
Tris-Buffered Saline, 10X (pH 7.4)	100mL	BP2471-100
	500mL	BP2471-500
	1L	BP2471-1
Tris Base	500g	BP152-500
	1kg	BP152-1
	5kg	BP152-5
	10kg	BP152-10
	25kg	BP152-25
Glycine	500g	BP381-500
	1kg	BP381-1
	5kg	BP381-5

*Pre-weighed powder to make 1L. Dissolve in water.
**One tablet dissolved in 200mL water yields 0.01M phosphate buffer, 0.0027M KCl, and 0.137M NaCl, pH 7.4 at 25°C.

Detergents and Denaturing Agents		
Description	**Quantity**	**Cat. No.**
Brij 35	500g	BP345-500
CHAPS	1g	BP571-1
	5g	BP571-5
SDS	100g	BP166-100
	500g	BP166-500
	5kg	BP166-5
SDS, 10% Solution	200mL	BP2436-200
	1L	BP2436-1
SDS, 20% Solution	200mL	BP1311-200
	1L	BP1311-1
Triton X-100	100mL	BP151-100
	500mL	BP151-500
Tween 20	100mL	BP337-100
	500mL	BP337-500
Tween 80	500mL	BP338-500

EZ-Run™ Protein Standards

- Highly purified markers and ladders provide compact and clear bands
- Prestained standards are indispensable in monitoring protein separation and transfer efficiency
- Reference bands allow quick gel progress assessment
- Unstained standards are most suitable for precise sizing of proteins
- All standards are supplied in loading buffer and are ready to use



4-20% SDS-PAGE BP3602 | 4-20% SDS-PAGE BP3603

Description	MW Range	No. of Bands	Reference Band	Source	Quantity	Cat. No.
Unstained Protein Standards	14.4 to 118.0 kDa	7		Native Proteins	500uL	BP3600-500
					2 x 500uL	BP3600-1
	10.0 to 200.0 kDa	14	50 kDa	Recombinant Proteins	500uL	BP3602-500
					2 x 500uL	BP3602-1
Prestained Protein Standards	20.0 to 118.0 kDa	6		Native Proteins	500uL	BP3601-500
					2 x 500uL	BP3601-1
	11.0 to 170.0 kDa	10	72 kDa	Recombinant Proteins	500uL	BP3603-500
					2 x 500uL	BP3603-1

Fisher BioReagents®

Agarose — Genetic Analysis Grade
Broad Separation Range for DNA/RNA

packaging		Mfr. No
100 g	PolyBottle	BP1356-100
500 g	PolyBottle	BP1356-500

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

DNase	Not detected
EEO (-Mr)	<0.15
Gel Strength	>1200g/cm2
Gelation Temperature	34.5°-37.5°C
Moisture Content	<10%
RNase	Not detected
Sulfate Content	<0.15%

Applications: Routine nucleic acid electrophoresis; broad resolution range 500 bp to 25kb. Certified for recovery of DNA and RNA. Reliable digestion and ligation of recovered DNA or RNA fragments. Cloning.
Recommended Storage: RT

Agarose — PCR Grade
Intermediate Melting

packaging		Mfr. No
100 g	AmberGlass	BP2410-100

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

DNase	Not detected
EEO (-Mr)	<=0.12
Gel Strength	>=1200g/cm2
Gelation Temperature	<35.5°C
Melting Temperature	80°C
RNase	Not detected
Sulfate Content	<=0.11%

Applications: Separation of low MW DNA <100 bp. PCR analysis applications.
Recommended Storage: RT

Agarose — Protein Electrophoresis Grade
High-EEO

packaging		Mfr. No
100 g	PolyBottle	BP162-100

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

DNase	Not detected
EEO (-Mr)	0.23-0.26
Gel Strength	>650g/cm2
Gelation Temperature	34.5°-37.5°C
Moisture Content	<10%
RNase	Not detected
Sulfate Content	<0.15%

Applications: Immunoelectrophoresis (IEP).
Crossed-IEP. Counter-immunoelectrophoresis (CIEP).
Serum protein electrophoresis.
Recommended Storage: RT

Agarose — Molecular Biology Grade
Low-Melting, Nucleic Acid Recovery

packaging		Mfr. No
25 g	PolyBottle	BP165-25

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

DNase	Not detected
EEO (-Mr)	<0.10
Gel Strength	>200g/cm2
Gelation Temperature	26°-30°C
Melting Temperature	65°C
Moisture Content	<10%
RNase	Not detected
Sulfate Content	<0.10%

Applications: Original low melting temperature agarose. Nucleic acid separation from 200 bp to 25kb.
Preparative DNA and RNA electrophoresis. Ideally suited for DNA and RNA recovery. Cloning of tissue culture cells and viral plaque assays.
Recommended Storage: RT

Agarose — DNA Grade
High Gelling Temperature

packaging		Mfr. No
25 g	PolyBottle	BP164-25
100 g	PolyBottle	BP164-100
500 g	PolyBottle	BP164-500

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

DNase	Not detected
EEO (-Mr)	<0.1
Gel Strength	>800g/cm2
Gelation Temperature	<40.5°-43.5°C
Moisture Content	<10%
RNase	Not detected
Sulfate Content	<0.15%

Recommended Storage: RT

Agarose — Molecular Biology Grade
Low-EEO/Multi-Purpose

packaging		Mfr. No
100 g	PolyBottle	BP160-100
500 g	PolyBottle	BP160-500

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

DNase	Not detected
EEO (-Mr)	0.09-0.13
Gel Strength	>1200g/cm2
Gelation Temperature	34°-45°C
Moisture Content	<10%
RNase	Not detected
Sulfate Content	<0.15%

Applications: Routine electrophoresis of DNA and RNA; wide resolution range 500 bp to 23kb. High gel strength ideal for Southern and Northern blotting. PCR >1kb.
Immunoprecipitation techniques. Baculovirus screening.
Colony lifts.
Recommended Storage: RT

Agarose — Genetic Analysis Grade
Low-Melting, <1kb DNA/RNA

packaging		Mfr. No
100 g	PolyBottle	BP1360-100

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

DNase	Not detected
EEO (-Mr)	<0.15
Gel Strength	>500g/cm2
Gelation Temperature	<35°C
Melting Temperature	65°C
Moisture Content	<10%
RNase	Not detected
Sulfate Content	<0.15%

Applications: Low melting temperature agarose.
Certified recovery of small nucleic acid fragments. Outstanding resolution of PCR and RT-PCR fragments from 50 to 1000 bp.
In-gel PCR. In-gel ligations/transformations.
Recommended Storage: RT

Agarose — Protein Electrophoresis Grade
Medium-EEO

packaging		Mfr. No
100 g	PolyBottle	BP161-100

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

DNase	Not detected
EEO (-Mr)	0.16-0.19
Gel Strength	>1000g/cm2
Gelation Temperature	34.5°-37.5°C
Moisture Content	<10%
RNase	Not detected
Sulfate Content	<0.15%

Applications: Ideal alternative to polyacrylamide for serum protein electrophoresis. Immunoelectrophoresis.
Electrophoresis of nucleic acids.
Recommended Storage: RT

Agarose — Molecular Biology Grade
Agarose Gel-Loading Dye, 6X

packaging		Mfr. No
5 mℓ	PolyBottle	BP633-5

description	Dark purple slightly viscous liquid
DNase	Not detected
Optical Absorbance (dilution 1:500 with deionized water) at 525nm	0.3-0.6
Optical Absorbance (dilution 1:500 with deionized water) at 588-594nm	0.5-0.8
Optical Absorbance (dilution 1:500 with deionized water) at 635-641nm	0.5-0.7
RNase	Not detected

Applications: This tracking dye is added to DNA and RNA samples prior to electrophoresis on agarose gels.
Components: Amaranth (<1.0%), Ficoll* (15%), Proprietary Component (<1.0%), and Water.
[915-67-3 (Amaranth)] ; [26873-85-8 (Ficoll*)]
Recommended Storage: RT

Bromophenol Blue
Free Acid

packaging		Mfr. No
25 g	AmberGlass	BP115-25

$C_{19}H_{10}Br_4O_5S$ EINECS: 204-086-2
CAS: 115-39-9
MW: 669.96

$E^{1\%}_{1cm}$	>=1000g-1cm-1
Lambda Max.	591nm ±2nm
Loss on Drying (at 105°C)	<=5%
Solubility	To pass test

Applications: Used as a tracking dye in electrophoresis.
Recommended storage: RT

Bromophenol Blue Sodium Salt

packaging		Mfr. No
25 g	AmberGlass	BP114-25

$C_{19}H_9Br_4NaO_5S$ P261, P302+P352, P280, P305+P351+P338
CAS: 62625-28-9
MW: 691.94
H335, H319, H315

Clarity of Solution	To pass test
$E^{1\%}_{1cm}$	>=800g-1cm-1
Lambda Max. in 0.05M Sodium Acetate	585-595nm
Visual Transition Interval	To pass test

Applications: Commonly used as a tracking dye in electrophoresis.
Recommended storage: RT

Boric Acid — Electrophoresis
Crystalline

packaging		Mfr. No
500 g	PolyBottle	BP168-500
1 kg	PolyBottle	BP168-1

H_3BO_3 H360FD
CAS: 10043-35-3 P310, P201, P308+P313, P304+P340
MW: 61.83
EINECS: 233-139-2

Assay	>=99.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.001%
DNase	Not detected
Electrophoresis	To pass test
Heavy Metals (Pb)	<=0.001%
Insoluble in Methanol	<=0.005%
Iron	<=0.001%
Nonvolatile with Methanol	<=0.05%
Phosphate (PO_4)	<=0.001%
Sulfate (SO_4)	<=0.010%

Applications: This high-purity electrophoresis-grade reagent is used in the preparation of Tris/Borate/EDTA electrophoresis buffers.
Recommended Storage: RT

Ethidium Bromide

packaging		Mfr. No
1 g	AmberGlass	BP102-1
5 g	AmberGlass	BP102-5

$C_{21}H_{20}BrN_3$ H341, H330, H302
CAS: 1239-45-8 P310, P281,
MW: 394.3 P304+P340
EINECS: 214-984-6

$E^{1\%}_{1cm}$	>=100ℓ g-1cm-1
Lambda Max.	480nm ±2nm
Loss on Drying (at 105°C)	<=5%
Solubility	To pass test

Applications: Fluorometric detection of double stranded nucleic acids. Also acts as an RNA polymerase inhibitor, and in separation of high molecular weight DNAs.
Recommended storage: RT

Ethidium Bromide — Molecular Biology
1% Solution

packaging		Mfr. No
10 mℓ	AmberPolyBottle	BP1302-10

$C_{21}H_{20}BrN_3$ H331, H341
CAS: 1239-45-8 P310, P281,
MW: 394.3 P304+P340
EINECS: 214-984-6

Appearance	Clear, reddish-brown liquid
DNase	Not detected
Electrophoresis	To pass test
$E^{1\%}_{1cm}$	.>100 absorbance units
Lambda Max.	480nm ±2nm
Protease	Not detected
RNase	Not detected

Filtered through a 0.2-micron filter.
Recommended storage: RT

Formaldehyde — Molecular Biology
37% by Weight

packaging		Mfr. No
25 mℓ	AmberGlass	BP531-25
500 mℓ	AmberGlass,EcoSafPak*	BP531-500

CH_2O P280, P301+P330+P331,
CAS: 50-00-0 P305+P351+P338,
MW: 30.02 P304+P340, P302+P352,
EINECS: 200-001-8 P301+P312, P210
H226, H314, H317, H370,
H311, H331, H301, H351

Assay (HCHO)	>=36.5-38%
Chloride (Cl)	<=5ppm
Color (APHA)	<=10
Heavy Metals (Pb)	<=5ppm
Iron	<=2ppm
Methanol	10-15%
pH (at 25°C)	3 to 4
Residue after ignition	<=0.005%
Sulfate (SO_4)	<=0.002%
Titratable Acid	<=0.006mEq/g

Applications: Molecular Biology-grade Formaldehyde is used for denaturing RNA.
Components: 37% Formaldehyde, 15% Methyl Alcohol and 48% Water.
[50-00-0 (Formaldehyde)] ; [67-56-1 (Methyl Alcohol)]
Recommended Storage: RT
UN 1198; DOT Class 3:Flammable Liquid
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Glycerol Gel-Loading Dye, 5X — Molecular Biology
Contains 30% Glycerol

packaging		Mfr. No
1 mℓ	PolyTube	BP645-1
5 mℓ	PolyBottle	BP645-5

DNase	Not detected
Optical Absorbance (dilution 1:500 with deionized water) at 525nm	0.25-0.45
Optical Absorbance (dilution 1:500 with deionized water) at 588-594nm	0.30-0.45
Optical Absorbance (dilution 1:500 with deionized water) at 635-641nm	0.25-0.40
RNase	Not detected

Applications: This dye is added to DNA and RNA samples prior to electrophoresis on agarose gels.
Components: Glycerol (30%), Proprietary Components (<6%), and Water
[56-81-5 (Glycerol)]
Recommended Storage: RT

Glyoxal — Electrophoresis
40% w/v

packaging		Mfr. No
500 mℓ	AmberGlass	BP1370-500

$C_2H_2O_2$ P280, P261, P308+P313,
CAS: 107-22-2 P305+P351+P338,
MW: 58.04 P302+P352, P333+P313
EINECS: 203-474-9
H341, H332, H319, H315, H317

Density (at 20°C)	1.26-1.29g/mℓ
Electrophoresis of RNA	To pass test
pH (at 25°C)	2.0 to 3.5

Applications: Glyoxal is used to denature RNA prior to agarose gel electrophoresis. Since Glyoxal is readily oxidized by air, it should be deionized with a mixed-bed resin, dispensed into aliquots, and then stored at -20°C.
Recommended Storage: 4°C
UN 1760; DOT Class 8:Corrosive

Methanol — Sequencing
Peroxide-free

packaging		Mfr. No
1 ℓ	AmberGlass,EcoSafPak*	BP1105-1
4 ℓ	AmberGlass	BP1105-4

CH_4O
CAS: 67-56-1
MW: 32.04
EINECS: 200-659-6
H225, H301, H311, H331, H370

P301+P310, P280, P302+P350, P304+P340, P210, P240

Acetone	To pass test
Assay	>=99.9%
Color (APHA)	<=5
Fluorescence Background (as Quinine Sulfate)	To pass test
Fluorescent Derivatizable Amines	To pass test
IR	Conforms to standard
LC Gradient Suitability	To pass test
Optical Absorbance at 205nm	<=1.00
Optical Absorbance at 220nm	<=0.30
Optical Absorbance at 230nm	<=0.15
Optical Absorbance at 254nm	<=0.025
Peroxides	<=0.001%
Reactive Impurities with H_2SO_4	Not detected
Refractive Index (at 25°C)	1.3260-1.3300
Residue after evaporation	<=3 ppm
Solubility in H_2O	To pass test
Substances Reducing Permanganate	To pass test
Titratable Acid	<=0.0003mEq/g
Titratable Base	<=0.0002mEq/g
Water	<=0.1%

Applications: Used in staining and destaining protein electrophoresis gels, in HPLC, and in other biological applications.
Recommended storage: RT
Also available in recyclable FisherPak* and NOWPak* containers. EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Sequencing Gel-Loading Dye, 3X
Contains 98% Formamide

packaging		Mfr. No
1 mℓ	PolyTube	BP639-1

DNase	Not detected
Optical Absorbance (dilution 1250 with deionized water) at 525nm	0.40-0.50
Optical Absorbance (dilution 1250 with deionized water) at 588-594nm	0.60-0.75
Optical Absorbance (dilution 1250 with deionized water) at 635-641nm	0.50-0.67
RNase	Not detected

Applications: This loading dye also denatures nucleic acid samples prior to electrophoresis on sequencing gels.
Components: 98% Formamide (<90%), Proprietary Component (<3%), and Water.
[75-12-7 (98% Formamide)]

TBE Buffer Mix — Electrophoresis
Dry Powder Mix of Tris/Boric Acid/EDTA

packaging		Mfr. No
86.1 g	PolyBottle	BP1396-86

CAS: 610769-35-2
H360FD, H315, H319, H335
P280, P305+P351+P338, P201, P308+P313

DNase	Not detected
Electrophoresis of DNA with 5X diluted buffer	Pass test
pH (at 25°C)	8.3±0.2
RNase	Not detected
Solubility (in 1ℓ final volume)	Clear, colorless with no suspending impurities

Recommended Storage: RT
Applications: Electrophoresis buffer.
Makes 1 liter of 5X buffer. Final concentration of components in 1X buffer: 0.089M Tris, 0.089M Boric Acid, 0.002M EDTA.
[77-86-1 (Tris)] ; [6381-92-6 (EDTA)] ; [10043-35-3 (Boric Acid)]

Tris-Acetate-EDTA — Electrophoresis
25X Powder

packaging		Mfr. No
1	FoilPack	BP1331-1

CAS: 135852-26-5

Conductivity of a 1X Solution (at 25°C)	1300±200µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.3±0.1
Protease	Not detected
RNase	Not detected
Solubility	To pass test

Applications: Tris-Acetate-EDTA (TAE) is commonly used as a buffer for nucleic acid electrophoresis.
Each pack contains preweighed powder to make 1ℓ of a 25X solution (1M Tris-Acetate and 0.025M EDTA).
Components: Tris (64.36%), Acetic Acid, Sodium Salt (31.91%) and Ethylenediamine Tetraacetic Acid (3.72%).
[77-86-1 (Tris)] ; [127-09-3 (Acetic Acid, Sodium Salt)] ; [60-00-4 (EDTA)]
Recommended Storage: RT

Tris-Borate-EDTA — Electrophoresis
10X Powder

packaging	Mfr. No
1	BP1334-1

CAS: 610769-35-2
H360FD, H315, H319, H335
P280, P305+P351+P338, P201, P308+P313

DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.3±0.1
Protease	Not detected
RNase	Not detected
Solubility (1X concentration 1g/60mℓ H_2O)	Clear, colorless with no suspending impurities

Applications: Tris-Borate-EDTA (TBE) is commonly used as a buffer for nucleic acid electrophoresis.
Each pack contains preweighed powder to make 1ℓ of a 10X solution (0.89M Tris Base, 0.89M Boric Acid, and 0.02M EDTA).
Components: Tris (63.91%), Boric Acid (32.54%), and EDTA (3.55%).
[77-86-1 (Tris)] ; [10043-35-3 (Boric Acid)] ; [60-00-4 (EDTA)]
Recommended Storage: RT

Tris Buffer — Molecular Biology
2M Solution

packaging		Mfr. No
100 mℓ	PolyBottle	BP1759-100
500 mℓ	PolyBottle	BP1759-500

CAS: 77-86-1
EINECS: 201-064-4
H315, H319, H335

P280, P305+P351+P338, P261, P302+P352, P264, P271

Arsenic	<0.0005%
Copper	<0.0001%
DNase	Not detected
Iron	<0.0001%
Lead	<0.0001%
Magnesium (Mg)	<0.0005%
Optical Absorbance of a 1M Solution at 280nm	<0.05
pH (at 25°C)	10.1-11.1
Protease	Not detected
RNase	Not detected
Tris Concentration	2±0.05M

Applications: Tris is a buffer component in molecular biology, tissue culture, and electrophoresis procedures.
Tris Solution, 2M, provides a convenient stock solution for preparing Tris buffers.
Recommended Storage: RT

Tris Hydrochloride Solution pH 7.0 — Molecular Biology
1M solution, High Purity, Low Metal

packaging		Mfr. No
100 mℓ	PolyBottle	BP1756-100
500 mℓ	PolyBottle	BP1756-500

CAS: 1185-53-1
EINECS: 214-684-5
H315, H319

P280, P305+P351+P338, P302+P352

Arsenic	<0.0005%
Calcium (Ca)	<0.0002%
Copper	<0.0001%
DNase	Not detected
Iron	<0.0001%
Lead	<0.0001%
Magnesium (Mg)	<0.0005%
Molar Concentration	1±0.04M
Protease	Not detected
RNase	Not detected
Zinc	<0.0001%

Applications: Tris is a buffer component in molecular biology, tissue culture, and electrophoresis procedures.
[77-86-1 (Tris)] ; [1185-53-1 (Tris HCl)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris Buffer — Molecular Biology
0.3M Solution

packaging		Mfr. No
500 mℓ	PolyBottle	BP1761-500
1 ℓ	PolyBottle	BP1761-1

CAS: 77-86-1
EINECS: 201-064-4

DNase	Not detected
Molarity	0.3±0.010
pH (at 25°C)	10.1 to 11.1
Protease	Not detected
RNase	Not detected

Applications: Tris is a buffer component in molecular biology, tissue culture, and electrophoresis procedures.
Tris Solution, 0.3M, provides a convenient stock solution for these applications.
Recommended Storage: RT

Tris Hydrochloride Solution pH 7.5 — Molecular Biology
1M solution, High Purity, Low Metal

packaging		Mfr. No
100 mℓ	PolyBottle	BP1757-100
500 mℓ	PolyBottle	BP1757-500

CAS: 1185-53-1
EINECS: 214-684-5
H315, H319

P280, P305+P351+P338, P302+P352

Arsenic	<0.0005%
Calcium (Ca)	<0.0002%
Copper	<0.0001%
DNase	Not detected
Iron	<0.0001%
Lead	<0.0001%
Magnesium (Mg)	<0.0005%
Molar Concentration	1±0.04M
Protease	Not detected
RNase	Not detected
Zinc	<0.0001%

Applications: Tris is a buffer component in molecular biology, tissue culture, and electrophoresis procedures.
[77-86-1 (Tris)] ; [1185-53-1 (Tris HCl)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-EDTA — Molecular Biology
100X Powder

packaging		Mfr. No
1	FoilPack	BP1339-1

CAS: 38641-82-6
H315, H319, H335
P280, P261, P305+P351+P338, P302+P352, P264, P271

Conductivity of a 1X Solution (at 25°C)	560 to 740µmhos/cm
DNase	Not detected
pH (1X solution) (at 23°C)	8.0±0.1
Protease	Not detected
RNase	Not detected
Solubility	To pass test

Applications: Tris-EDTA (TE) is routinely used for suspending nucleic acid samples.
Each pack contains preweighed powder to make 1ℓ of a 100X solution (1.0M Tris Base and 0.1M EDTA).
[77-86-1 (Tris)] ; [60-00-4 (EDTA)]
Recommended Storage: RT

Tris Hydrochloride Solution pH 8.0
Molecular Biology
1M solution, High Purity, Low Metal

packaging		Mfr. No
100 mℓ	PolyBottle	**BP1758-100**
500 mℓ	PolyBottle	**BP1758-500**

CAS: 1185-53-1
EINECS: 214-684-5
H315, H319
P280, P305+P351+P338, P302+P352

Arsenic	<0.0005%
Calcium (Ca)	<0.0002%
Copper	<0.0001%
DNase	Not detected
Iron	<0.0001%
Lead	<0.0001%
Magnesium (Mg)	<0.0005%
Molar Concentration	1±0.04M
Protease	Not detected
RNase	Not detected
Zinc	<0.0001%

Applications: Tris is a buffer component in molecular biology, tissue culture, and electrophoresis procedures.
[77-86-1 (Tris)] ; [1185-53-1 (Tris HCl)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-Acetate-EDTA
Electrophoresis
25X Solution

packaging		Mfr. No
1 ℓ	PolyBottle	**BP1330-1**

CAS: 135852-26-5
H315, H319
P264, P280, P305+P351+P338, P302+P352

Conductivity of a 1X Solution (at 25°C)	Report
DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.3±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-Acetate-EDTA (TAE) is commonly used as a buffer for nucleic acid electrophoresis.
1M Tris-Acetate and 0.025M EDTA.
Components: Tris (11.31%), EDTA Disodium Salt (0.87%), Acetic Acid, Sodium Salt (7.66%), and Hydrogen Chloride (3.74%).
[77-86-1 (Tris)] ; [6381-92-6 (EDTA Disodium Salt)] ; [127-09-3 (Acetic Acid, Sodium Salt)] ; [7647-01-0 (Hydrogen Chloride)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-Acetate-EDTA
Electrophoresis
10X Solution

packaging		Mfr. No
500 mℓ	PolyBottle	**BP1335-500**
1 ℓ	PolyBottle	**BP1335-1**
4 ℓ	PolyPac*	**BP1335-4**
20 ℓ	PolyPac*	**BP1335-20**

CAS: 135852-26-5
H315, H319
P264, P280, P305+P351+P338, P302+P352

DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.2-8.4
Protease	Not detected
RNase	Not detected

Applications: Tris-Acetate-EDTA (TAE) is commonly used as a buffer for nucleic acid electrophoresis.
0.4M Tris-Acetate and 0.01M EDTA.
Components: Tris (<5.0%), Acetic Acid (1.0%), and EDTA (<1%).
[77-86-1 (Tris)] ; [64-19-7 (Acetic Acid)] ; [60-00-4 (EDTA)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-Acetate-EDTA
Electrophoresis
50X Solution

packaging		Mfr. No
500 mℓ	PolyBottle	**BP1332-500**
1 ℓ	PolyBottle	**BP1332-1**
4 ℓ	PolyPac*	**BP1332-4**
20 ℓ	PolyPac*	**BP1332-20**

CAS: 135852-26-5
H315, H319
P264, P280, P305+P351+P338, P302+P352

Conductivity of a 1X Solution (at 25°C)	Report
DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.2-8.4
Protease	Not detected
RNase	Not detected

Applications: Tris-Acetate-EDTA (TAE) is commonly used as a buffer for nucleic acid electrophoresis.
2M Tris-Acetate and 0.050M EDTA.
Components: Tris (24%), Acetic Acid (5.0%), and EDTA (<2%).
[77-86-1 (Tris)] ; [64-19-7 (Acetic Acid)] ; [60-00-4 (EDTA)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-Acetate-EDTA
Electrophoresis
1X Solution

packaging		Mfr. No
4 ℓ	PolyPac*	**BP2434-4**
20 ℓ	PolyPac*	**BP2434-20**

CAS: 135852-26-5

Conductivity of a 1X Solution (at 25°C)	Report
DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.3±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-Acetate-EDTA (TAE) is commonly used as a buffer for nucleic acid electrophoresis.
0.04M Tris-Acetate and 0.001M EDTA.
[77-86-1 (Tris)] ; [64-19-7 (Acetic Acid)] ; [60-00-4 (EDTA)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-EDTA
Molecular Biology
100X Solution

packaging		Mfr. No
1 ℓ	PolyBottle	**BP1338-1**
4 ℓ	PolyPac*	**BP1338-4**

CAS: 38641-82-6
H315, H319
P280, P305+P351+P338, P302+P352

DNase	Not detected
pH (1X solution) (at 23°C)	8.0±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-EDTA (TE) is routinely used for suspending nucleic acid samples.
1.0M Tris Base and 0.1M EDTA.
[77-86-1 (Tris)] ; [60-00-4 (EDTA)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-Borate-EDTA
Electrophoresis
10X Solution

packaging		Mfr. No
1 ℓ	PolyBottle	**BP1333-1**
4 ℓ	PolyPac*	**BP1333-4**
20 ℓ	PolyPac*	**BP1333-20**

CAS: 610769-35-2
H360FD, H315, H319
P280, P305+P351+P338, P308+P313, P201

Conductivity of 1X solution (at 25°C)	750-1250µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.3±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-Borate-EDTA (TBE) is commonly used as a buffer for nucleic acid electrophoresis.
0.89M Tris Base, 0.89M Boric Acid, and 0.02M EDTA.
Components: Tris (10.8%), Boric Acid (5.5%), and EDTA (0.6%) [77-86-1 (Tris)] ; [10043-35-3 (Boric Acid)] ; [60-00-4 (EDTA)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Xylene Cyanole FF
Electrophoresis
Bluish-green Powder

packaging		Mfr. No
10 g	AmberGlass	**BP565-10**

$C_{25}H_{27}N_2NaO_6S_2$
CAS: 2650-17-1
MW: 538.61
EINECS: 220-167-5
H315, H319, H335
P280, P305+P351+P338

Absorption Maxima	614±2nm
DNase	Not detected
Loss on Drying (at 105°C)	<=10.0%
Molar Absorbance (Em, H2O)	>30.000
RNase	Not detected

Applications: This dye is used in electrophoretic applications to mark the migration position of nucleic acid fragments.
Recommended Storage: RT
C.I. 42135

Tris-Borate-EDTA
Electrophoresis
1X Solution

packaging		Mfr. No
1 ℓ	PolyBottle	**BP2430-1**
4 ℓ	PolyPac*	**BP2430-4**
20 ℓ	PolyPac*	**BP2430-20**

CAS: 610769-35-2

DNase	Not detected
Electrophoresis	To pass test
pH of 1X solution (at 25°C)	8.3±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-Borate-EDTA (TBE) is commonly used as a buffer for nucleic acid electrophoresis.
0.089M Tris Base, 0.089M Boric Acid, and 0.002M EDTA.
[77-86-1 (Tris)] ; [6381-92-6 (EDTA)] ; [10043-35-3 (Boric Acid)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

100 Base-Pair Ladder

packaging		Mfr. No
50 µg	PolyMicroTube	**BP2551-50**

Applications: For precise sizing of double-stranded DNA fragments from 100-2000 bp on agarose gels.
Supplied at 1µg/µℓ in TE buffer.
Consists of multiple repeats of a 100 bp fragment.
Not designed for quantifying DNA content in a sample.
Can be visualized by ethidium bromide staining or by autoradiography (after radiolabeling).
Recommended Gel: 1.5% agarose with loading amount of 2.0µg/lane.
Do not heat before loading.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Fisher BioReagents* *ex*ACTG*ene** 50 bp Mini DNA Ladder

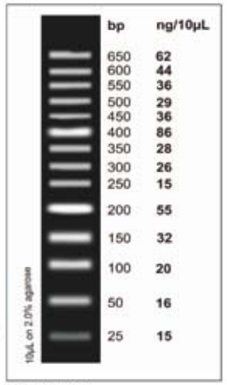
Ready-to-use DNA size standards are stable at room temperature—no need to thaw and refreeze

- 25-650 bp range
- **Number of Bands:** 14
- Higher intensity reference band at 200 and 400 bp
- Ideal for size determination and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: PCR Size Confirmation

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).

STORAGE CONDITIONS: Stable at room temperature for two years.



BP2570-100

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2570-100

Fisher BioReagents* *ex*ACTG*ene** Low Range DNA Ladder

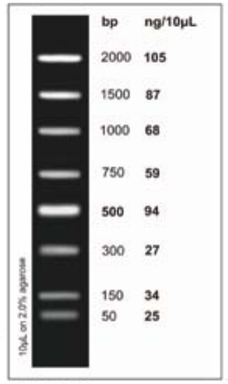
Ready-to-use DNA size standards are stable at room temperature—no need to thaw and refreeze

- 50-2000 bp range
- **Number of Bands:** 8
- Higher intensity reference band at 500 bp
- Ideal for size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: Quick Check of PCR Amplicons or Enzyme Digestion results

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).

STORAGE CONDITIONS: Stable at room temperature for two years.



BP2572-100

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2572-100

Fisher BioReagents* *ex*ACTG*ene** 100 bp PCR DNA Ladder

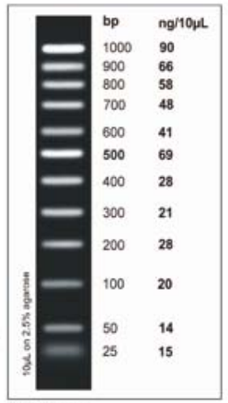
Ready-to-use DNA size standards are stable at room temperature—no need to thaw and refreeze

- 25-1000 bp range
- **Number of Bands:** 12
- Higher intensity reference band at 500 bp
- Ideal for size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: PCR Size Confirmation and Small DNA Digests

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).

STORAGE CONDITIONS: Stable at room temperature for two years.



BP2571-100

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2571-100

Fisher BioReagents* *ex*ACTG*ene** Low Range Plus DNA Ladder

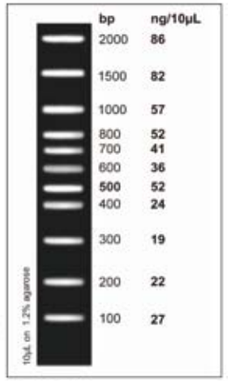
Ready-to-use DNA size standards are stable at room temperature—no need to thaw and refreeze

- 100-2000 bp range
- **Number of Bands:** 11
- Higher intensity reference band at 500 bp
- Ideal for size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: Fast Run Times, Small Size DNA

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).

STORAGE CONDITIONS: Stable at room temperature for two years.



BP2574-100

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2574-100

Fisher BioReagents* *ex*ACTG*ene** 100 bp DNA Ladder

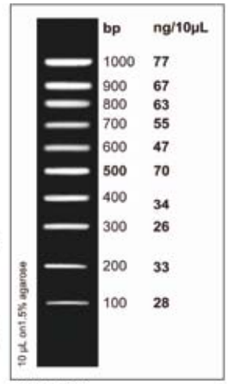
Ready-to-use DNA size standards are stable at room temperature—no need to thaw and refreeze

- 100-1000 bp range
- **Number of Bands:** 10
- Higher intensity reference band at 500 bp
- Ideal for size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: General Purpose and Small Size DNA

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).

STORAGE CONDITIONS: Stable at room temperature for two years.



BP2573-100

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2573-100

Fisher BioReagents* *ex*ACTG*ene** Mid Range DNA Ladder

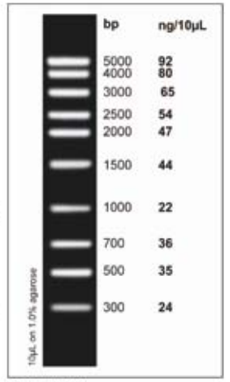
Ready-to-use DNA size standards are stable at room temperature—no need to thaw and refreeze

- 300-5000 bp range
- **Number of Bands:** 10
- Ideal for size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: Large Size PCR confirmation or cloning application

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).

STORAGE CONDITIONS: Stable at room temperature for two years.



BP2576-100

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2576-100

Fisher BioReagents* *ex*ACTG*ene** Cloning DNA Ladder

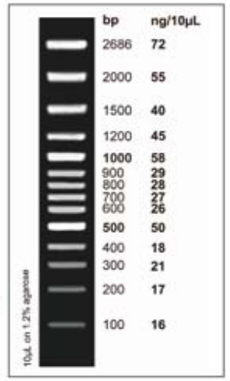
Ready-to-use DNA size standards are stable at room temperature—no need to thaw and refreeze

- 100-2686 bp range
- **Number of Bands:** 14
- Higher intensity reference band at 500 and 1000 bp
- Ideal for size assessment and quantitative determination of DNA mass
- A 2686 bp (pUC 19) reference band for clone identification
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: Clone Identification

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).

STORAGE CONDITIONS: Stable at room temperature for two years.



BP2575-100

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2575-100

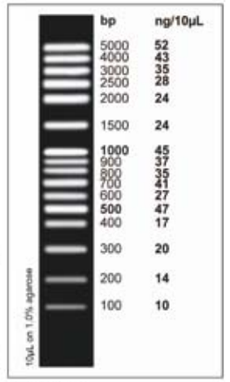
Fisher BioReagents* *ex*ACTG*ene** Mid Range Plus DNA Ladder

Ready-to-use DNA size standards are stable at room temperature—no need to thaw and refreeze

- 100-5000 bp range
- **Number of Bands:** 16
- Higher intensity reference band at 500 and 1000 bp
- Ideal for size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: Small and Large Cloning Applications

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).



BP2577-100

STORAGE CONDITIONS: Stable at room temperature for two years.

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2577-100

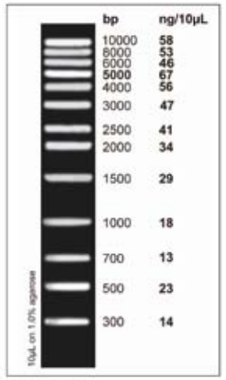
Fisher BioReagents* *exACTGene** 1kb DNA Ladder

Ready-to-use DNA size standards are stable at room temperature— no need to thaw and refreeze

- 300-10,000 bp range
- **Number of Bands:** 13
- Higher intensity reference band at 5000 bp
- Ideal for size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: General Purpose, Large Digested DNA

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).



BP2578-100

STORAGE CONDITIONS: Stable at room temperature for two years.

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2578-100

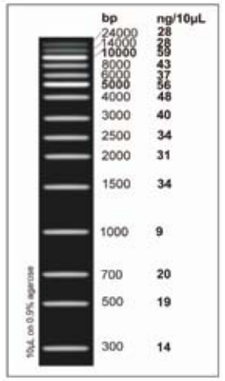
Fisher BioReagents* *exACTGene** 24kb Max DNA Ladder

Ready-to-use DNA size standards are stable at room temperature— no need to thaw and refreeze

- 300-24,000 bp range
- **Number of Bands:** 15
- Higher intensity reference band at 10,000 bp
- Ideal for wide range size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: General Purpose, Extra Large Size DNA

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).



BP2580-100

STORAGE CONDITIONS: Stable at room temperature for two years.

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2580-100

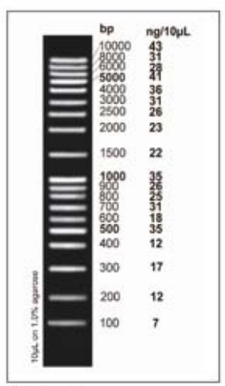
Fisher BioReagents* *exACTGene** 1kb Plus DNA Ladder

Ready-to-use DNA size standards are stable at room temperature— no need to thaw and refreeze

- 100-10,000 bp range
- **Number of Bands:** 19
- Higher intensity reference band at 500, 1000 and 5000 bp
- Ideal for wide range size assessment and quantitative determination of DNA mass
- Contain loading dye to reduce pipetting steps and save time
- Provided in sufficient quantity to load 100 lanes

APPLICATIONS: General Purpose, Wide DNA Size Range

INCLUDES: 1mL of premixed ladder (0.5µg/10µL) in loading dye (10mM EDTA, 10% glycerol, 0.015% bromophenol blue, 0.17% SDS).



BP2579-100

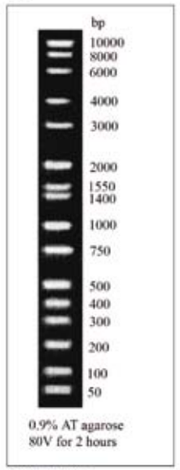
STORAGE CONDITIONS: Stable at room temperature for two years.

Quantity	Packaging	MFR No.
1000µL	Poly Micro Tube	BP2579-100

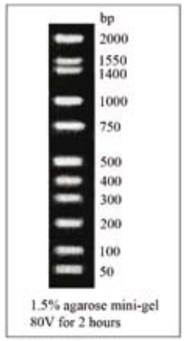
Fisher BioReagents* Routine DNA Ladders

Ready-to-use DNA size standards are room-temperature stable for up to two years

- Both ladders include a landmark doublet at 1400 and 1550 bp



BP2582-200



BP2581-200

Marker (Base Pair Range)	No. of Bands	Application	Size	MFR No.
100 bp Low Scale DNA Ladder (50 to 2000 bp)	11	PCR Size Confirmation	1000µL (200 loadings)	BP2581-200
1kb Full Scale DNA Ladder (50 to 10,000 bp)	16	General Purpose, Wide DNA Size Range	1000µL (200 loadings)	BP2582-200

250 Base-Pair Ladder

packaging		Mfr. No
200 µg	PolyMicroTube	BP2552-100

Applications: For precise sizing of double-stranded DNA fragments from 250-2000 bp on agarose gels.
Supplied at 1µg/µℓ in TE buffer (pH 7.5).
Consists of multiple repeats of a 250 bp fragment.
Not designed for quantifying DNA content in a sample.
Recommended Gel: 1% agarose with loading amount of 2.0µg/lane.
Do not heat before loading.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

50 Base-Pair Ladder

packaging		Mfr. No
200 µg	PolyMicroTube	BP2550-100

Applications: For precise sizing of average-sized PCR products and other DNAs from 50-500 bp on agarose gels.
Supplied at 1µg/µℓ in TE buffer (pH 7.5).
Consists of multiple repeats of a 50 bp fragment.
Can be visualized by ethidium bromide staining or by autoradiography (after radiolabeling).
Recommended Gel: 2% agarose/ 6% polyacrylamide with loading amount of 2.0µg/lane.
Do not heat before loading.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Kilobase DNA Marker

packaging		Mfr. No
50 µg	PolyMicroTube	BP2553-100

Applications: For quick and precise sizing of double-stranded DNA fragments from 500 bp to 10.0kb on agarose gels.
Supplied at 0.5µg/µℓ in TE buffer (pH 8.0).
Consists of 11 easily identifiable bands - 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 8.0, and 10.0kb - when run on a 0.8% agarose gel.
Not designed for quantifying DNA content in a sample.
Recommended Gel: 0.8% agarose with loading amount of 0.5µg/lane.
Do not heat before loading.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

DNA-Hind III Digest

packaging		Mfr. No
100 µg	PolyMicroTube	BP2556-200

Applications: For sizing DNA fragments from 125 to 23.130 bp on agarose gels.
Recommended Gel: 1% agarose with loading amount of 0.5µg/lane.
Contains lambda DNA that has been digested with restriction enzyme.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

DNA-Hind III/phi X-174 RF DNA-Hae III Digest

packaging		Mfr. No
25 µg	PolyMicroTube	BP2555-25

Applications: For sizing DNA fragments from 72 to 23.130 bp on agarose gels. Contains a combination of lambda DNA and phi X-174 RF DNA that has been digested with restriction enzyme.
Recommended Gel: 1% agarose with loading amount of 0.5-1.0µg/lane.
Heat before loading at 60°-65°C for 2 minutes.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

DNA-Hind III/phi X-174 RF DNA-Hae III Digest
Lyophilized Powder

packaging		Mfr. No
25 µg	PolyMicroTube	BP2554-25

Applications: For sizing DNA fragments from 72 to 23.130 bp on agarose gels. Contains a combination of lambda DNA and phi X-174 RF DNA that has been digested with restriction enzyme.
Recommended Gel: 1% agarose with loading amount of 0.5-1.0µg/lane.
Heat before loading at 60°-65°C for 2 minutes.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Ø X-174 RF DNA-Hae III Digest

packaging		Mfr. No
10 µg	PolyMicroTube	BP2558-10
100 µg	PolyMicroTube	BP2558-100

Applications: For sizing DNA fragments from 72 to 1.353 bp on agarose gels.
Recommended Gel: 1% agarose with loading amount of 0.5µg/lane.
Do not heat before loading.
Contains phi X-174 RF DNA that has been digested with restriction enzyme.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Collagenase From Clostridium histolyticum — Islet Isolation Grade
Yellowish Brown Lyophilized Powder

packaging		Mfr. No
1 g	AmberGlass	BP2649-1

CAS: 9001-12-1

Activity ..... >=3.500units/g

Applications: Collagenase is most suitable for pancreatic islet isolation.
Unit Definition: One unit will liberate peptides from collagen equivalent in ninhydrin color to 3.0µmole of L-leucine in 18 hr. at pH 7.4 and 37°C.
Inhibitors:Hg^{2+}, Pb^{2+}, Cd^{2+}, Cu^{2+}, Zn^{2+}, EDTA, o-phenanthroline.
Recommended Storage: 0° to 5°C, desiccate

Cytosine-β-D-Arabinofuranoside Hydrochloride
White Powder

packaging		Mfr. No
100 mg	AmberGlass	**BP2512-100**
500 mg	AmberGlass	**BP2512-500**
5 g	AmberGlass	**BP2512-5**
10 g	AmberGlass	**BP2512-10**

$C_9H_{13}N_3O_5$.HCl
CAS: 69-74-9
MW: 279.67

H317, H319, H361d
P280, P281,
P305+P351+P338

FTIR ..... Conforms to standard
Melting Point ..... 185°-195°C
Optical Rotation α^{25}_{D} ..... +130° ± 5° (c=1, water)
Tested for ..... RNase activity, protease activity, and specific performance tests.
UV/VIS: lambda max (H_2O) ..... 280 ± 6nm

Applications: Cytosine-β-D-Arabinofuranoside Hydrochloride inhibits incorporation of labeled thymidine into DNA.
Recommended Storage: 4°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Lysozyme, Egg White
White Crystalline Powder

packaging		Mfr. No
1 g	AmberGlass	**BP535-1**
5 g	AmberGlass	**BP535-5**
10 g	AmberGlass	**BP535-10**
25 g	AmberGlass	**BP535-25**
100 g	AmberGlass	**BP535-100**

CAS: 12650-88-3
EINECS: 235-747-3

Activity ..... Approx. 20.000 units/mg protein
Salmonella ..... None detected
Solubility ..... Pass test
Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: This enzyme is used to lyse E. coli for preparation of plasmid DNA from transformed cell cultures.
Recommended Storage: <0° C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 1198

OPTIZYME™ Alkaline Phosphatase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
1000 units Poly Tube	**BP8097-1**
3000 units Poly Tube	**BP8097-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Dephosphorylation of cloning vector DNA to prevent recircularization during ligation; PCR product clean-up: nucleotide degradation prior to sequencing of PCR product; Dephosphorylation of nucleic acid 5′-termini prior to labeling with T4 Polynucleotide Kinase; Other applications where dephosphorylation of DNA and RNA substrates is necessary; Protein dephosphorylation.
Description: OPTIZYME™ Alkaline Phosphatase catalyzes the release of 5′- and 3′- phosphate groups from DNA, RNA and both ribo- and deoxyribonucleoside triphosphates. OPTIZYME Alkaline Phosphatase also removes phosphate groups from proteins.
Supplied With: 10X OPTIZYME™ AP Buffer (100mM Tris-HCl (pH 8.0 at 37°C), 50mM MgCl2, 1M KCl, 0.2% (v/v) Triton X-100, 1 mg/mℓ BSA)
Concentration: 1 u/µℓ
Storage Buffer Components: 20 mM HEPES-NaOH (pH 7.4), 1 mM MgCl2, 0.1 mM ZnCl2, 0.1% (v/v) Triton X-100 and 50% (v/v) glycerol.
Unit Definition: One unit is the amount of the enzyme required to dephosphorylate 5′-termini of 1 µg of linearized pUC57 DNA in 10 min at 37°C in OPTIZYME AP Buffer.
Tested for: Endo-, exodeoxyribonuclease and ribonuclease-free; Functionally tested for dephosphorylation of 5′-termini of overhanging, recessed and blunt DNA.
Recommended storage: -20°C

OPTIZYME DNA Polymerase I
Source: Recombinant E. Coli Strain

packaging	Mfr. No
500 units Poly Tube	**BP8109-1**
2500 units Poly Tube	**BP8109-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: DNA labeling by nick-translation in conjunction with DNase I; Second-strand cDNA synthesis in conjunction with RNase H; Filling-in of 5′-overhangs
Description: OPTIZYME™ DNA Polymerase I, a template-dependent DNA polymerase, catalyzes 5′>3′ synthesis of DNA. The enzyme also exhibits 3′>5′ exonuclease (proofreading) activity, 5′>3′ exonuclease activity and ribonuclease H activity.
Supplied With: 10X OPTIZYME™ DNA Pol I Buffer (500mM Tris-HCl (pH 7.5 at 25°C), 100mM MgCl2, 10mM DTT).
Concentration: 10u/µℓ
Storage Buffer Components: 25 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM DTT and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme catalyzes the incorporation of 10 nmol of deoxyribonucleotides into a polynucleotide fraction (adsorbed on DE-81) in 30 min at 37°C, using poly(dA-dT)·poly(dA-dT) as a template·primer. Enzyme activity is assayed in the following mixture: 67 mM potassium phosphate (pH 7.4), 6.7 mM MgCl2, 1 mM 2-mercaptoethanol, 0.033 mM dATP, 0.033 mM dTTP, 0.4 MBq/mℓ -dTTP and 62.5 µg/mℓ poly(dA-dT) poly(dA-dT).
Tested for: Endodeoxyribonuclease-free
Recommended storage: -20°C

OPTIZYME™ DNase I, RNase-Free
Source: Recombinant E. Coli Strain

packaging	Mfr. No
1000 units Poly Tube	**BP8107-1**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Preparation of DNA-free RNA; Removal of template DNA following in vitro transcription; Preparation of DNA-free RNA prior to RT-PCR and RT-qPCR; DNA labeling by nick-translation in conjunction with DNA Polymerase I; Studies of DNA-protein interactions by DNase footprinting.
Description: OPTIZYME™ DNase I, RNase-Free is an endonuclease that digests single- and double-stranded DNA. It hydrolyzes phosphodiester bonds producing mono- and oligodeoxyribonucleotides with phosphate and OH groups. The enzyme activity is strictly dependent on Ca2+ and is activated by Mg2+ or Mn2+ ions: (1) In the presence of Mg2+, DNase I cleaves each strand of dsDNA independently, in a statistically random fashion; (2) In the presence of Mn2+, the enzyme cleaves both DNA strands at approximately the same site, producing DNA fragments with blunt ends or with one or two nucleotide overhangs.
Supplied With: 10X OPTIZYME™ DNase I Buffer (100mM Tris-HCl (pH 7.5 at 25°C), 25mM MgCl2, 1mM CaCl2); 50mM OPTIZYME™ EDTA
Concentration: 1u/µℓ
Storage Buffer Components: 50 mM Tris-HCl (pH 7.5), 10 mM CaCl2 and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme completely degrades 1 µg of plasmid DNA in 10 min at 37°C. Enzyme activity is assayed in the following mixture: 10 mM Tris-HCl (pH 7.5 at 25°C), 2.5 mM MgCl2, 0.1 mM CaCl2, 1 µg of pUC19 DNA. One DNase I, RNase-Free unit is equivalent to 0.3 Kunitz unit.
Tested for: Ribonuclease-free; Functionally tested for the digestion of template DNA after in vitro transcription.
Recommended storage: -20°C

OPTIZYME Exonuclease III
Source: Recombinant E. Coli Strain

packaging	Mfr. No
4000 units Poly Tube	**BP8108-1**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Creation of unidirectional deletions in DNA fragments in conjunction with S1 Nuclease; Generation of a single-stranded template for dideoxy sequencing of DNA; Site-directed mutagenesis; Cloning of PCR products; Preparation of strand-specific probes.
Description: OPTIZYME™ Exonuclease III exhibits four different catalytic activities: (1) 3′>5′ exodeoxyribonuclease activity specific for double-stranded DNA. Exo III degrades dsDNA from blunt ends, 5′-overhangs or nicks, releasing 5′-mononucleotides from the 3′-ends of DNA strands and producing stretches of single stranded DNA. It is not active on 3′-overhang ends of DNA that are at least four bases long and do not carry a 3′-terminal C-residue (on single-stranded DNA, or on phosphorothioate-linked nucleotides); (2) 3′-phosphatase activity: Exo III removes the 3′-terminal phosphate and generates a 3′-OH group; (3) RNase H activity: Exo III exonucleolytically degrades the RNA strand in DNA-RNA hybrids; (4) Apurinic/apyrimidinic-endonuclease activity: Exo III cleaves phosphodiester bonds at apurinic or apyrimidinic sites to produce 5′-termini that are base free deoxyribose 5′-phosphate residues.
Supplied With: 10X OPTIZYME™ ExoIII Buffer (660mM Tris-HCl (pH 8.0 at 30°C), 6.6 mM MgCl2).
Concentration: 200u/µℓ
Storage Buffer Components: 50 mM Tris-HCl (pH 8.0), 50 mM KCl, 1 mM DTT and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme catalyzes the release of 1 nmol of acid soluble reaction products from E.coli -DNA in 30 min at 37°C. Enzyme activity is assayed in the following mixture: 50 mM Tris-HCl (pH 8.0), 5 mM MgCl2, 1 mM DTT and 0.05 mM sonicated E.coli -DNA.
Tested for: Endodeoxyribonuclease-free; Functionally tested for the creation of unidirectional deletions in DNA fragments.
Recommended storage: -20°C

OPTIZYME™ Klenow Fragment
Source: Recombinant E. Coli Strain

packaging	Mfr. No
300 units Poly Tube	**BP8106-1**
1500 units Poly Tube	**BP8106-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: DNA blunting by fill-in of 5′-overhangs; Random-primed DNA labeling; Labeling by fill-in 5′-overhangs of dsDNA; DNA sequencing by the Sanger method; Site-specific mutagenesis of DNA with synthetic oligonucleotides; Second strand synthesis of cDNA.
Description: OPTIZYME™ Klenow Fragment is the large fragment of DNA Polymerase I (E.coli). It exhibits 5′>3′ polymerase activity and 3′> 5′ exonuclease (proofreading) activity, but lacks the 5′> 3′ exonuclease activity of DNA Polymerase I.
Supplied With: 10X OPTIZYME™ Klenow Fragment Buffer (500mM Tris-HCl (pH 8.0 at 25°C), 50mM MgCl2, 10mM DTT).
Concentration: 10u/µℓ
Storage Buffer Components: 25 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM DTT and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme catalyzes the incorporation of 10 nmol of deoxyribonucleotides into a polynucleotide fraction (adsorbed on DE-81) in 30 min at 37°C. Enzyme activity is assayed in the following mixture: 50 mM Tris-HCl (pH 8.0 at 25°C), 5 mM MgCl2, 1 mM DTT, 0.033 mM dNTP, 0.4 M Bq/mℓ -dTTP and 62.5 µg/mℓ activated salmon milt DNA.
Tested for: Endodeoxyribonuclease-free; Functionally tested for fill in of 5′-overhanging DNA termini and for random primed DNA labeling
Recommended storage: -20°C

OPTIZYME™ M-MLV Reverse Transcriptase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
5000 units Poly Tube	**BP8104-1**
25000 units Poly Tube	**BP8104-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: First strand cDNA synthesis for RT-PCR and real-time RT-PCR; Synthesis of cDNA for cloning and expression; Generation of labeled cDNA probes for microarrays; DNA labeling; Analysis of RNA by primer extension.
Description: OPTIZYME™ M-MLV Reverse Transcriptase possesses RNA-dependent and DNA-dependent polymerase activity and RNase H activity specific to RNA in RNA-DNA hybrids, which is significantly lower than that of Avian Myeloblastis Virus (AMV) reverse transcriptase. M-MLV RT activity is optimal at 42°C (active up to 50°C). The enzyme is capable of both first strand cDNA synthesis (<=13 kb) and incorporation of modified nucleotides.
Supplied With: 5X OPTIZYME™ M-MLV RT Buffer (250mM Tris-HCl (pH 8.3 at 25°C), 250mM KCl, 20mM MgCl2, 50mM DTT).
Concentration: 200 u/µℓ
Storage Buffer Components: 50 mM Tris-HCl (pH 7.5), 0.1 M NaCl, 1 mM EDTA, 5 mM DTT, 0.1% (v/v) Triton X-100 and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme incorporates 1 nmol of dTMP into a polynucleotide fraction (adsorbed on DE-81) in 10 min at 37°C. Enzyme activity is assayed in the following mixture: 50 mM Tris-HCl (pH 8.3), 4 mM MgCl2, 10 mM DTT, 50 mM KCl, 0.5 mM dTTP, 0.4 MBq/mℓ -dTTP, 0.4 mM polyA·oligo (dT)12-18.
Tested for: Endo-, exodeoxyribonuclease, phosphatase and ribonuclease-free; Functionally tested in first strand cDNA and RT-PCR.
Recommended storage: -20°C

rDNase I (RNase-free) — OPTIZYME™
Source: Recombinant E. Coli Stain

packaging	Mfr. No
1000 units PolyTube	**BP3226-1**
2000 units PolyTube	**BP3226-2**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Robust ability to remove genomic and template DNA from RNA preparations; meets or exceeds the performance of native bovine DNase I. Developed by recombinant methods; non-animal source (yeast) eliminates potential RNase contamination-safest choice to address environmental concerns.
Certified RNase free. Highly purified for excellent lot-to-lot consistency and optimal performance. Can even be used in
the characterization of DNA:Protein interactions.
Ideal for use in RT-PCR, cDNA synthesis, and in vitro RNA transcription.
Description: Recombinant DNase I (rDNase I) efficiently hydrolyzes phosphodiester linkages of double- or single-stranded DNA. Requires magnesium and calcium for maximum activity.
Concentration: 2 units/µℓ
Storage Buffer Components: 20mM HEPES (pH 7.5), 10mM CaCl2, 10mM MgCl2, 1mM DTT, 50% (v/v) Glycerol.
Provided with 10X Reaction Buffer: 100mM Tris-HCl (pH 7.5), 25mM MgCl2, 5mM CaCl2.
Unit Definition: One unit is defined as the amount of enzyme required to completely degrade 1µg DNA in 10 minutes at 37°C.
Recommended Storage: -20°C

OPTIZYME™ recombinant DNase I — 10X Reaction Buffer

packaging	Mfr. No
1 mℓ PolyTube	**BP3227-1**

Applications: Provides optimal pH and ionic conditions for use with Optizyme rDNase I.
10X Reaction Buffer Components:100mM Tris-HCl (pH 7.5), 25mM MgCl2, 5mM CaCl2.
Recommended Storage: -20°C

Ribonuclease Inhibitor — OPTIZYME ™
Source: Recombinant

packaging	Mfr. No
2500 units PolyTube	**BP3222-1**
10000 units PolyTube	**BP3222-5**

Tested for DNase and Nickase contamination, absence of RNase activity, and specific performance tests

Applications: Recombinant Ribonuclease Inhibitor displays a broad spectrum of inhibitory activity against RNases, and does not have activity against other polymerases and reverse transcriptases. Suitable for use in common molecular biology applications such as isolation and purification of RNA, cDNA synthesis, RT-PCR, in vitro RNA transcription/translation, ribonuclease protection assay, and preparation of RNase-free antibodies.
Description: Supplied as a recombinant product from E. coli (originally isolated from rat lung) and provides superior protection of RNA from degradation by RNases. This RNase inhibitor is commonly added to all solutions used during the isolation of RNA, and will not interfere with the performance of most enzymes in downstream applications. Active over a broad temperature range, and even provides some RNase inhibition at 60°C which is useful when performing reverse transcription reactions at elevated temperatures to overcome secondary structure in RNA.
Storage Buffer Components: 20mM HEPES-KOH (pH 7.6 at 4°C), 50 mM KCl, 8 mM DTT, and 50% glycerol (v/v).
Note: Inactivates RNase A, RNase B, and RNase T2. No activity against SP6, T7, or T3 RNA polymerases, AMV or MMLV reverse transcriptases, and Taq DNA polymerase.
Unit Activity: Defined as the amount of inhibitor required to inhibit 50% of the activity of 5ng of RNase A.
Recommended Storage: -20°C

OPTIZYME™ SP6 RNA Polymerase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
2000 units Poly Tube	**BP8100-1**
10000 units Poly Tube	**BP8100-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Synthesis of unlabeled & labeled RNA that can be used: (1) for hybridization and for in vitro RNA translation, (2) as RNA or siRNA, (3) as a substrate in RNase protection assays or as template for genomic DNA sequencing and (4) in studies of RNA secondary structure and RNA-protein interactions.
Description: OPTIZYME™ SP6 RNA Polymerase is a DNA-dependent RNA polymerase with strict specificity for its respective double-stranded promoter. The enzyme catalyzes the 5'->3' synthesis of RNA on either single-stranded DNA or double-stranded DNA downstream from the SP6 promoter. SP6 RNA Polymerase accepts modified nucleotides (e.g., biotin-, digoxigenin-, fluorescein-labeled nucleotides) as substrates for RNA synthesis.
Supplied With: 5X OPTIZYME™ Transcription Buffer (200mM Tris-HCl (pH 7.9 at 25°C), 30mM MgCl2, 50mM DTT, 50mM NaCl, 10mM spermidine).
Concentration: 20u/µℓ
Storage Buffer Components: 50 mM Tris-HCl (pH 8.0), 150 mM NaCl, 5 mM DTT, 0.1 mg/mℓ BSA, 0.03% (v/v) ELUGENT Detergent and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme incorporates 1 nmol of AMP into a polynucleotide fraction (adsorbed on DE-81) in 60 minutes at 37°C. Enzyme activity is assayed in the following mixture: 40 mM Tris-HCl (pH 8.0), 6 mM MgCl2, 10 mM DTT,2 mM spermidine, 0.5 mM of each NTP, 0.6 MBq/mℓ -ATP, 20 µg/mℓ plasmid DNA containing the SP6 promoter sequences.
Tested for: Endo-, exodeoxyribonuclease and ribonuclease-free; Functionally tested in in vitro transcription reaction.
Recommended storage: -20°C

OPTIZYME™ T3 RNA Polymerase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
1000 units Poly Tube	**BP8101-1**
5000 units Poly Tube	**BP8101-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Synthesis of unlabeled & labeled RNA that can be used: (1) for hybridization and for in vitro RNA translation, (2) as RNA or siRNA, (3) as a substrate in RNase protection assays or as template for genomic DNA sequencing and (4) in studies of RNA secondary structure and RNA-protein interactions.
Description: OPTIZYME™ T3 RNA Polymerase is a DNA-dependent RNA polymerase with strict specificity for its respective double-stranded promoter. The enzyme catalyzes the 5'->3' synthesis of RNA on either single-stranded DNA or double-stranded DNA downstream from the T3 promoter. Bacteriophage T3 RNA Polymerase accepts modified nucleotides (e.g. biotin-, digoxigenin-, fluorescein-labeled nucleotides) as substrates for RNA synthesis.
Supplied With: 5X OPTIZYME™ Transcription Buffer (200mM Tris-HCl (pH 7.9 at 25°C), 30mM MgCl2, 50mM DTT, 50mM NaCl, 10mM spermidine).
Concentration: 20u/µℓ
Storage Buffer Components: 50 mM Tris-HCl (pH 8.0), 150 mM NaCl, 5 mM DTT, 0.1 mg/mℓ BSA, 0.03% (v/v) ELUGENT Detergent and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme incorporates 1 nmol of AMP into a polynucleotide fraction (adsorbed on DE-81) in 60 minutes at 37°C. Enzyme activity is assayed in the following mixture: 40 mM Tris-HCl (pH 8.0), 6 mM MgCl2, 10 mM DTT, 2 mM spermidine, 0.5 mM of each NTP, 0.6 MBq/mℓ -ATP, 20 µg/mℓ plasmid DNA containing the T3 promoter sequence.
Tested for: Endo-, exodeoxyribonuclease and ribonuclease-free; Functionally tested in in vitro transcription reaction.
Recommended storage: -20°C

OPTIZYME™ T4 DNA Ligase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
100 units Poly Tube	**BP8099-1**
1500 units Poly Tube	**BP8099-15**
500 units Poly Tube	**BP8099-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Molecular cloning; Joining of double-stranded oligonucleotide linkers or adaptors to DNA; Site-directed mutagenesis; Amplified fragment length polymorphism (AFLP); Ligase-mediated RNA detection; Nick repair in duplex DNA, RNA or DNA/RNA hybrids.
Description: OPTIZYME™ T4 DNA Ligase catalyzes the formation of a phosphodiester bond between juxtaposed 5'-phosphate and 3'-hydroxyl termini in duplex DNA or RNA. The enzyme repairs single-strand nicks in duplex DNA, RNA or DNA/RNA hybrids and joins DNA fragments with either cohesive or blunt termini. The T4 DNA Ligase requires ATP as a cofactor.
Supplied With: 10X OPTIZYME™ T4 DNA Ligase Buffer (400mM Tris-HCl, 100mM MgCl2, 100mM DTT, 5mM ATP (pH 7.8 at 25°C); 50% OPTIZYME™ PEG 4000 Solution (50% (w/v) polyethylene glycol).
Concentration: 5u/µℓ
Storage Buffer Components: 20 mM Tris-HCl (pH 7.5), 50 mM KCl, 1 mM DTT, 0.1 mM EDTA and 50% (v/v) glycerol.
Unit Definition: One Weiss unit of the enzyme catalyzes the conversion of 1 nmol of into Norit-adsorbable form in 20 min at 37°C. One Weiss unit is equivalent to approximately 200 cohesive end ligation units (CEU)*. Enzyme activity is assayed in the following mixture: 66 mM Tris-HCl (pH 7.6), 6.6 mM MgCl2, 0.066 mM ATP, 10 mM DTT, 3.3 µM . (*One CEU is defined as the amount of enzyme required to give 50% ligation of HindIII fragments of lambda DNA in 30 min at 16°C).
Tested for: Endo-, exodeoxyribonuclease, phosphatase and ribonuclease-free; Functionally tested for ligation of cohesive and blunt end DNA fragments.
Recommended storage: -20°C

OPTIZYME™ T4 DNA Polymerase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
100 units Poly Tube	**BP8105-1**
500 units Poly Tube	**BP8105-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Blunting of DNA ends: fill-in 5'-overhangs and/or removal of 3'-overhangs; Blunting of PCR products with 3'-dA overhangs; Synthesis of labeled DNA probes by the replacement reaction; Oligonucleotide-directed site-specific mutagenesis; Ligation-independent cloning of PCR products.
Description: OPTIZYME™ T4 DNA Polymerase is a template -dependent DNA polymerase which catalyzes 5'->3' synthesis from primed single-stranded DNA. The enzyme possesses 3'->5' exonuclease activity, but lacks 5'->3' exonuclease activity.
Supplied With: 5X OPTIZYME™ T4 DNA Pol Buffer (335mM Tris-HCl (pH 8.8 at 25°C), 33mM MgCl2, 5mM DTT, 84mM (NH4)2SO4)
Concentration: 5 u/µℓ
Storage Buffer Components: 20 mM potassium phosphate (pH 7.5), 200 mM KCl, 2 mM DTT and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme catalyzes the incorporation of 10 nmol of deoxyribonucleotides into a polynucleotide fraction (adsorbed on DE-81) in 30 min at 37°C. Enzyme activity is assayed in the following mixture: 67 mM Tris-HCl (pH 8.8), 6.7 mM MgCl2, 1 mM DTT, 16.7 mM (NH4)2SO4, 0.2 mg/mℓ BSA, 0.033 mM of each dNTP, 0.4 MBq/mℓ -dTTP and 0.2 mM heat-denatured and nuclease-digested calf thymus DNA.
Tested for: Endodeoxyribonuclease-free
Recommended storage: -20°C

OPTIZYME™ T4 Polynucleotide Kinase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
500 units Poly Tube	**BP8098-1**
2500 units Poly Tube	**BP8098-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Labeling 5'-termini of nucleic acids to be used as: probes for hybridization, probes for transcript mapping markers for gel-electrophoresis primers for DNA sequencing, and primers for PCR; 5'-phosphorylation of oligonucleotides, PCR products, and other DNA or RNA prior to ligation; Phosphorylation of PCR primers; Detection of DNA modification by the post-labeling assay; Removal of 3'-phosphate groups.
Description: OPTIZYME™ T4 PNK catalyzes the transfer of the Upsilon gamma-phosphate from ATP to the 5'-OH group of single- and double-stranded DNAs and RNAs, oligonucleotides or nucleoside 3'-monophosphates (forward reaction). The reaction is reversible. In the presence of ADP, T4 PNK exhibits 5'-phosphatase activity and catalyzes the exchange of phosphate groups between 5'-P-oligo-/polynucleotides and ATP (exchange reaction). The enzyme is also a 3'-phosphatase.
Supplied With: 10X OPTIZYME T4 PNK Buffer 1 (500 mM Tris-HCl (pH 7.6 at 25°C), 100 mM MgCl2, 50 mM DTT, 1 mM spermidine); 10X OPTIZYME T4 PNK Buffer 2 (2500 mM imidazole-HCl (pH 6.4 at 25°C), 180 mM MgCl2, 50 mM DTT, 1 mM spermidine and 1 mM ADP); 24% PEG 6000 Sol for T4 PNK (24% (w/v) polyethylene glycol 6000)
Concentration: 10 u/µℓ
Storage Buffer Components: 20 mM Tris-HCl (pH 7.5), 25 mM KCl, 0.1 mM EDTA, 2 mM DTT and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme transfers 1 nmol of g-phosphate from ATP to 5'-OH DNA in 30 min at 37°C. Enzyme activity is assayed in the following mixture: 100 mM Tris-HCl (pH 8.0), 10 mM MgCl2, 5 mM DTT, 0.5 mM 5'-OH DNA, 0.05 mM ATP and 0.1 MBq/mℓ [g -33P]-ATP.
Tested for: Endo-, exodeoxyribonuclease and ribonuclease-free; Functionally tested for labeling of 5'-termini of DNA.
Recommended storage: -20°C

OPTIZYME™ T7 RNA Polymerase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
5000 units Poly Tube	**BP8102-1**
25000 units Poly Tube	**BP8102-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Synthesis of unlabeled & labeled RNA that can be used: (1) for hybridization and for in vitro RNA translation, (2) as RNA or siRNA, (3) as a substrate in RNase protection assays or as template for genomic DNA sequencing and (4) in studies of RNA secondary structure and RNA-protein interactions.
Description: OPTIZYME™ T7 RNA Polymerase is a DNA dependent RNA polymerase with strict specificity for its respective double-stranded promoter. The enzyme catalyzes the 5 -> 3' synthesis of RNA on either single-stranded DNA or double-stranded DNA downstream from the T7 promoter. Bacteriophage T7 RNA Polymerase accepts modified nucleotides (e.g., biotin-, digoxigenin-, fluorescein-labeled nucleotides) as substrates for RNA synthesis.
Supplied With: 5X OPTIZYME™ Transcription Buffer (200mM Tris-HCl (pH 7.9 at 25°C), 30mM MgCl2, 50mM DTT, 50mM NaCl, 10mM spermidine).
Concentration: 20 u/µℓ
Storage Buffer Components: 50 mM Tris-HCl (pH 8.0), 150 mM NaCl, 5 mM DTT, 0.1 mg/mℓ BSA, 0.03% (v/v) ELUGENT Detergent and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme incorporates 1 nmol of AMP into a polynucleotide fraction (adsorbed on DE-81) in 60 minutes at 37°C. Enzyme activity is assayed in the following mixture: 40 mM Tris-HCl (pH 8.0), 6 mM MgCl2, 10 mM DTT, 2 mM spermidine, 0.5 mM of each NTP, 0.6 MBq/mℓ -ATP, 20 µg/mℓ plasmid DNA containing the T7 promoter sequence.
Recommended storage: -20°C

OPTIZYME™ Terminal Deoxynucleotidyl Transferase
Source: Recombinant E. Coli Strain

packaging	Mfr. No
300 units Poly Tube	**BP8103-1**
1500 units Poly Tube	**BP8103-5**

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Production of synthetic homo- and heteropolymers; Homopolymeric tailing of linear duplex DNA with any type of 3'-OH terminus; Oligodeoxyribonucleotide and DNA labeling; 5'-RACE (Rapid Amplification of cDNA Ends); In situ localization of apoptosis.
Description: OPTIZYME™ TdT, a template-independent DNA polymerase, catalyzes the repetitive addition of deoxyribonucleotides to the 3'-OH of oligodeoxyribonucleotides and single-stranded, or double-stranded DNA. TdT requires an oligonucleotide of at least three nucleotides to serve as a primer. With RNA as template, TdT shows variable performance which strongly depends upon the tertiary structure of acceptor RNA 3'-end and the nature of nucleotide. Generally, it is lower than using DNA as a template.
Supplied With: 5X OPTIZYME™ TdT Buffer (1M potassium cacodylate, 125mM Tris, 0.05% (v/v) Triton X-100, 5mM CoCl2 (pH 7.2 at 25°C))
Concentration: 20 u/µℓ
Storage Buffer Components: 100 mM potassium acetate (pH 6.8), 2 mM 2 -mercaptoethanol, 0.01% (v/v) Triton X-100 and 50% (v/v) glycerol.
Unit Definition: One unit of the enzyme catalyzes the incorporation of 1 nmol of deoxythymidylate into a polynucleotide fraction (adsorbed on DE-81) in 60 min at 37°C. Enzyme activity is assayed in the following mixture: 200 mM potassium cacodylate (pH 7.2), 1 mM CoCl2, 0.01% (v/v) Triton X 100, 10 µM oligo(dT)10, 1 mM dTTP and 0.4 MBq/mℓ -dTTP.
Tested for: Endo-, exodeoxyribonuclease, phosphatase and ribonuclease-free
Recommended storage: -20°C

Ribonuclease H

packaging	Mfr. No
50 units PolyTube	**BP3215-1**

CAS: 9050-76-4
H315, H319, H335
P280, P305+P351+P338

Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: Ribonuclease H is used in removal of the RNA strand prior to second strand cDNA synthesis and analysis of in vitro polyadenylation reaction products.
Description: Ribonuclease H (RNase H) from E. coli is an endoribonuclease that specifically hydrolyzes the phosphodiester bonds of RNA hybridized to DNA to produce 3'-OH and 5'-P terminated products. It will not degrade single-stranded nucleic acids, duplex DNA or double-stranded RNA.
Concentration: 0.5-2u/µℓ
Storage Buffer Components: 20mm HEPES-KOH (pH 7.8), 1mM DTT, 50mM KCl and 50% (v/v) glycerol, and 0.2mg/mℓ BSA.
Unit Definition: One unit is defined as the amount of enzyme required to produce 1nmol acid-soluble ribonucleotides from radiolabeled poly(rA):poly(dT) in 20 minutes at 37°C in 20mM HEPES-KOH (pH 7.8), 50mM KCl, 10mM MgCl2, 1mM DTT, 20µM radiolabeled poly(rA):poly(dT).
Recommended Storage: -20°C

OPTIZYME™ AarI
Source: E. coli

packaging	Mfr. No
125 units Poly Tube	**BP8069-1**

Buffer 1 ..... No Reaction%
Buffer 2 ..... No Reaction%
Buffer 3 ..... 0-20%
Buffer 4 ..... No Reaction%
Buffer 5 ..... 0-20%
Buffer AarI, ScaI, PasI 100%
Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: OPTIZYME™ AarI digests dsDNA with the recognition sequence indicated below.
Conditions for 100% Activity: 1X OPTIZYME Buffer AarI, ScaI, PasI: 10mM Bis-Tris Propane-HCl (pH 6.5 at 37°C), 10mM MgCl2, 100mM KCl, 0.1mg/mℓ BSA; 0.5µM of oligonucleotide; Incubate at 37°C.
Recognition Sequence: 5'...C A C C T G C (N)4 ^...3'
Supplied With: 10X OPTIZYME Buffer AarI, ScaI, PasI and 50X Oligonucleotide
Concentration: 2u/µℓ
Storage Buffer Components: 10mM potassium phosphate (pH 7.4 at 25°C), 100mM KCl, 1mM EDTA, 1mM DTT, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of AarI at which no change in the fragmentation pattern is observed with further increase of enzyme. 1 µg of lambda DNA is incubated with the enzyme for 1 hour at 37°C in 50 µℓ of recommended reaction buffer. The cleavage of DNA by AarI is never complete.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ AatII
Source: E. coli

packaging	Mfr. No
300 units Poly Tube	**BP8041-1**

Buffer 1 ..... 50-100%
Buffer 2 ..... 20-50%
Buffer 3 ..... 0-20%
Buffer 4 ..... 100%
Buffer 5 ..... 0-20%

Applications: OPTIZYME™ AatII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G A C G T^C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/ mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of AatII required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ AloI
Source: E. coli

packaging	Mfr. No
100 units Poly Tube	**BP8075-1**

Buffer 1 ..... 0-20%
Buffer 2 ..... 0-20%
Buffer 3 ..... 0-20%
Buffer 4 ..... 20-50%
Buffer 5 ..... 100%
Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: OPTIZYME™ AloI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...^ 7(N) G A A C (N)6 T C C (N)12-13^...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 30°C.
Concentration: 1-3u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of AloI required to digest 1 µg of lambda DNA in 1 hour at 30°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified
Recommended storage: -20°C

OPTIZYME™ AluI
Source: Arthrobacter luteus

packaging	Mfr. No
600 units Poly Tube	**BP8015-1**

Buffer 1 ..... 50-100%
Buffer 2 ..... 0-20%
Buffer 3 ..... 0-20%
Buffer 4 ..... 100%
Buffer 5 ..... 0-20%
Tested for ..... RNase activity, protease activity, and specific performance tests.

Applications: OPTIZYME™ AluI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A G^C T...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1 mM DTT, 0.1mM EDTA, 0.15% Triton X-100, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of AluI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ Alw44I
Source: Acinetobacter lwoffi RFL44

packaging	Mfr. No
1000 units Poly Tube	**BP8059-1**

Buffer 1 ..... 50-100%
Buffer 2 ..... 100%
Buffer 3 ..... 0-20%
Buffer 4 ..... 100%
Buffer 5 ..... 50-100%

Applications: OPTIZYME™ Alw44I digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^T G C A C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/ mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Alw44I required to digest 1 µg of lambda DNA-SmaI fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ ApaI
Source: E. coli

packaging	Mfr. No
5000 units Poly Tube	**BP8025-1**

Buffer 1	100%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	20-50%
Buffer 5	0-20%

Applications: OPTIZYME™ ApaI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G G G C C^C...3'
Supplied With: 10X OPTIZYME Buffer 1
Conditions for 100% Activity: 1X OPTIZYME Buffer 1: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 50mM NaCl, 1 mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of ApaI required to digest 1 µg of lambda DNA-CpoI fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ AvaI
Source: E. coli

packaging	Mfr. No
1000 units Poly Tube	**BP8035-1**

Buffer 1	100%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ AvaI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C^Y C G R G...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of AvaI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ AvaII
Source: E. coli

packaging	Mfr. No
800 units Poly Tube	**BP8043-1**

Buffer 1	0-20%
Buffer 2	50-100%
Buffer 3	50-100%
Buffer 4	50-100%
Buffer 5	100%

Applications: OPTIZYME™ AvaII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^G W C C...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of AvaII required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ BalI
Source: Micrococcus luteus Ng 16-122

packaging	Mfr. No
200 units Poly Tube	**BP8039-1**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	20-50%
Buffer 5	100%

Applications: OPTIZYME™ BalI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...T G G^C C A...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 5u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of BalI required to digest 1 µg of lambda DNA dcm- in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ BamHI
Source: E. coli

packaging	Mfr. No
12500 units Poly Tube	**BP8005-5**

Buffer 1	20-50%
Buffer 2	100%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	50-100%
Buffer BamHI	100%

Applications: OPTIZYME™ BamHI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^G A T C C...3'
Supplied With: 10X OPTIZYME BamHI Buffer
Conditions for 100% Activity: 1X OPTIZYME Buffer BamHI: 10mM Tris-HCl (pH 8.0 at 37°C), 5mM MgCl2, 100mM KCl, 0.02% Triton X-100 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 200mM NaCl, 1mM DTT, 0.1mM EDTA, 0.15% Triton X-100, 0.2mg/mℓ BSA and 50% (v/v) glycerol.
Unit Definition: One unit is defined as the amount of BamHI required to digest 1 µg of lambda DNA-Bsp120I fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ BclI
Source: Bacillus caldolyticus

packaging	Mfr. No
3000 units Poly Tube	**BP8053-1**

Buffer 1	20-50%
Buffer 2	100%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ BclI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...T^G A T C A...3'
Supplied With: 10X OPTIZYME Buffer 2
Conditions for 100% Activity: 1X OPTIZYME Buffer 2: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 50mM NaCl and 0.1mg/mℓ BSA; Incubate at 55°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of BclI required to digest 1 µg of lambda DNA dam- in 1 hour at 55°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified
Recommended storage: -20°C

OPTIZYME™ BglI
Bacillus globigii

packaging	Mfr. No
2000 units Poly Tube	**BP8046-1**

Buffer 1	0-20%
Buffer 2	50-100%
Buffer 3	100%
Buffer 4	0-20%
Buffer 5	100%

Applications: OPTIZYME™ BglI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G C C N N N N^N G G C...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 300mM NaCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of BglI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ BglII
Source: E. coli

packaging	Mfr. No
1000 units Poly Tube	**BP8014-1**
2500 units Poly Tube	**BP8014-5**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	100%
Buffer 4	0-20%
Buffer 5	50-100%

Applications: OPTIZYME™ BglII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A^G A T C T...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 8.2 at 25°C), 200 mM KCl, 1mM DTT, 0.1mM EDTA, 0.5mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of BglII required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ BpiI
Source: Bacillus pumillus Sw 4-3

packaging	Mfr. No
1000 units Poly Tube	**BP8072-1**

Buffer 1	20-50%
Buffer 2	100%
Buffer 3	50-100%
Buffer 4	50-100%
Buffer 5	50-100%

Applications: OPTIZYME™ BpiI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G A A G A C (N)2^...3'
Supplied With: 10X OPTIZYME Buffer 2
Conditions for 100% Activity: 1X OPTIZYME Buffer 2: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 50mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of BpiI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ BshTI
Source: Bacillus sphaericus Jo 22-024

packaging	Mfr. No
1000 units Poly Tube	**BP8078-1**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	100%
Buffer 4	20-50%
Buffer 5	50-100%

Applications: OPTIZYME™ BshTI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A^C C G G T...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of BshTI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ Bsh1236I
Source: Bacillus sphaericus RFL1236

packaging	Mfr. No
2500 units Poly Tube	**BP8071-1**

Buffer 1	0-20%
Buffer 2	0-20%
Buffer 3	50-100%
Buffer 4	20-50%
Buffer 5	100%

Applications: OPTIZYME™ Bsh1236I digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C G^C G...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Bsh1236I required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ BssHII
Source: Paracoccus alcaliphilus ZVK3-3

packaging	Mfr. No
200 units Poly Tube	**BP8036-1**

Buffer 1	0-20%
Buffer 2	0-20%
Buffer 3	100%
Buffer 4	0-20%
Buffer 5	100%

Applications: OPTIZYME™ BssHII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^C G C G C...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of BssHII required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ BstEII
Source: Escherichia coli RFL91

packaging	Mfr. No
2000 units Poly Tube	**BP8038-1**

Buffer 1	20-50%
Buffer 2	20-50%
Buffer 3	100%
Buffer 4	No Reaction%
Buffer 5	50-100%

Applications: OPTIZYME™ BstEII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^G T N A C C...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl)2 , 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of BstEII required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ ClaI
Source: Bacillus subtilis 15

packaging	Mfr. No
600 units Poly Tube	**BP8024-1**
2500 units Poly Tube	**BP8024-5**

Buffer 1	20-50%
Buffer 2	20-50%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ ClaI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A T^C G A T...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 8.0 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.5mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of ClaI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ Cfr9I
Source: E. coli

packaging	Mfr. No
1500 units Poly Tube	**BP8081-1**

Buffer 1	0-20%
Buffer 2	0-20%
Buffer 3	0-20%
Buffer 4	20-50%
Buffer 5	0-20%
Buffer Cfr9I	100%

Applications: OPTIZYME™ Cfr9I digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C^C C G G G...3'
Supplied With: 10X OPTIZYME Cfr9I
Conditions for 100% Activity: 1X OPTIZYME Buffer Cfr9I: 10mM Tris-HCl (pH 7.2 at 37°C), 5mM MgCl2, 200mM sodium glutamate and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 250mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Cfr9I required to digest 1 µg of lambda DNA-HindIII fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer (containing 2 µg DNA fragments).
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ Csp6I
Source: Corynebacterium species RFL6

packaging	Mfr. No
1500 units Poly Tube	**BP8068-1**

Buffer 1	100%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	50-100%
Buffer 5	0-20%

Applications: OPTIZYME™ Csp6I digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^T A C...3'
Supplied With: 10X OPTIZYME Buffer 1
Conditions for 100% Activity: 1X OPTIZYME Buffer 1: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl)2 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Csp6I required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ DdeI
Source: E. coli

packaging	Mfr. No
500 units Poly Tube	**BP8060-1**
1000 units Poly Tube	**BP8060-5**

Buffer 1	20-50%
Buffer 2	20-50%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ DdeI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C^T N A G...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of DdeI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ DpnI
Source: E. coli

packaging	Mfr. No
500 units Poly Tube	**BP8009-1**

Buffer 1	100%
Buffer 2	100%
Buffer 3	50-100%
Buffer 4	100%
Buffer 5	50-100%

Applications: OPTIZYME™ DpnI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G m6A^T C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 400mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of DpnI required to digest 1 µg of pBR322 DNA (dam methylated) in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ DraI
Source: Deinococcus radiophilus

packaging	Mfr. No
2000 units Poly Tube	**BP8026-1**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ DraI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...T T T^A A A...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.15% Triton X-100, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of DraI required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ Ecl136II
Source: Enterobacter cloacae RFL136

packaging	Mfr. No
1500 units Poly Tube	**BP8080-1**

Buffer 1	50-100%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	50-100%
Buffer 5	0-20%
Buffer Ecl136II, SacI	100%

Applications: OPTIZYME™ Ecl136II digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G A G^C T C...3'
Supplied With: 10X OPTIZYME Ecl136II, SacI
Conditions for 100% Activity: 1X Buffer Ecl136II, SacI: 10mM Bis-Tris Propane-HCl (pH 6.5 at 37°C), 10mM MgCl2 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Ecl136II required to digest 1 µg of lambda DNA-HindIII in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ Eco57I
Source: E. coli

packaging	Mfr. No
1000 units Poly Tube	**BP8066-1**

Buffer 1	100%
Buffer 2	100%
Buffer 3	20-50%
Buffer 4	50-100%
Buffer 5	20-50%

Applications: OPTIZYME™ Eco57I digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C T G A A G (N)16^...3'
Supplied With: 10X OPTIZYME Buffer 2 and 50X S-adenosylmethionine.
Conditions for 100% Activity: 1X OPTIZYME Buffer 2: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2 , 50mM NaCl and 0.1mg/mℓ BSA; 0.01mM S-adenosylmethionine; Incubate at 37°C
Concentration: 5u/µℓ
Storage Buffer Components: 10mM potassium phosphate (pH 7.4 at 25°C), 100mM NaCl, 1mM EDTA, 1mM DTT and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Eco57I at which no change in the fragmentation pattern is observed with further increase of enzyme. 1 µg of lambda DNA is incubated with Eco57I for 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ EcoRI
Source: E. coli

packaging	Mfr. No
15000 units Poly Tube	**BP8003-5**

Buffer 1	0-20%
Buffer 2	No Reaction%
Buffer 3	100%
Buffer 4	No Reaction%
Buffer 5	100%
Buffer EcoRI	100%

Applications: OPTIZYME™ EcoRI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^A A T T C...3'
Supplied With: 10X OPTIZYME EcoRI Buffer
Conditions for 100% Activity: 1X OPTIZYME Buffer EcoRI: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 100mM NaCl, 0.02% Triton X-100 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM potassium phosphate (pH 7.4 at 25°C), 300mM NaCl, 1mM EDTA, 1mM DTT, 0.2mg/mℓ BSA, 0.15% Triton X-100 and 50% (v/v) glycerol.
Unit Definition: One unit is defined as the amount of EcoRI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ EcoRI
Source: E. coli

packaging	Mfr. No
25000 units Poly Tube	**BP8054-1**

Buffer 1	0-20%
Buffer 2	No Reaction%
Buffer 3	100%
Buffer 4	No Reaction%
Buffer 5	100%
Buffer EcoRI	100%

Applications: OPTIZYME™ EcoRI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^A A T T C...3'
Supplied With: 10X OPTIZYME EcoRI Buffer
Conditions for 100% Activity: 1X OPTIZYME Buffer EcoRI: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 100mM NaCl, 0.02% Triton X-100 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 50u/µℓ
Storage Buffer Components: 10mM potassium phosphate (pH 7.4 at 25°C), 300mM NaCl, 1mM EDTA, 1mM DTT, 0.2mg/mℓ BSA, 0.15% Triton X-100 and 50% (v/v) glycerol.
Unit Definition: One unit is defined as the amount of EcoRI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ EcoRV
Source: Escherichia coli RFL32

packaging	Mfr. No
3000 units Poly Tube	**BP8012-1**

Buffer 1	0-20%
Buffer 2	50-100%
Buffer 3	50-100%
Buffer 4	20-50%
Buffer 5	100%

Applications: OPTIZYME™ EcoRV digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G A T^A T C...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 25mM Tris-HCl (pH 7.5 at 25°C), 200mM NaCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of EcoRV required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ Esp3I
Source: E. coli

packaging	Mfr. No
1000 units Poly Tube	**BP8070-1**

Buffer 1	100%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ Esp3I digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C G T C T C (N)1^...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4 + DTT: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; 1.0mM DTT; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM potassium phosphate (pH 7.4 at 25°C), 100mM KCl, 1mM EDTA, 7mM 2-mercaptoethanol, 0.5mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Esp3I required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ HincII
Source: E. coli

packaging	Mfr. No
500 units Poly Tube	**BP8034-1**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	50-100%

Applications: OPTIZYME™ HincII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G T Y^R A C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 200mM KCl, 1mM DTT, 0.1mM EDTA, 0.5mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of HincII required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ HaeIII
Source: Bacillus subtilis R

packaging	Mfr. No
2500 units Poly Tube	**BP8002-1**
10000 units Poly Tube	**BP8002-5**

Buffer 1	0-20%
Buffer 2	0-20%
Buffer 3	0-20%
Buffer 4	50-100%
Buffer 5	100%

Applications: OPTIZYME™ HaeIII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G G^C C...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2 , 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol.
Unit Definition: One unit is defined as the amount of HaeIII required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ HindIII
Source: Haemophilus influenzae Rd

packaging	Mfr. No
15000 units Poly Tube	**BP8006-5**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	50-100%
Buffer 5	100%

Applications: OPTIZYME™ HindIII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A^A G C T T...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 250mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of HindIII required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ HinFI
Source: Haemophilus influenzae Rf

packaging	Mfr. No
2000 units Poly Tube	**BP8051-1**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	50-100%
Buffer 4	50-100%
Buffer 5	100%

Applications: OPTIZYME™ HinFI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^A N T C...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of HinfI required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ HpaII
Source: Haemophilus parainfluenzae

packaging	Mfr. No
1000 units Poly Tube	**BP8032-1**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ HpaII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C^C G G...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM NaCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of HpaII required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ HpaI
Source: Kurthia species N88

packaging	Mfr. No
500 units Poly Tube	**BP8049-1**

Buffer 1	100%
Buffer 2	50-100%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ HpaI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G T T^A A C...3'
Supplied With: 10X OPTIZYME Buffer 1
Conditions for 100% Activity: 1X OPTIZYME Buffer 1: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of HpaI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ Hpy8I
Source: E. coli

packaging	Mfr. No
1000 units Poly Tube	**BP8079-1**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ Hpy8I digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G T N^N A C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Hpy8I required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ KpnI
Source: Klebsiella pneumoniae OK8

packaging	Mfr. No
4000 units Poly Tube	**BP8083-1**

Buffer 1	20-50%
Buffer 2	0-20%
Buffer 3	0-20%
Buffer 4	20-50%
Buffer 5	0-20%
Buffer KpnI	100%

Applications: OPTIZYME™ KpnI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G G T A C^C...3'
Supplied With: 10X OPTIZYME KpnI
Conditions for 100% Activity: 1X OPTIZYME Buffer KpnI: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 0.02% Triton X-100 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of KpnI required to digest 1 µg of lambda DNA-BamHI fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ LguI
Source: Lysobacter gummosus RFL1

packaging	Mfr. No
500 units Poly Tube	**BP8067-1**

Buffer 1	20-50%
Buffer 2	50-100%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ LguI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G C T C T T C (N)1^...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 5U/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of LguI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ MluI
Source: Micrococcus luteus

packaging	Mfr. No
1000 units Poly Tube	**BP8021-1**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	50-100%
Buffer 4	20-50%
Buffer 5	100%

Applications: OPTIZYME™ MluI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A^C G C G T...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of MluI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ MspI
Source: Moraxella species

packaging	Mfr. No
3000 units Poly Tube	**BP8048-1**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ MspI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C^C G G...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM potassium phosphate (pH 7.5 at 25°C), 200mM NaCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of MspI required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ NaeI
Source: E. coli

packaging	Mfr. No
250 units Poly Tube	**BP8057-1**

Buffer 1	50-100%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ NaeI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G C C^G G C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 500mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA, 0.15% Triton X-100 and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of NaeI required to digest 1 µg of pBR322 DNA-NdeI fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ NcoI
Source: E. coli

packaging	Mfr. No
500 units Poly Tube	**BP8017-1**
2500 units Poly Tube	**BP8017-5**

Buffer 1	20-50%
Buffer 2	20-50%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	50-100%

Applications: OPTIZYME™ NcoI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C^C A T G G...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of NcoI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ NdeI
Source: E. coli

packaging	Mfr. No
1500 units Poly Tube	**BP8020-1**

Buffer 1	0-20%
Buffer 2	0-20%
Buffer 3	100%
Buffer 4	0-20%
Buffer 5	50-100%

Applications: OPTIZYME™ NdeI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C A^T A T G...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of NdeI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ NheI
Source: Neisseria mucosa heidelbergensis

packaging	Mfr. No
500 units Poly Tube	**BP8019-1**

Buffer 1	100%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ NheI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^C T A G C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 8.0 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of NheI required to digest 1 µg of lambda DNA-HindIII fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ NotI
Source: Nocardia otitidis-caviarum

packaging	Mfr. No
300 units Poly Tube	**BP8004-1**
1000 units Poly Tube	**BP8004-5**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	100%
Buffer 4	0-20%
Buffer 5	20-50%

Applications: OPTIZYME™ NotI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G C^G G C C G C...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2 , 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 20mM Tris-HCl (pH 7.8 at 25°C), 100mM NaCl, 0.1mM EDTA, 1mM DTT, 0.02% Triton X-100, 0.2mg/mℓ BSA and 50% (v/v) glycerol.
Unit Definition: One unit is defined as the amount of NotI required to digest 1 µg pTZ19RJL2 DNA-BseLI fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ NsiI
Source: Moraxella phenylpyruvica RFL1103

packaging	Mfr. No
1000 units Poly Tube	**BP8058-1**

Buffer 1	0-20%
Buffer 2	50-100%
Buffer 3	20-50%
Buffer 4	50-100%
Buffer 5	100%

Applications: OPTIZYME™ NsiI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A T G C A^T...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 200mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of NsiI required to digest 1 µg lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified
Recommended storage: -20°C

OPTIZYME™ PasI
Source: Pseudomonas anquilliseptica RFL1

packaging	Mfr. No
200 units Poly Tube	**BP8073-1**

Buffer 1	No Reaction%
Buffer 2	No Reaction%
Buffer 3	No Reaction%
Buffer 4	No Reaction%
Buffer 5	No Reaction%
Buffer AarI, ScaI, PasI	100%

Applications: OPTIZYME™ PasI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C C^C W G G G...3'
Supplied With: 10X OPTIZYME Buffer AarI, ScaI, PasI
Conditions for 100% Activity: 1X OPTIZYME Buffer AarI, ScaI, PasI: 10mM Bis-Tris Propane-HCl (pH 6.5 at 37°C), 10mM MgCl2 , 100mM KCl and 0.1mg/mℓ BSA; Incubate at 55°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of PasI required to digest 1 µg of lambda DNA-XagI fragments in 1 hour at 55°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ PfoI
Source: Pseudomonas fluorescens biovar 126

packaging	Mfr. No
200 units Poly Tube	**BP8077-1**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	50-100%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ PfoI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...T^C C N G G A...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of PfoI required to digest 1 µg of lambda DNA dam-, dcm- in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ PstI
Source: Providencia stuarti

packaging	Mfr. No
6000 units Poly Tube	**BP8001-1**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	100%
Buffer 4	50-100%
Buffer 5	100%

Applications: OPTIZYME™ PstI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C T G C A^G...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2 , 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 200mM NaCl, 1mM DTT, 0.1mM EDTA, 0.15% Triton X-100, 0.2mg/mℓ BSA and 50% (v/v) glycerol.
Unit Definition: One unit is defined as the amount of PstI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ PvuI
Source: E. coli

packaging	Mfr. No
300 units Poly Tube	**BP8050-1**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	50-100%
Buffer 4	50-100%
Buffer 5	100%

Applications: OPTIZYME™ PvuI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C G A T^C G...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 300mM KCl, 0.1mM EDTA, 1mM DTT, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of PvuI required to digest 1 µg lambda DNA-CpoI fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ PvuII
Source: Proteus vulgaris

packaging	Mfr. No
2500 units Poly Tube	**BP8022-1**
5000 units Poly Tube	**BP8022-5**

Buffer 1	50-100%
Buffer 2	100%
Buffer 3	20-50%
Buffer 4	20-50%
Buffer 5	50-100%
Tested for	RNase activity, protease activity, and specific performance tests.

Applications: OPTIZYME™ PvuII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C A G^C T G...3'
Supplied With: 10X OPTIZYME Buffer 2
Conditions for 100% Activity: 1X OPTIZYME Buffer 2: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 50mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10U/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of PvuII required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ RsaI
Source: Rhodopseudomonas sphaeroides

packaging	Mfr. No
1000 units Poly Tube	**BP8000-1**

Buffer 1	50-100%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ RsaI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G T^A C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10U/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of RsaI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ SacI
Source: Streptomyces achromoqenes

packaging	Mfr. No
2000 units Poly Tube	**BP8016-1**

Buffer 1	50-100%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	50-100%
Buffer 5	0-20%

Applications: OPTIZYME™ SacI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G A G C T^C...3'
Supplied With: 10X OPTIZYME Ecl136II, SacI Buffer
Conditions for 100% Activity: 1X OPTIZYME Buffer Ecl136II, SacI: 10mM Bis-Tris Propane-HCl (pH 6.5 at 37°C), 10mM MgCl2 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1 mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of SacI required to digest 1 µg of lambda DNA-HindIIII fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ SacII
Source: E. coli

packaging	Mfr. No
1200 units Poly Tube	**BP8023-1**

Buffer 1	100%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	50-100%
Buffer 5	0-20%

Applications: OPTIZYME™ SacII digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C C G C^G G...3'
Supplied With: 10X OPTIZYME Buffer 1
Conditions for 100% Activity: 1X OPTIZYME Buffer 1: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM potassium phosphate (pH 7.4 at 25°C), 100mM NaCl, 1mM EDTA, 7mM 2-mercaptoethanol, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of SacII required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ SalI
Source: Streptomyces albus G

packaging	Mfr. No
2000 units Poly Tube	**BP8013-1**

Buffer 1	0-20%
Buffer 2	0-20%
Buffer 3	100%
Buffer 4	0-20%
Buffer 5	20-50%

Applications: OPTIZYME™ SalI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G^T C G A C...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C),100 mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of SalI required to digest 1 µg DNA-Eco81I fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ Sau3AI
Source: Bacillus species RFL143

packaging	Mfr. No
300 units Poly Tube	**BP8030-1**

Buffer 1	20-50%
Buffer 2	20-50%
Buffer 3	0-20%
Buffer 4	50-100%
Buffer 5	0-20%

Applications: OPTIZYME™ Sau3AI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...^G A T C ...3'
Supplied With: 10X OPTIZYME Buffer Sau3AI
Conditions for 100% Activity: 1X OPTIZYME Buffer Sau3AI: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate, 0.02% Triton X-100 and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 10mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Sau3AI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ ScaI
Source: Streptomyces caespitosus

packaging	Mfr. No
1000 units Poly Tube	**BP8037-1**

Buffer 1	0-20%
Buffer 2	0-20%
Buffer 3	0-20%
Buffer 4	0-20%
Buffer 5	0-20%

Applications: OPTIZYME™ ScaI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A G T^A C T...3'
Supplied With: 10X OPTIZYME AarI, ScaI, PasI Buffer
Conditions for 100% Activity: 1X OPTIZYME Buffer AarI, ScaI, PasI: 10mM Bis-Tris Propane-HCl (pH 6.5 at 37°C), 10mM MgCl2 , 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.5mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of ScaI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ SfaAI
Source: E. coli

packaging	Mfr. No
1000 units Poly Tube	**BP8076-1**

Buffer 1	50-100%
Buffer 2	0-20%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ SfaAI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G C G A T^C G C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of SfaAI required to digest 1 µg of control DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer. The control DNA is linearized pJET1 DNA with inserted SfaAI recognition site.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ SmaI
Source: Serratia marcescens

packaging	Mfr. No
1200 units Poly Tube	**BP8011-1**
5000 units Poly Tube	**BP8011-5**

Buffer 1	50-100%
Buffer 2	0-20%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ SmaI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C C C^G G G...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol; Incubate at 30°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of SmaI required to digest 1 µg of lambda DNA-Eco81I fragments in 1 hour at 30°C in 50µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ SpeI
Source: Bacillus coagulans VS 29-022

packaging	Mfr. No
400 units Poly Tube	**BP8018-1**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ SpeI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A^C T A G T...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 300mM KCl, 1mM DTT, 0.1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of SpeI required to digest 1 µg of control DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer. The control DNA is pUC19 DNA with inserted SpeI recognition site-Psp1406I fragments.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ SphI
Source: Pseudomonas aeruginosa

packaging	Mfr. No
500 units Poly Tube	**BP8029-1**

Buffer 1	100%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	50-100%
Buffer 5	0-20%

Applications: OPTIZYME™ SphI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G C A T G^C...3'
Supplied With: 10X OPTIZYME Buffer 1
Conditions for 100% Activity: 1X OPTIZYME Buffer 1: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM potassium-phosphate (pH 7.0 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.15% Triton X-100, 0.5mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of SphI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ TaqI
Source: E. coli

packaging	Mfr. No
3000 units Poly Tube	**BP8007-1**

Buffer 1	0-20%
Buffer 2	20-50%
Buffer 3	20-50%
Buffer 4	20-50%
Buffer 5	20-50%
Buffer TaqI	100%

Applications: OPTIZYME™ TaqI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...T^C G A...3'
Supplied With: 10X OPTIZYME TaqI Buffer
Conditions for 100% Activity: 1X OPTIZYME Buffer TaqI: 10mM Tris-HCl (pH 8.0 at 37°C), 5mM MgCl2, 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 65°C; To ensure higher efficiency digestion, perform the cleavage reaction under paraffin oil.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 300mM KCl, 1mM DTT, 0.1mM EDTA, 0.5mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of TaqI required to digest 1 µg of lambda DNA dam - in 1 hour at 65°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ StuI
Source: E. coli

packaging	Mfr. No
1000 units Poly Tube	**BP8027-1**

Buffer 1	100%
Buffer 2	50-100%
Buffer 3	20-50%
Buffer 4	50-100%
Buffer 5	20-50%

Applications: OPTIZYME™ StuI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A G G^C C T...3'
Supplied With: 10X OPTIZYME Buffer 1
Conditions for 100% Activity: 1X OPTIZYME Buffer 1: 10mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2 and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of StuI required to digest 1 µg of lambda DNA-Eco81I in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ Tru9I
Source: Thermus ruber RFL1

packaging	Mfr. No
300 units Poly Tube	**BP8064-1**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	20-50%
Buffer 4	50-100%
Buffer 5	100%

Applications: OPTIZYME™ Tru9I digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...T^T A A...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2, 100mM KCl and 0.1mg/mℓ BSA; Incubate at 65°C; To ensure higher efficiency of digestion, perform the cleavage reaction under paraffin oil.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of Tru1I required to digest 1 µg of lambda DNA in 1 hour at 65°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay
Recommended storage: -20°C

OPTIZYME™ VspI
Source: Vibrio species

packaging	Mfr. No
1000 units Poly Tube	**BP8055-1**

Buffer 1	0-20%
Buffer 2	50-100%
Buffer 3	100%
Buffer 4	100%
Buffer 5	20-50%

Applications: OPTIZYME™ VspI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...A T^T A A T...3'
Supplied With: 10X OPTIZYME Buffer 3
Conditions for 100% Activity: 1X OPTIZYME Buffer 3: 50mM Tris-HCl (pH 7.5 at 37°C), 10mM MgCl2, 100mM NaCl and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of VspI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ XhoI
Source: Xanthomonas holcicola

packaging	Mfr. No
3000 units Poly Tube	**BP8010-1**
10000 units Poly Tube	**BP8010-5**

Buffer 1	0-20%
Buffer 2	50-100%
Buffer 3	50-100%
Buffer 4	20-50%
Buffer 5	100%

Applications: OPTIZYME™ XhoI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'....C^T C G A G...3'
Supplied With: 10X OPTIZYME Buffer 5
Conditions for 100% Activity: 1X OPTIZYME Buffer 5: 10mM Tris-HCl (pH 8.5 at 37°C), 10mM MgCl2 , 100mM KCl and 0.1mg/mℓ BSA; Incubate at 37°C.
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of XhoI required to digest 1 µg of lambda DNA-HindIII fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ XbaI
Source: Xanthomonas badrii

packaging	Mfr. No
2000 units Poly Tube	**BP8008-1**
10000 units Poly Tube	**BP8008-5**

Buffer 1	50-100%
Buffer 2	50-100%
Buffer 3	20-50%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ XbaI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...T^C T A G A...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 7mM 2-mercaptoethanol, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of XbaI required to digest 1 µg of lambda DNA dam --SmaI fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ XmaJI
Source: Xanthomonas maltophilia Jo 85-025

packaging	Mfr. No
200 units Poly Tube	**BP8082-1**

Buffer 1	20-50%
Buffer 2	50-100%
Buffer 3	50-100%
Buffer 4	100%
Buffer 5	50-100%

Applications: OPTIZYME™ XmaJI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...C^C T A G G...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM DTT, 1mM EDTA, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of XmaJI required to digest 1 µg of lambda DNA-SmaI fragments in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Blue/White Colony Certified, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ XmnI
Source: E. coli

packaging	Mfr. No
500 units Poly Tube	BP8052-1

Buffer 1	20-50%
Buffer 2	50-100%
Buffer 3	0-20%
Buffer 4	100%
Buffer 5	0-20%

Applications: OPTIZYME™ XmnI digests dsDNA with the recognition sequence indicated below.
Recognition Sequence: 5'...G A A N N^N N T T C...3'
Supplied With: 10X OPTIZYME Buffer 4
Conditions for 100% Activity: 1X OPTIZYME Buffer 4: 33mM Tris-acetate (pH 7.9 at 37°C), 10mM Mg-acetate, 66mM K-acetate and 0.1mg/mℓ BSA; Incubate at 37°C
Concentration: 10u/µℓ
Storage Buffer Components: 10mM Tris-HCl (pH 7.5 at 25°C), 100mM KCl, 1mM DTT, 5mM MgCl2, 0.2mg/mℓ BSA and 50% (v/v) glycerol
Unit Definition: One unit is defined as the amount of XmnI required to digest 1 µg of lambda DNA in 1 hour at 37°C in 50 µℓ of recommended reaction buffer.
Tested for: Overdigestion Assay, Ligation/Re-Cutting Assay, Genome Qualified
Recommended storage: -20°C

OPTIZYME™ 10X Buffer 1

packaging	Mfr. No
5X1mℓ Poly Tube	BP8084-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Tris-HCl (pH 7.5 at 37°C), 100mM MgCl2, 1 mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer 2

packaging	Mfr. No
5X1mℓ Poly Tube	BP8085-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Tris-HCl (pH 7.5 at 37°C), 100mM MgCl2, 500mM NaCl, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer 3

packaging	Mfr. No
5X1mℓ Poly Tube	BP8086-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 500mM Tris-HCl (pH 7.5 at 37°C), 100mM MgCl2, 1M NaCl, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer 4

packaging	Mfr. No
5X1mℓ Poly Tube	BP8087-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 330mM Tris-acetate (pH 7.9 at 37°C), 100mM magnesium acetate, 660mM potassium acetate, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer 5

packaging	Mfr. No
5X1mℓ Poly Tube	BP8088-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Tris HCl (pH 8.5 at 37°C), 100mM MgCl2, 1M KCl , 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer AarI, ScaI, PasI

packaging	Mfr. No
1 mℓ Poly Tube	BP8096-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Bis-Tris Propane-HCl (pH 6.5 at 37°C), 100mM MgCl2, 1M KCl, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer BamHI

packaging	Mfr. No
5X1mℓ Poly Tube	BP8089-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Tris-HCl (pH 8.0 at 37°C), 50mM MgCl2, 1M KCl , 0.2 % Triton X-100, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer Cfr9I

packaging	Mfr. No
1 mℓ Poly Tube	BP8093-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Tris-HCl (pH 7.2 at 37°C), 50mM MgCl2, 2M sodium glutamate, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer Ecl136II, SacI

packaging	Mfr. No
1 mℓ Poly Tube	BP8095-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Bis-Tris Propane-HCl (pH 6.5 at 37°C), 100mM MgCl2, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer EcoRI

packaging	Mfr. No
5X1mℓ Poly Tube	BP8090-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 500mM Tris-HCl (pH 7.5 at 37°C), 100mM MgCl2, 1M NaCl, 0.2 % Triton X-100, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer KpnI

packaging	Mfr. No
1 mℓ Poly Tube	BP8094-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Tris-HCl (pH 7.5 at 37°C), 100mM MgCl2, 0.2% Triton X-100, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer Sau3AI

packaging		Mfr. No
1 mℓ	Poly Tube	BP8091-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 330mM Tris-acetate (pH 7.9 at 37°C), 100mM Mg-acetate, 660mM K-acetate, 0.2% Triton X-100 and 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

OPTIZYME™ 10X Buffer TaqI

packaging		Mfr. No
1 mℓ	Poly Tube	BP8092-1

Applications: The OPTIZYME™ Five Buffer System ensures the optimum reaction conditions for each restriction enzyme. This system consists of 10X Buffer 1, 10X Buffer 2, 10X Buffer 3, 10X Buffer 4 and 10X Buffer 5. The recommended buffer is supplied with each enzyme. To ensure consistent enzyme performance, OPTIZYME™ restriction enzyme buffers contain BSA, which enhances the stability of many enzymes and binds contaminants that may be present in DNA preparations. Multiple freeze-thaw cycles of the buffers will not cause BSA precipitation. OPTIZYME™ restriction enzymes exhibit 100% of their certified activity in the recommended buffer.
Components: 100mM Tris-HCl (pH 8.0 at 37°C), 50mM MgCl2, 1M NaCl, 1mg/mℓ BSA
Tested for: Functional Test, Endo- and Exonucleases Assay, Nicking Activity Assay
Recommended storage: -20°C

Denhardt's Reagent — Molecular Biology
50X Powder

packaging		Mfr. No
150 mg	AmberGlass	BP520-5

DNase	Not detected
Optical Absorbance of a 5X Solution (at 278nm)	0.6-0.8
pH of 1X solution (at 25°C)	5.0-7.0
Protease	Not detected
RNase	Not detected

Applications: Denhardt's Reagent is used as a blocking agent in DNA hybridizations.
A 50X concentrate is obtained by reconstituting with 5mℓ of sterile water.
Components: 50mg each of Ficoll*, Polyvinylpyrrolidone, and Bovine Albumin. [26873-85-8 (Ficoll)] ; [9003-39-8 (Polyvinylpyrrolidone)] ; [9048-46-8 (Bovine Albumin)]
Recommended Storage: 2°C to 8°C

Denhardt's Reagent — Molecular Biology
50X Solution

packaging		Mfr. No
5 mℓ	AmberGlass	BP515-5

DNase	Not detected
Optical Absorbance of a 5X Solution (at 278nm)	0.6-0.8
pH of 1X solution (at 25°C)	5.0-7.0
Protease	Not detected
RNase	Not detected

Applications: Denhardt's Reagent is used as a blocking agent in DNA hybridizations.
Components: <1% each of Ficoll*, Polyvinylpyrrolidone, and Bovine Albumin; and Water. Each 5mℓ of 50X Solution contains 50mg each of Ficoll*, Polyvinylpyrrolidone, and Bovine Albumin.
[26873-85-8 (Ficoll*)] ; [9003-39-8 (Polyvinylpyrrolidone)] ; [9048-46-8 (Bovine Albumin)]
Recommended Storage: -20°C

Dextran
White to Off-white Powder

packaging		Mfr. No
100 g	PolyBottle	BP1580-100

CAS: 9004-54-0

Heavy Metals (Pb)	<=0.0005%
Loss on drying	<=5%
pH of 1% Solution in 0.9% NaCl	6.5 ±0.3
Sulfated ash	<=1%

Applications: Dextran may be used with Polyethylene Glycol under certain conditions in the fractionation of proteins, cells, virus particles, and other macromolecules.
Dextran at neutral pH may be autoclaved.
Average M.W. of 500.000
Recommended Storage: RT

Dextran Sulfate Sodium Salt
White to Off-white Powder

packaging		Mfr. No
100 g	PolyBottle	BP1585-100
500 g	PolyBottle	BP1585-500

CAS: 9011-18-1

Moisture	<=7.5%
Sulfur Content	17-20%

Applications: Dextran Sulfate accelerates the rate of hybridization of DNA or RNA bound to membranes and may be used in Southern and Northern blotting procedures.
Average M.W. of 500.000
Recommended Storage: RT

Formamide — Molecular Biology

packaging		Mfr. No
100 mℓ	AmberGlass	BP227-100
500 mℓ	AmberGlass,EcoSafPak*	BP227-500

CH_3NO
CAS: 75-12-7
MW: 45.04
EINECS: 200-842-0
H360D
P201, P308+P313

Assay	>=99.0%
Conductivity	<=350µmhos/cm
Copper	<=0.0001%
Freezing Point	1.0°-3.0°C
Iron	<=0.0005%
Lead	<=0.0005%
Optical Absorbance at 280nm	<=0.1
Zinc	<=0.0005%

H2NCH:O; CH3NO; F.W. 45.04
Applications: Molecular Biology-grade Formamide is commonly used in nucleic acid hybridization and sequencing.
It requires pretreatment with a mixed-bed resin.
Recommended Storage: 4°C
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.
Vacuum distilled and packaged under Nitrogen

Hybridization Cocktail — Molecular Biology
50% Formamide

packaging		Mfr. No
50 mℓ	PolyBottle	BP1575-50

DNase	Not detected
RNase	Not detected
Suitability for Nucleic Acid Hybridization	To pass test

Applications: Hybridization Cocktail is formulated for use in Southern and Northern transfers, dot blots, and in situ DNA and RNA hybridizations.
Components: <85.0% Formamide, 2.2% Sodium Citrate Dihydrate, 4.4% Sodium Chloride, and <6.0% Dextran, Hydrogen Sulfate, Sodium Salt [75-12-7 (Formamide)] ; [6132-04-3 (Sodium Citrate Dihydrate)] ; [7647-14-5 (Sodium Chloride)] ; [9011-18-1 (Dextran, Hydrogen Sulfate, Sodium Salt)]
Recommended Storage: -20°C

Saline-Sodium Citrate — Molecular Biology
20X solution

packaging		Mfr. No
1 ℓ	PolyBottle	BP1325-1
4 ℓ	PolyPac*	BP1325-4
20 ℓ	PolyPac*	BP1325-20

CAS: [7647-14-5 (Sodium Chloride)], [6132-04-3 (Sodium Citrate Dihydrate)]

DNase	Not detected
NaCl Molarity	3 ±0.10M
pH (20X solution) (at 23°C)	7.0±0.1
Protease	Not detected
RNase	Not detected

Filtered through a 2-5 micron filter.
Applications: Saline-Sodium Citrate (SSC) is used as a buffer in Southern Blot transfer protocols.
Recommended storage: RT

Saline-Sodium Phosphate-EDTA
20X solution

packaging		Mfr. No
1 ℓ	PolyBottle	BP1328-1
4 ℓ	PolyPac*	BP1328-4
20 ℓ	PolyPac*	BP1328-20

0.2M NaH_2PO4, 3.0M NaCl and 0.02M EDTA
CAS: [7647-14-5 (Sodium Chloride)], [7558-80-7 (Sodium Phosphate Monobasic, anhydrous)], [60-00-4 (Ethylenediamine Tetraacetic Acid)]

DNase	Not detected
Ethylenediaminetetraacetic acid	0.6%
Molarity of NaCl	3 ±0.10M
pH (20X solution) (at 23°C)	7.4±0.1
Protease	Not detected
RNase	Not detected
Sodium Biophosphate	2.8%
Sodium (Na)	2.8% phosphate
sodium chloride	17.5 %

Filtered through a 2-5 micron filter.
Applications: Saline-Sodium Phosphate-EDTA is used in bacterial screening and hybridization procedures.
0.2M NaH_2PO_4, 3.0M NaCl and 0.02M EDTA
Recommended storage: RT

8-Hydroxyquinoline
White to Light-buff Needles or Powder

packaging		Mfr. No
100 g	AmberGlass	BP436-100

C_9H_7NO
CAS: 148-24-3
MW: 145.16
EINECS: 205-711-1
H319, H315, H335, H332,
H312, H302, H341
P281, P260, P301+P312,
P304+P340, P302+P352,
P280, P305+P351+P338

Assay	>=99.0%
Insoluble in Alcohol	<=0.05%
Melting Point	72.5°-74.0°C
Residue after ignition	<=0.05%
Suitability for Magnesium Determination	To pass test
Sulfate (SO_4)	To pass test (about 0.02%)

Applications: 8-Hydroxyquinoline is used to stabilize phenol.
Recommended Storage: RT

Ammonium Acetate
White Crystals

packaging		Mfr. No
500 g	AmberGlass	**BP326-500**
1 kg	AmberGlass	**BP326-1**

$C_2H_7NO_2$
CAS: 631-61-8
MW: 77.08

Assay	>=97.0%
Chloride (Cl)	<=5ppm
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iron	<=5ppm
Nitrate	<=0.001%
Optical Absorbance of a 1M Solution at 254nm	<=0.02
Optical Absorbance of a 1M Solution at 280nm	<=0.01
Optical Absorbance of a 1M Solution at 350nm	<=0.01
pH of 5% Solution (at 25°C)	6.7-7.3
Residue after ignition	<=0.01%
Sulfate (SO_4)	<=0.001%

Applications: Ammonium Acetate can be used to precipitate DNA from enzymatic reactions.
Recommended Storage: 4°C

Cesium Chloride
Crystalline Powder

packaging		Mfr. No
500 g	PolyBottle	**BP1595-500**
1 kg	PolyBottle	**BP1595-1**

ClCs EINECS: 231-600-2
CAS: 7647-17-8
MW: 168.36

Assay	>=99.5%
DNase	Not detected
Lithium metal in liquid paraffin	<=0.0002%
Potassium	<=0.03%
Protease	Not detected
Refractive Index (50% solution at 25°C)	1.369 ±0.005
RNase	Not detected
Sodium	<=0.02%
UV A260nm of a 50% Solution (w/v)	<=0.08

Applications: This economical grade of Cesium Chloride can be used where low levels of metal ion impurities do not interfere. It is recommended for isolating phage DNA, plasmid DNA, or total RNA.
Recommended Storage: RT

Cesium Chloride
White Crystalline Powder

packaging		Mfr. No
100 g	PolyBottle	**BP210-100**
500 g	PolyBottle	**BP210-500**
1 kg	PolyBottle	**BP210-1**

ClCs EINECS: 231-600-2
CAS: 7647-17-8
MW: 168.36

Assay	>=99.999%
DNase	Not detected
Lithium metal in liquid paraffin	<=1ppm
Potassium	<=2ppm
Protease	Not detected
Refractive Index of a 50% Solution	1.369 ±0.002
RNase	Not detected
Sodium	<=4ppm
UV A260nm of a 50% Solution (w/v)	<=0.02

Applications: This Molecular Biology-grade cesium chloride is ideal for UV analysis of nucleic acids during density-gradient centrifugation and for the isolation of plasmid DNA, phage DNA, virus particles, and RNA.
Recommended Storage: RT

Ethanol, Absolute (200 proof) DNase-, RNase- and Protease-Free
Molecular Biology Grade

packaging		Mfr. No
100 mℓ	Amber Glass	**BP2818-100**
500 mℓ	Amber Glass	**BP2818-500**
4 ℓ	Amber Glass	**BP2818-4**

C_2H_6O H225
CAS: 64-17-5 P210, P240
MW: 46.07

Acetone, Isopropyl alcohol	To pass test
Assay	>=99.5%
Benzene	<=2 ppm
DNase	Not detected
Infrared spectrum	Conforms to ref.
Methanol	<=0.1%
Protease	Not detected
Residue after evaporation	<=0.001%
RNase	Not detected
Solubility in water	Pass test
Substances darkened by H_2SO_4	Pass test
Substances reducing KMnO 4	Pass test
Titratable acid	<=0.0005mEq /g
Titratable base	<=0.0002mEq /g
Water Content	<=0.2%

Applications: For the purification and precipitation of biomolecules such as nucleic acids and proteins. It is also used in histology to prepare staining and destaining reagents and for dehydrating tissues prior to embedding.
Recommended storage: RT

Ethylenediamine Tetraacetic Acid 0.5 M Solution, pH 8.0 (for DNA Work)
Clear, Colorless Liquid

packaging		Mfr. No
100 mℓ	AmberGlass	**BP2482-100**
500 mℓ	AmberGlass	**BP2482-500**
1 ℓ	AmberGlass	**BP2482-1**
20 ℓ	PolyPac*	**BP2482-20**

$(HOOCCH_2)_2NCH_2CH_2N(CH_2COOH)_2;C_{10}H_{16}N_2O_8$ H319
CAS: 60-00-4 P280, P305+P351+P338
MW: 292.25

Molarity	0.475-0.525 M
pH	8.0±0.1

Applications: EDTA is used extensively in molecular biology to minimize metal ion impurities in reaction buffers. Ideal for DNA work.
Recommended Storage: RT

Guanidine Hydrochloride
Colorless-to-white Crystals

packaging		Mfr. No
500 g	PolyBottle	**BP178-500**
1 kg	PolyBottle	**BP178-1**

$CH_5N_3.HCl$ H315, H302, H319
CAS: 50-01-1 P301+P312, P302+P352,
MW: 95.53 P280, P305+P351+P338
EINECS: 200-002-3

Absorbance of a 6M Solution at 260nm	<=0.03
Absorbance of a 6M Solution at 280nm	<=0.01
Arsenic	<=5ppm
Assay	>=99.5%
Iron	<=5ppm
Lead	<=5ppm

$H_2NC(NH_2)$:NH·HCl;CH_5N_3·HCl;F.W.95.53
Applications: Guanidine Hydrochloride is a strong protein-denaturing agent used in the isolation of RNA from cell extracts. RNase activity is inhibited in the presence of this reagent.
Recommended Storage: RT

Guanidine Thiocyanate
White Crystalline Powder

packaging		Mfr. No
250 g	PolyBottle	**BP221-250**
1 kg	PolyBottle	**BP221-1**

$CH_5N_3.CHNS$ P280, P301+P330+P331,
CAS: 593-84-0 P305+P351+P338, P310,
MW: 118.16 P302+P352, P273,
H312, H332, H302, H412, P233
H314, EUH032

A280nm (70% in H_2O at 25°C)	<=0.8
Assay	>=99.0%
Melting Point	117°-122°C
Solubility (70% in H_2O at 25°C)	Clear and haze-free

Applications: A more powerful denaturing agent than Guanidine Hydrochloride, Guanidine Thiocyanate is suitable for the isolation of intact RNA from cell extracts.
Recommended Storage: RT

Isopropanol Molecular Biology-Grade

packaging		Mfr. No
500 mℓ	Amber Glass	**BP2618-500**
1 ℓ	Amber Glass	**BP2618-1**
2.5 ℓ	Amber Glass	**BP2618-212**
4 ℓ	Amber Glass	**BP2618-4**

C_3H_8O H225, H336, H319
CAS: 67-63-0 P261, P280,
MW: 60.1 P305+P351+P338, P210,
EINECS: 200-661-7 P240

Acetone	<=0.002%
Assay	>=99.9%
Color (APHA)	<=5 APHA
DNase	Not detected
Fluorescence Background (as Quinine Sulfate)	<=1 ppb
Optical Abs. at 205nm	<=1
Optical Abs. at 220nm	<=0.20
Optical Abs. at 230nm	<=0.10
Optical Abs. at 254nm	<=0.015
Propionaldehyde	<=0.002%
Protease	Not detected
Ref. index at 25°C	Inclusive between 1.3740-1.3760
Residue after evaporation	<=1 ppm
RNase	Not detected
Solubility in water	To pass test
Substances reducing KMnO 4	To pass test
Titrat. acid or base	<=0.0001mEq/g.
Water Content	<=0.05%

Applications: Used in fundamental applications, such as purification and precipitation of nucleic acids and proteins and preservation of biological specimens.
Recommended storage: RT

Phenol/Chloroform/Isoamyl Alcohol
125:24:1 Mixture, pH 4.3, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1754I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1754I-400**

CAS: 108-95-2 P280, P301+P330+P331,
EINECS: 203-632-7 P302+P350, P304+P340,
H301, H314, H341, H318, P305+P351+P338, P310,
H331, H311, H351, H373 P260

Assay	>99.0%
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH	4.3±0.2

Applications: This mixture is used to purify total RNA from mixtures containing RNA, DNA, and protein.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Phenol/Chloroform/Isoamyl Alcohol
25:24:1 Mixture, pH 5.2, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1753I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1753I-400**

CAS: 108-95-2 P280, P301+P330+P331,
EINECS: 203-632-7 P302+P350, P304+P340,
H301, H314, H341, H318, P305+P351+P338, P310,
H331, H311, H351, H373 P260

Assay	>99.0%
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH (with buffer)	5.2±0.3

Applications: This mixture is used for extracting protein from nucleic acid preparations.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Phenol/Chloroform/Isoamyl Alcohol
25:24:1 Mixture, pH 6.7/8.0, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1752I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1752I-400**

CAS: 136112-00-0
H341, H373, H314, H351, H301, H311, H331
P301+P330+P331, P280, P305+P351+P338, P310, P281, P304+P340, P260

Assay	>99.0%
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH	6.7±0.2

Applications: This mixture is used for extracting protein from crude nucleic acid preparations.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Phenol, Saturated
pH 4.3, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1751I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1751I-400**

C_6H_5OH
MW: 94.04
H301, H311, H331, H314, H373, H341
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P301+P310, P260

Assay	>99.0%
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH (with buffer)	4.3±0.2

Applications: Phenol saturated with Tris buffer is used for purifying RNA.
Capped with a layer of buffer.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Phenol, Saturated
pH 6.6/7.9, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1750I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1750I-400**

H314, H331, H373, H341, H311
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P301+P310, P260

Assay	>99.0%
DNase	Not detected
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH	6.6±0.2
pH (with buffer)	7.9±0.2
RNase	Not detected

Applications: Phenol saturated with Tris buffer is used in DNA extraction procedures.
Capped with a layer of buffer.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Proteinase K
From Tritirachium album

Molecular Biology

packaging		Mfr. No
50 mg	PolyBottle	**BP1700-50**
100 mg	PolyBottle	**BP1700-100**
500 mg	PolyBottle	**BP1700-500**

CAS: 39450-01-6
EINECS: 254-457-8
H315, H319, H335, H334
P261, P280, P305+P351+P338

DNase	Not detected
RNase	Not detected
Specific Activity	>=30U/mg

Applications: Proteinase K is widely used in the isolation of DNA and RNA from cell and tissue preparations. It is a wide-spectrum protease, inactivating many enzymes, including endogenous nucleases.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Sodium Acetate Anhydrous
White Crystals or Granular Powder

packaging		Mfr. No
500 g	PolyBottle	**BP333-500**
1 kg	PolyBottle	**BP333-1**

$C_2H_3NaO_2$ EINECS: 204-823-8
CAS: 127-09-3
MW: 82.03

Assay	>=99.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.002%
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.01%
Iron	<=0.001%
Loss on Drying (at 120°C)	<=1.0%
Magnesium (Mg)	<=0.002%
pH of 5% Solution (at 25°C)	7.0-9.2
Phosphate (PO_4)	<=0.001%
Sulfate (SO_4)	<=0.003%

Applications: Sodium Acetate is added to DNA reactions to facilitate ethanol precipitation of the DNA.
Recommended Storage: RT

Sodium Acetate Trihydrate
Colorless-to-white Crystals

packaging		Mfr. No
500 g	PolyBottle	**BP334-500**

$C_2H_3NaO_2.3H_2O$
CAS: 6131-90-4
MW: 136.08

Assay	99.0-101.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.001%
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iron	<=5ppm
Magnesium (Mg)	<=0.002%
pH of 5% Solution (at 25°C)	7.5-9.2
Phosphate (PO_4)	<=5ppm
Potassium	<=0.005%
Substances Reducing Permanganate	To pass test
Sulfate (SO_4)	<=0.002%

Applications: The trihydrate form of Sodium Acetate can be used for many of the same applications as the anhydrous form.
Recommended Storage: RT

Sodium Chloride-Tris-EDTA (STE) Buffer
10X, pH 8.0

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2479-100**
500 mℓ	PolyBottle	**BP2479-500**
1 ℓ	PolyBottle	**BP2479-1**

DNase	Not detected
pH of 1X solution (at 25°C)	7.9-8.1
Protease	Not detected
RNase	Not detected

Applications: STE buffer is suitable for biomolecular lab procedures.
10X Solution contains 100mM Tris-HCl, 10mM EDTA, and 1M NaCl.
Autoclaved.
[77-86-1 (Tris Base)] ; [60-00-4 (EDTA)] ; [7647-01-0 (HCl)] ; [7647-14-5 (NaCl)]
Recommended Storage: RT
Filtered through a 5-micron filter.

Sodium Chloride-Tris-EDTA Buffer
1X, pH 8.0

packaging		Mfr. No
500 mℓ	PolyBottle	**BP2478-500**
1 ℓ	PolyBottle	**BP2478-1**

DNase	Not detected
pH (at 25°C)	7.9-8.1
Protease	Not detected
RNase	Not detected

Applications: STE buffer is suitable for biomolecular lab procedures.
1X solution contains 10mM Tris-HCl, 1mM EDTA and 100mM NaCl.
Autoclaved.
[77-86-1 (Tris Base)] ; [60-00-4 (EDTA)] ; [7647-01-0 (HCl)] ; [7647-14-5 (NaCl)]
Recommended Storage: RT
Filtered through a 5-micron filter.

Spermidine Trihydrochloride
White Crystalline Powder

packaging		Mfr. No
1 g	AmberGlass	**BP2540-1**
5 g	AmberGlass	**BP2540-5**
25 g	AmberGlass	**BP2540-25**

$C_7H_{19}N_3.3HCl$
CAS: 334-50-9
MW: 254.63
EINECS: 206-379-0
H319, H335, H315
P261, P302+P352, P280, P305+P351+P338

Assay	>=99%
FTIR	Conforms to standard
Melting Point	253°-263°C

Applications: Spermidine Trihydrochloride forms stable compounds with nucleic acids. It is used in biochemical research.
Recommended Storage: Store below 20°C, desiccate.

SurePrep* FFPE RNA Isolation Kit
For the rapid and efficient extraction and purification of RNA (including microRNA) from FFPE samples

packaging	Mfr. No
50 preps	**BP2816-50**

Average Yield	Variable due to age of parrafin blocks; 2-3 µg of total RNA per 1mg of fresh FFPE hamster kidney
Binding capacity per column	Up to 50µg RNA
Maximum amount of starting material	5 slices of 20mm thick paraffin slices (25 mg of unsectioned block)
Maximum loading volume per spin column	650 µℓ
Size of RNA purified	All sizes, including small RNA and microRNA (<200n.t.)
Time to complete 10 purifications	1 to 4 hours

Applications: Rapid method for the isolation and purification of total RNA from formaldehyde-fixed paraffin-embedded (FFPE) tissue samples.
Description: High quality and integrity of the isolated RNA - The purified total RNA is of the highest quality and integrity, and can be used in any sensitive downstream applications; Isolate a diversity of RNA species - All RNA species can be isolated, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA); High yields - The FFPE RNA Purification Kit allows for the purification of high yields of total RNA; No phenol:chloroform extractions - Total RNA is isolated from FFPE tissue samples without the use of harmful chemicals such as phenol or chloroform; Rapid procedure - Isolate total RNA from FFPE tissue sections using a rapid spin column format in as little as 1 hour
Components: Enzyme incubation buffer (6mL); Digestion buffer (20mL); Wash solution (22mL); Binding solution (20mL); Proteinase K (12mg); DNase I (1 vial); Elution buffer (6mL); Spin columns (50); Collection tubes (50); Elution tubes, 1.7mℓ (50).
Recommended storage: RT

SurePrep* Plant/Fungi Total RNA Purification Kit

For the rapid purification of total RNA (including microRNA) from plants and fungi

packaging	Mfr. No
50 preps	BP2817-50

Average yield: 50mg Grape leaves	35 µg
Average yield: 50mg Peach leaves	30 µg
Average yield: 50mg Plum leaves	32 µg
Average yield: 50mg Tobacco leaves	60 µg
Average yield: 50mg Tomato leaves	60 µg
Column binding capacity	50 µg
Maximum amount of starting material: Fungi (wet weight)	50 µg
Maximum amount of starting material: Plant cells	1 X 106cells
Maximum amount of starting material: Plant tissues	50 mg
Maximum column loading volume	650 µℓ
Size of RNA purified	All sizes, including small RNA and microRNA (<200n.t.)
Time to complete 10 purifications	30 min

Applications: Rapid method for the isolation and purification of total RNA from a wide range of plant and filamentous fungi species.
Description: No liquid nitrogen required for homogenization - Liquid nitrogen is not required for homogenization of samples, making RNA purification rapid and convenient; Isolate RNA from a wide range of samples - Total RNA can be isolated from a wide range of plant and filamentous fungi samples; Isolate a diversity of RNA species - All sizes of RNA are isolated from large mRNA down to microRNA, without the use of phenol or chloroform; Isolate total RNA, including viral RNA - RNA samples can be used for the detection of viral pathogens, as viral RNA is isolated with the total RNA; High yield of RNA - High yields of purified RNA can be isolated with this kit; No phenol:chloroform extractions - Total RNA is isolated without the use of harmful chemicals such as phenol or chloroform. RNA is of the highest quality and can be used in a number of downstream applications.
Components: Wash solution (22mL); Lysis solution (40mL); Elution buffer (6mL); Spin columns (50); Collection tubes (50); Elution tubes, 1.7mℓ (50).
Recommended storage: RT

SurePrep* Soil DNA Isolation Kit

For the rapid preparation of inhibitor-free DNA from common types of soil

packaging	Mfr. No
50 preps	BP2815-50

Column binding capacity	50 µℓ
Maximum column loading volume	650 µℓ
Maximum soil input	250 mg
Time to complete 10 purifications	30 min
Type of soil processed	All common soil types, including clay, loam and sandy soil

Applications: Isolation and purification of total DNA from microorganisms in soil and sediment samples, such as bacteria, fungi, and algae.
Description: Process all types of soil - All types of soil samples can be processed with this kit, including common soil samples such as clay, loam and sandy soil; Remove all humic acid from DNA samples - The kit removes all traces of humic acid using the provided Bead Tubes and a combination of chemical and physical homogenization and lysis. All the brown colour is removed from the samples; Rapid detection of microorganisms in soil samples - Isolate total DNA from all microorganisms found in soil, including bacteria, fungi and algae; Fast and easy processing - Rapid spin column format allows for the isolation of DNA in under 30 minutes; .Isolate high quality total DNA - The purified DNA is free from all inhibitors including humic acid, and can be used directly in downstream applications including PCR.
Components: Lysis additive (6mL); Binding solution (6mL); Lysis solution (45mL); Wash solution I (30mL); Wash solution II (18mL); Elution buffer (6mL); Spin columns (50); Collection tubes (50); Beads (30g); Screw cap tubes (50); Elution tubes, 1.7 mℓ (50).
Recommended storage: RT

SurePrep* Water RNA/DNA Purification Kit

For the rapid isolation of DNA/RNA from microorganisms in non-turbid water samples

packaging	Mfr. No
25 preps	BP2814-25

Maximum filter column loading volume	20 mℓ
Maximum spin column loading volume	650 µℓ
Maximum water input	100 mℓ
Elution volume	100 µℓ
safety	10 mℓ
Time to complete 10 purifications	45 min

Applications: Isolation and purification of total RNA and DNA simultaneously from all microorganisms found in environmental water samples, including bacteria, fungi, and algae.
Description: Rapid isolation of DNA/RNA from microorganisms in non-turbid water samples -Only three buffers are required to complete isolation of total DNA and RNA from all microorganisms found in water, including bacteria, fungi and algae; Complete column purification - The RNA and DNA are both column purified simultaneously using the same column; Fast and easy processing - Rapid spin column format allows for the isolation of both RNA and DNA in under 45 minutes; Isolate highly concentrated RNA and DNA - The purified RNA and DNA is eluted in low volumes, allowing for the direct use of the nucleic acid in downstream applications; Isolate a diversity of RNA species - All sizes of RNA are isolated, from large mRNA down to microRNA, without the use of phenol or chloroform
Components: Lysis solution (15mL); Enzyme incubation buffer (4mL); Nucleic acid elution buffer (4mL); Nucleic acid wash solution (11mL); Spin columns (25); Collection tubes (25); Elution tubes, 1.7mℓ (25); Bead tubes (25); Filter column, 0.45µm (25).
Recommended storage: RT

N-Methylpyrrolidinone

packaging		Mfr. No
4 ℓ	AmberGlass,EcoSafPak*	BP1172-4

C_5H_9NO
CAS: 872-50-4
MW: 99.13
H319, H315, H335, H360D

P201, P308+P313, P261, P302+P352, P280, P305+P351+P338

Assay (GC)	>=99.8%
Color (APHA)	<=20
IR	Conforms to standard
Optical Absorbance at 265nm	<=1.0
Optical Absorbance at 270nm	<=0.7
Optical Absorbance at 300nm	<=0.3
Optical Absorbance at 400nm	<=0.02
Titratable Base	<=0.001mEq/g
Water	<=0.05%

Recommended storage: RT
Also available in recyclable FisherPak* and NOWPak* containers. EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Fisher BioReagents* SurePrep* Small RNA Purification Kit

Optimized for enrichment of small RNA by removing large RNA for studying regulation of gene expression

- Isolate all small RNA molecules (<200 nucleotides)
- Minimal contamination from large RNA molecules and genomic DNA
- Fast and easy processing using rapid spin-column format
- No phenol or chloroform extractions
- High quality small RNA such as miRNA and siRNA can be used in various downstream applications

BP2801-25

APPLICATIONS: Purified small RNA is suitable for use in RT-PCR, Northern blotting, and microarray analysis

INCLUDES: Lysis solution (2 x 20mL), Wash solution (22mL), RNA elution buffer (6mL), large RNA removal columns (25), small RNA enrichment columns (25), Collection tubes (50), Elution tubes (1.7mL) (50) and Product insert

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. Reagents should remain stable for at least two years in unopened containers.

Kit Specifications	
Column binding capacity	50µg
Maximum column loading volume	600µL
Size of RNA Purified	<200 nt
Maximum amount of starting material:	
Animal cells	3×10^6 cells
Animal tissues	25mg
Bacteria	5×10^8 cells
Plant tissues	50mg
Time to complete ten purifications	45 minutes

No. of Preps	MFR No.
25	BP2801-25

Fisher BioReagents* SurePrep* Leukocyte RNA Purification Kit

Rapid method for the isolation and purification of total leukocyte (white blood cell) RNA from mammalian blood samples

- Fast and easy processing using rapid spin-column format
- Differential red blood cell lysis allows for the removal of a majority of globin mRNA
- Isolate total leukocyte RNA, including all small RNA species
- No phenol or chloroform extractions
- High quality leukocyte RNA can be used in a number of downstream applications

BP2807-50

APPLICATIONS: Purified RNA is suitable for use in real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays

INCLUDES: RBC Lysis Solution (180mL); Binding Solution (25mL); Wash Solution (22mL); RNA Elution Buffer (6mL); Spin Columns (50); Collection Tubes (50); Elution tubes (1.7mL) (50); Product Insert (1)

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. The RBC Lysis Solution should be stored at 4°C upon arrival. These reagents should remain stable for at least two years in their unopened containers.

Kit Specifications	
Column binding capacity	50µg
Maximum Column Loading Volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum Blood Input	2mL or 3×10^6 Leukocytes
Minimum Blood Input	10µL
Time to complete ten purifications	45 minutes
Average Yield: 500µL human blood	1.5µg

No. of Preps	MFR No.
50	BP2807-50

Fisher BioReagents* SurePrep* TrueTotal* RNA Purification Kit

Rapidly isolate and purify total RNA from a variety of biological sources

- Fast and easy processing using rapid spin-column format
- Isolate all sizes of RNA including large RNA and small RNA species
- No phenol or chloroform extractions
- Isolate and detect RNA from as little as a single animal cell
- Purify total RNA from a variety of biological sources such as cultured animal cells, tissue samples, blood, bacteria, yeast, fungi and plants

BP2800-50

APPLICATIONS: Purified intact RNA is suitable for Quantitative RT-PCR, Northern blotting, RNase protection, and expression array assays

INCLUDES: Lysis solution (40mL), Wash solution (22mL), Elution buffer (6mL), Micro spin columns (50), Collection tubes (50), Elution tubes (1.7mL) (50) and product insert

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. Reagents should remain stable for at least two years in unopened containers.

Kit Specifications	
Column binding capacity	50µg
Maximum column loading volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum amount of starting material:	
Animal cells	3×10^6 cells
Animal tissues	25mg
Blood	100µL
Bacteria	1×10^9 cells
Yeast	1×10^8 cells
Fungi	50mg
Plant tissues	50mg
Time to complete ten purifications	20 minutes
Average yields[1]	
HeLa cells (1×10^6 cells)	15µg
E. coli (1×10^9 cells)	50µg

[1] *Average yields will vary depending upon a number of factors including species, growth conditions, and developmental stage.*

No. of Preps	MFR No.
50	BP2800-50

Fisher BioReagents* SurePrep* RNA Cleanup and Concentration Kit

Provides a rapid method to purify and concentrate RNA isolated using other methods such as phenol:chloroform extraction or after enzymatic reactions

- Fast and easy processing using rapid spin-column format
- Suitable for all sizes of RNA, from large mRNA to microRNA (miRNA)
- Able to clean up RNA isolated using different methods, including phenol/chloroform extractions
- Efficient RNA cleanup from various enzymatic reactions such as labeling, DNase treatment and in vitro transcription

BP2809-50

APPLICATIONS: Purified RNA is suitable for Quantitative RT-PCR, Northern blotting, RNase protection, primer extension, and expression array assays

INCLUDES: Binding solution (2 x 20mL), Wash solution (22mL), RNA elution buffer (6mL), Collection tubes (50), Spin columns (50), Elution tubes (1.7mL) (50), Product insert

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. Reagents should remain stable for at least two years in unopened containers.

Kit Specifications	
Column binding capacity	50µg
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum Amount of Starting Material	50µg of RNA
Minimum Elution Volume	20µL
Time to complete ten purifications	20 minutes
Average Recovery	≥90%

No. of Preps	MFR No.
50	BP2809-50

Fisher BioReagents* SurePrep* RNA/Protein Purification Kit

Rapid method for the isolation and purification of total RNA and proteins sequentially from a single sample using the same column in less than 20 minutes

- Fast and easy processing using rapid spin-column format
- All columns for RNA purification and protein purification provided
- Sequentially isolate high quality RNA and proteins from a single lysate – no need to split the lysate
- Isolate all sizes of RNA, from large mRNA and rRNA down to microRNA (miRNA)
- No phenol or chloroform extractions
- Purify total RNA and proteins from a variety of biological sources such as cultured animal cells, tissue samples, blood, bacterica, yeast, fungi or plants

BP2806-50

APPLICATIONS: Purified total RNA and protein from same biological sample for studies of gene expression including gene silencing experiments, mRNA knockdowns, or experiments correlating RNA and protein expression levels. RNA qualified for use in real time PCR, reverse transcription PCR, Northern blotting, RNase protection and expression array assays. Proteins suitable for use in SDS-PAGE analysis and Western blots.

INCLUDES: Lysis solution (40mL); Nucleic acid wash solution (22mL); Nucleic acid elution buffer (15mL); Protein column regeneration buffer (30mL); Protein column activation and wash buffer (60mL); Protein pH binding buffer (4mL); Protein elution buffer (8mL); Enzyme incubation buffer (6mL); Protein neutralizer (2mL); Protein loading dye (2mL); Spin colulmns (50); Collection tubes (150); Product insert (1)

STORAGE CONDITIONS: The Protein Loading Dye should be stored at -20°C upon arrival. All other solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least one year in their unopened containers.

Kit Specifications	
Column binding capacity	50µg for RNA
	200µg for protein
Maximum Column Loading Volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maxium Amount of Starting Material:	
Animal Cells	3×10^6 cells
Animal Tissues	25mg
Blood	100µL
Bacteria	1×10^9 cells
Yeast	1×10^9 cells
Fungi	50mg
Plant Tissues	50mg
Time to complete ten purifications	30 minutes
Average Yield*	
HeLa Cells (1×10^6 cells)	15µg RNA
HeLa Cells (1×10^6 cells)	150µg protein

** Average yields will vary depending upon a number of factors including species, growth conditions used and developmental stage.*

No. of Preps	MFR No.
50	BP2806-50

Fisher BioReagents* SurePrep* Nuclear or Cytoplasmic RNA Purification Kit

Rapid method for the isolation and purification of both nuclear and cytoplasmic RNA from cultured animal cells and animal tissue samples

- Fast and easy processing using rapid spin-column format
- High quality intact RNA can be used in various downstream applications
- Enrich for cytoplasmic or nuclear RNA depending on downstream application
- No genomic DNA contamination in the cytoplasmic fraction
- No phenol or chloroform extractions
- Isolate all sizes of RNA from each fraction, including all small RNA molecules (>200 nt)
- Kit provides sufficient reagents to perform either 50 cytoplasmic RNA preparations or 25 cytoplasmic and nuclear preparations

BP2805-50

APPLICATIONS: Purification of Nuclear and Cytoplasmic RNA suitable for real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays.

INCLUDES: Lysis solution (20mL); Wash solution (22mL); Binding solution (25mL); RNA elution solution (6mL); Spin columns (50); Collection tubes (50); Elution tubes (1.7mL) (50); Product insert (1)

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least two years in their unopened containers.

Kit Specifications	
Column binding capacity	50µg
Maximum Column Loading Volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum Amount of Starting Material:	
Animal Cells	3×10^6 cells
Animal Tissues	15mg
Time to complete ten purifications	45 minutes
Average Yields*	
HeLa Cells - cytoplasmic (1×10^6 cells)	15µg
HeLa Cells - nuclear (1×10^6 cells)	≤3.5µg

No. of Preps	MFR No.
50 (Cyto); 25 (Nuc & Cyto)	BP2805-50

Fisher BioReagents* SurePrep* Urine Bacterial RNA Purification Kit

Designed for the rapid preparation of bacterial RNA from human or animal urine samples

- Fast and easy processing using rapid spin-column format
- Isolate total RNA, from large mRNA down to microRNA (miRNA)
- No phenol or chloroform extractions
- Isolate RNA from both Gram negative and Gram positive bacteria, including *E. coli, Proteus spp., Klebsiella spp., Enterobacter spp., Serratia spp., Pseudomonas spp., Clostridial ssp.* and *Leptospirosis spp.*, as well as *Chlamydia trachomatis* and *Neisseria gonorrhoeae*

BP2804-50

APPLICATIONS: Purified bacterial RNA suitable for real time PCR, reverse transcription PCR, Northern blotting, RNase protection, primer extension, and expression array assays.

INCLUDES: Lysis solution (40mL); Wash solution (22mL); RNA elution buffer (6mL); Spin columns (50); Collection tubes (50); Elution tubes (1.7mL) (50); Product insert (1)

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least two years in their unopened containers.

Kit Specifications	
Column binding capacity	50µg
Volume of Urine Processed	10-50mL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Time to complete ten purifications	30 minutes
Average Yield	~0.5µg RNA per 1×10^7 cells (Varies due to cell density of sample)

No. of Preps	MFR No.
50	BP2804-50

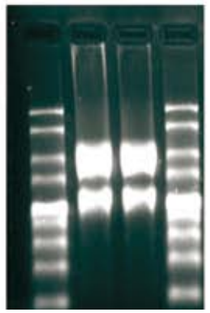
Fisher BioReagents* MOPS 10X Buffer for Agarose RNA Electrophoresis

Convenient, easy to use 10X concentrated solution

A low ionic strength buffer used for electrophoretic separation of formaldehyde-denatured RNA.

- Easy to dilute solution, pH 7.0
- One-year shelf life
- 0.2-micron filtered
- RNase and DNase free
- Available in 500mL and 1L sizes, both in poly translucent bottles

Quantity	MFR No.
500mL	BP2900-500
1L	BP2900-1



Lanes 2 and 3 demonstrate the electrophoresis of 1µg of purified RNA from E. coli, resolved on a 1.5% denaturing formaldehyde-agarose gel, using the MOPS 10X Buffer (BP2900), diluted to 1X as a running buffer. Lanes 1 and 4 contain a 1kb RiboLadder RNA standard (BP2811-50). Electrophoresis was performed at 100V for 70 min., and the gel was stained with ethidium bromide (BP1302-10).

Fisher BioReagents SurePrep* Urine Exfoliated Cell RNA Purification Kit

Rapid method for the isolation and purification of total RNA from exfoliated cells that have been shed into the urine from the urinary tract

- Fast and easy processing using rapid spin-column format
- Isolate total RNA, from large mRNA down to microRNA (miRNA)
- RNA can be isolated and detected from as little as 100 exfoliated cells
- Isolate high quality total RNA from urine
- No phenol or chloroform extractions

BP2803-50

APPLICATIONS: Purified RNA from urine exfoliated cells suitable for real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays

INCLUDES: Lysis solution (40mL); Wash solution (22mL); RNA elution solution (6mL); Spin columns (50); Collection tubes (50); Elution tubes (1.7mL) (50); Product insert (1)

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least two years in their unopened containers.

Kit Specifications	
Column binding capacity	50µg
Volume of Urine Processed	1-50mL
Maximum Input of Exfoliated Cells	1 x 10^6 cells
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Time to complete ten purifications	20 minutes
Average Yield	~1µg RNA per 1 x 10^5 cells (varies due to cell density of sample)

No. of Preps	MFR No.
50	BP2803-50

Fisher BioReagents* SurePrep* RNA/DNA/Protein Purification Kit

Rapid method for the isolation and purification of total RNA, genomic DNA and proteins sequentially from a single sample of cultured animal cells, tissue samples, blood, bacteria, yeast, fungi or plants

The total RNA, genomic DNA and proteins are all column-purified using the same column. This kit is ideal for researchers who are interested in studying the genome, proteome and transcriptome of a single biological sample, such as studies of gene expression including gene silencing experiments or mRNA knockdowns, studies involving biomarker discovery, studies in epigenetics, and for characterization of cultured cell lines.

BP2802-50

- Fast and easy processing using rapid spin-column format
- All columns for RNA, DNA and protein purification provided
- Sequential isolation of nucleic acids and proteins from a single lysate, no need to split the lysate
- Isolate all sizes of RNA, including large mRNA and rRNA to microRNA (miRNA)
- Isolate high quality total RNA
- Isolate high quality genomic DNA with a molecular weight ≥ 30kb
- High yields of isolated proteins
- No phenol or chloroform extractions

APPLICATIONS: Purifed RNA, DNA and protein suitable for assays such as PCR, real time PCR, reverse transcription PCR, Northern blotting, RNase protection, expression array assays, DNA sequencing, Southern blotting, SNP analysis, SDS-PAGE and Western Blots

INCLUDES: Lysis solution (40mL); RNA wash solution (20mL); RNA elution solution (6mL); gDNA wash solution (15mL); gDNA elution buffer (15mL); Protein column regeneration buffer (30mL); Protein column activation and wash buffer (60mL); Protein pH binding buffer (4mL); Protein elution buffer (8mL); Protein neutralizer (2mL); Protein loading dye (2mL); Spin columns (50); Collection tubes (200); Product inserts (1)

STORAGE CONDITIONS: The Protein Loading Dye should be stored at -20°C upon arrival. All other solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least one year in their unopened containers

Kit Specifications	
Column binding capacity	50µg for RNA
	20µg for DNA
	200µg for protein
Maximum column loading volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200nt)
Size of DNA Purified	≥30kb
Maximum amount of starting material:	
Animal cells	3 × 10^6 cells
Animal tissues	25mg
Blood	100µL
Bacteria	1 × 10^9 cells
Yeast	1 x 10^8 cells
Fungi	50mg
Plant tissues	50mg
Time to complete ten purifications	30 minutes
Average Yields*	
HeLa Cells (1 x 10^6 cells)	15µg RNA
HeLa Cells (1 x 10^6 cells)	8µg DNA
HeLa Cells (1 x 10^6 cells)	150µg protein

** Average yields will vary depending upon a number of factors including species, growth conditions used and developmental stage.*

No. of Preps	MFR No.
50	BP2802-50

4-Dimethylaminopyridine — Peptide Synthesis

packaging		Mfr. No
100 g	AmberGlass	BP596-100

$C_7H_{10}N_2$
CAS: 1122-58-3
MW: 122.17
EINECS: 214-353-5
H310, H314, H301

P280, P361, P302+P350, P301+P330+P331, P305+P351+P338, P310

Assay	>=99%
IR	Conforms to standard
Melting Point	108°-111°C

Applications: 4-Dimethylaminopyridine is a catalyst for several acylation reactions, especially in oligonucleotide synthesis.
Recommended Storage: RT
UN 2928; DOT Class 6.1:Poison

5-Bromo-2′-Deoxyuridine
Off-white Powder

packaging		Mfr. No
250 mg	AmberGlass	BP2508-250
500 mg	AmberGlass	BP2508-500
1 g	AmberGlass	BP2508-1
5 g	AmberGlass	BP2508-5

$C_9H_{11}BrN_2O_5$
CAS: 59-14-3
MW: 307.09
H335, H319, H341, H315

P281, P261, P302+P352, P280, P305+P351+P338

FTIR	Conforms to standard
Melting Point	183-193°C
UV/VIS: lambda max (H_2O)	279, (209)nm ± 3nm

Applications: 5-Bromo-2′-Deoxyuridine is a thymidine analog used as a mutagen in genetic research.
Recommended Storage: -20°C

8-Bromoadenine
Light Tan Powder

packaging		Mfr. No
100 mg	AmberGlass	BP2507-100
500 mg	AmberGlass	BP2507-500
1 g	AmberGlass	BP2507-1

$C_5C_4N_5Br$
CAS: 6974-78-3
MW: 213.97

EINECS: 230-225-1

Applications: 8-Bromoadenine is used in several biochemical research applications.
Recommended Storage: Store below 0° C, desiccate
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Acetic Acid, Glacial
Aldehyde-free — Sequencing

packaging		Mfr. No
500 mℓ	Glass	BP1185-500

$C_2H_4O_2$
CAS: 64-19-7
MW: 60.05
H226, H314

P280, P305+P351+P338, P302+P352, P304+P340, P210, P309+P311

Acetic Anhydride ($(CH_3CO)_2O$)	<=0.01%
Assay	>=99.7%
Chloride (Cl)	<=0.4ppm
Color (APHA)	<=10
Copper	<=0.1ppm
Dilution Test	To pass test
Heavy Metals (Pb)	<=0.5ppm
Impurities Reducing Dichromate	Not detected
Impurities Reducing Permanganate	Not detected
Iron	<=0.2ppm
Nickel	<=0.1ppm
Residue after evaporation	<=8ppm
Sulfate (SO_4)	<=0.4ppm
Titratable Base	<=0.0004mEq/g

Recommended storage: RT

Acetonitrile DNA Synthesis

packaging		Mfr. No
450 mℓ	AmberGlass	BP1170-450
4 ℓ	AmberGlass	BP1170-4

C_2H_3N
CAS: 75-05-8
MW: 41.04
EINECS: 200-835-2
H225, H319, H332, H302, H312

P280, P302+P352, P301+P312, P304+P340, P305+P351+P338, P210, P240

Assay (by GLC)	>=99.9%
Color (APHA)	<=10
Density (at 25°C)	0.775-0.780g/mℓ
Fluorescence Background (as Quinine Sulfate)	To pass test
IR	Conforms to standard
LC Gradient Suitability	To pass test
Optical Absorbance at 190nm	<=1.00
Optical Absorbance at 195nm	<=0.15
Optical Absorbance at 200nm	<=0.07
Optical Absorbance at 205nm	<=0.05
Optical Absorbance at 210nm	<=0.04
Optical Absorbance at 220nm	<=0.02
Optical Absorbance at 254nm	<=0.01
Refractive Index (at 25°C)	1.3405-1.3425
Residue after evaporation	<=1.0ppm
Titratable Acid	<=0.008mEq/g
Titratable Base	<=0.0006mEq/g
Water	<=10ppm

Also available in recyclable FisherPak and NOWPak* containers.*
Recommended storage: RT

Chloroform — Molecular Biology
Approx. 0.75% Ethanol as Preservative

packaging		Mfr. No
1 ℓ	AmberGlass,EcoSafPak*	BP1145-1

$CHCl_3$
CAS: 67-66-3
MW: 119.38
EINECS: 200-663-8

H302, H315, H351, H373
P281, P260, P301+P312,
P302+P352

Acetone and Aldehyde	Not detected
Acid and Chloride	Not detected
Assay (GC)	>=99%
Color (APHA)	<=10
Density (at 25°C)	1.471-1.476g/mℓ
Fluorescence Background (as Quinine Sulfate)	To pass test
Free Chlorine	Not detected
Lead	<=0.05ppm
Optical Absorbance at 244nm	<=1.00
Optical Absorbance at 245nm	<=0.80
Optical Absorbance at 250nm	<=0.28
Optical Absorbance at 254nm	<=0.13
Peroxides	Not detected
Preservative (Ethanol)	0.5-1.0v/v%
Reactive Impurities with H_2SO_4	Not detected
Refractive Index (at 25°C)	1.4420-1.4450
Residue after evaporation	<=2ppm
Water	<=0.02%

EcoSafPak is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.*
Applications: Used in Phenol/Chloroform extractions to remove proteins from DNA or RNA samples.
Recommended storage: RT

Ethyl Acetate — Sequencing

packaging		Mfr. No
1 ℓ	AmberGlass,EcoSafPak*	BP1125-1

$C_4H_8O_2$
CAS: 141-78-6
MW: 88.11
EINECS: 205-500-4

H225, H319, H336, EUH066
P261, P280,
P305+P351+P338, P210,
P240

Assay (GC)	>=99.9%
Color (APHA)	<=10
Density (at 25°C)	0.893 to 0.895g/mℓ
Fluorescence Background (as Quinine Sulfate)	To pass test
Optical Absorbance at 255nm	<=1.00
Optical Absorbance at 260nm	<=0.15
Optical Absorbance at 270nm	<=0.025
Peroxides	Not detected
Reactive Impurities with H_2SO_4	Not detected
Refractive Index (at 25°C)	1.3680-1.3710
Residue after evaporation	<=10ppm
Titratable Acid	<=0.0009mEq/g
Water	<=0.02%

Applications: Solvent that is commonly used in DNA or peptide synthesis.
Recommended storage: RT
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Formic Acid — Sequencing
Aldehyde-free

packaging		Mfr. No
500 mℓ	PolyBottle	BP1215-500

CH_2O_2
CAS: 64-18-6
MW: 46.02
H226, H314
P280, P260,

P305+P351+P338,
P301+P330+P331,
P302+P352, P210

Acetic acid glacial min.	<=0.4%
Aldehyde (HCHO)	Not detected
Ammonium (NH_4)	<=0.005%
Assay (HCOOH w/w in H_2O)	>=88%
Chloride (Cl)	<=0.001%
Color (APHA)	<=15
Dilution Test	To pass test
Heavy Metals (Pb)	<=5ppm
Iron	<=5ppm
Residue after evaporation	<=0.002%
Sulfate (SO_4)	<=0.002%
Sulfite	To pass test

Recommended storage: RT

Methylene Chloride
Pentene Preservative

packaging		Mfr. No
4 ℓ	AmberGlass	BP1186-4

CH_2Cl_2
CAS: 75-09-2
MW: 84.93
EINECS: 200-838-9

H351
P280

Assay	>=99.9%
Boiling Range (1 drop to dryness)	<=1.0° incℓ. 39.8°C at 760mmHg
Color (APHA)	<=10
Density (at 25°C)	1.315-1.321g/mℓ
Fluorescence Background (as Quinine Sulfate)	<=1ppb
Free Halogens	To pass test
Optical Absorbance at 233nm	<=1.00
Optical Absorbance at 240nm	<=0.12
Optical Absorbance at 254nm	<=0.010
Refractive Index (at 25°C)	1.4200-1.4230
Residue after evaporation	<=1ppm
Titratable Acid (as HCl)	<=0.0003mEq/g
Water	<=25ppm

Recommended storage: RT
Also available in recyclable FisherPak* and NOWPak* containers.

N,N-Dimethylformamide Synthesis

packaging		Mfr. No
500 mℓ	AmberGlass,EcoSafPak*	BP1160-500
4 ℓ	AmberGlass	BP1160-4

C_3H_7NO
CAS: 68-12-2
MW: 73.09
H319, H312, H332, H360D,
H226

P301+P310, P302+P352,
P304+P340, P280,
P305+P351+P338, P210

Amines (as Dimethylamine)	<=5ppm
Assay (GC)	>=99.5%
Boiling Point	153.0° ±0.1°C
Boiling Range (1 drop to dryness)	2.0°C
Color (APHA)	<=15
Density (at 25°C)	0.942-0.946g/mℓ
IR	Conforms to standard
Optical Absorbance at 270nm	<=1.00
Optical Absorbance at 275nm	<=0.30
Optical Absorbance at 295nm	<=0.10
Optical Absorbance at 310nm	<=0.05
Optical Absorbance at 340-400nm	<=0.01
Residue after evaporation	<=0.005%
Titratable Acid	<=0.0005mEq/g
Titratable Base	<=0.003mEq/g
Water	<=0.03%

Recommended storage: RT
Also available in recyclable FisherPak*and NOWPak* containers. EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

n-Butyl Acetate — Sequencing

packaging		Mfr. No
500 mℓ	AmberGlass	BP1135-500

$C_6H_{12}O_2$
CAS: 123-86-4
MW: 116.16
EINECS: 204-658-1

H226, H336
P304+P340, P261, P210,
P240

Assay (GC)	>=99.5%
Boiling Range (1 drop to dryness)	<=1.0°C
Color (APHA)	<=10
Density (at 25°C)	0.860-0.900 g/mℓ
Fluorescence Background (as Quinine Sulfate)	To pass test
Foreign Esters	Not detected
Optical Absorbance at 255nm	<=1.00
Optical Absorbance at 260nm	<=0.30
Optical Absorbance at 280nm	<=0.050
Reactive Impurities with H_2SO_4	Not detected
Refractive Index (at 25°C)	1.3890-1.3950
Residue after evaporation	<=10 ppm
Titratable Acid	<=0.003 meq/g
Water	<=0.05%

Applications: Solvent is commonly used in DNA or peptide synthesis.
Recommended storage: RT

n-Propanol — Sequencing
Peroxide-free

packaging		Mfr. No
500 mℓ	AmberGlass,EcoSafPak*	BP1130-500

C_3H_8O
CAS: 71-23-8
MW: 60.1
EINECS: 200-746-9
H225, H336, H318

P280, P305+P351+P338,
P310, P261, P301+P312,
P210, P240,
P304+P340

Acidity (as Acetic Acid)	<=0.02%
Aldehyde (HCHO)	Not detected
Assay (GC)	>=99.5%
Boiling Range	96°-98°C
Color (APHA)	<=20
Density (at 25°C)	0.8016 ±0.005g/mℓ
Peroxides	Not detected
Residue after evaporation	<=0.01%

Also available in recyclable FisherPak and NOWPak* containers. EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.*
Applications: Used for extracting ethidium bromide from DNA samples.
Recommended storage: RT

Pyridine — Sequencing

packaging		Mfr. No
500 mℓ	AmberGlass,EcoSafPak*	BP1155-500

C_5H_5N
CAS: 110-86-1
MW: 79.1
EINECS: 203-809-9

H225, H312, H332, H302
P280, P302+P352,
P304+P340, P210,
P240

Ammonia	<=0.002%
Assay (GC)	>=99.5%
Boiling Point	115.3° ±0.1°C
Boiling Range (1 drop to dryness)	<=2.0°C
Chloride (Cl)	<=0.001%
Copper	To pass test (about 5ppm)
Impurities Oxidized by Permanganate	Not detected
Residue after evaporation	<=0.002%
Solubility in H_2O	To pass test
Sulfate (SO_4)	<=0.001%
Water	<=0.10%

Also available in recyclable FisherPak and NOWPak* containers. EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.*
Applications: Commonly used in automated synthesis protocols.
Recommended storage: RT

Tetrahydrofuran

Sequencing

packaging		Mfr. No
1 ℓ	AmberGlass,EcoSafPak*	BP1140-1

C_4H_8O
CAS: 109-99-9
MW: 72.11
EINECS: 203-726-8

H225, H319, H335, EUH019
P261, P233, P280,
P305+P351+P338, P210,
P240

Assay	>=99.9%
Color (APHA)	<=10 APHA
Fluorescence Background (as Quinine Sulfate)	To pass test
Optical Absorbance at 210nm	<=1
Optical Absorbance at 215nm	<=0.60
Optical Absorbance at 230nm	<=0.30
Optical Absorbance at 254nm	<=0.10
Peroxide	<=0.015%
Ref. index at 25°C	Inclusive between 1.4040-1.4070
Residue after evaporation	<=5 ppm
Water	<=0.02%

Applications: Commonly used in sequencing procedures.
Recommended storage: RT
Also available in recyclable FisherPak* and NOWPak* containers. EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

2′-Deoxyadenosine 5′-Triphosphate (dATP)
100mM Solution

packaging		Mfr. No
400 µℓ	PolyTube	BP2560-4

$C_{10}H_{14}N_5Na_2O_{12}P_3$
CAS: 1927-31-7
MW: 535.15
EINECS: 217-662-3

Base Purity	>=98% Deoxynucleoside
Identity	Conforms to Standard
Purity	>=98% Triphosphate
Pyrophosphate	Run and report

Applications: dATP high-purity solution is used in PCR, dideoxy sequencing, mutagenesis and cDNA synthesis.
Functionally tested in PCR.
High purity:> 98% triphosphate.
Supplied as 100mM solution in purified water (pH 7.5).
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 1845; DOT Class 9:Miscellaneous
recyclable material by an SFI certified supplier.

2′-Deoxyguanosine 5′-Triphosphate (dGTP)
100mM Solution

packaging		Mfr. No
400 µℓ	PolyTube	BP2561-4

$C_{10}H_{12}N_5Na_4O_{13}P_3$
CAS: 93919-41-6
MW: 594.99
EINECS: 300-026-5

Base Purity	>=98% Deoxynucleoside
Identity	Conforms to Standard
Purity	>=98% Triphosphate
Pyrophosphate	Run and Report

Applications: dGTP high-purity solution is used in PCR, dideoxy sequencing, mutagenesis and cDNA synthesis.
Functionally tested in PCR.
High purity:> 98% triphosphate.
Supplied as 100mM solution in purified water (pH 7.5).
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 1845; DOT Class 9:Miscellaneous

2′-Deoxycytidine 5′-Triphosphate (dCTP)
100mM Solution

packaging		Mfr. No
400 µℓ	PolyTube	BP2562-4

$C_9H_{12}O_{13}N_3P_3Na_4$
CAS: 102783-51-7
MW: 554.98

Base Purity	>=98% Deoxynucleoside
Identity	Conforms to Standard
Purity	>=98% Triphosphate
Pyrophosphate	Run and Report

Applications: dCTP high-purity solution is used in PCR, dideoxy sequencing, mutagenesis and cDNA synthesis.
Functionally tested in PCR.
High purity:> 98% triphosphate.
Supplied as 100mM solution in purified water (pH 7.5).
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 1845; DOT Class 9:Miscellaneous

2′-Deoxythymidine 5′-Triphosphate (dTTP)
100mM Solution

packaging		Mfr. No
400 µℓ	PolyTube	BP2563-4

$C_{10}H_{13}O_{14}N_2P_3Na_4$
CAS: 18423-43-3
MW: 569.98

Base Purity	>=98% Deoxynucleoside
Identity	Conforms to Standard
Purity	>=98% Triphosphate
Pyrophosphate	Run and Report

Applications: dTTP high-purity solution is used in PCR, dideoxy sequencing, mutagenesis and cDNA synthesis.
Functionally tested in PCR.
Supplied as 100mM solution in purified water (pH 7.5).
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 1845; DOT Class 9:Miscellaneous

dNTP Set 4 tubes/pack
100mM Solutions (dATP, dCTP, dGTP, dTTP)

packaging		Mfr. No
1Set	PolyTube	BP2564-1
1Set	PolyTube	BP2564-4

Lambda max (pH 7.0)	267nm
Molar Absorbancy (Am) (at pH 7.0)	9.6 x 103

High-purity:> 98% triphosphate
Applications: dNTP Set consists of 100mM high-purity solutions of dATP, dCTP, dGTP, and dTTP for use in PCR, dideoxy sequencing, mutagenesis and cDNA synthesis.
Functionally tested in PCR.
Components: Supplied as 100mM solutions in purified water (pH 7.5)
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 1845; DOT Class 9:Miscellaneous
High-purity: > 98% triphosphate

Fisher BioReagents* *ex*ACTG*ene** Complete PCR Kit and Core Reagent Sets

Optimized for routine PCR applications

- Generate reliable PCR products using all genomic and cDNA templates
- Provide clean and consistent PCR yields up to 10kb
- Offer excellent specificity for all PCR amplicons
- PCR-tested to ensure reliable, reproducible, high-performance reactions
- **Complete PCR Kit** includes positive controls for troubleshooting PCR parameters, color-coded reagent tubes for ease-of-use, and dual reaction buffers for extra flexibility in optimizing PCR reactions
- **Core Reagent Sets** provide an economical alternative for high quality PCR
- Kit components are also available separately

STORAGE CONDITIONS: Store at -20°C.

FB-6100

Description	Quantity	MFR No.
Complete PCR Kit (250U *Taq* DNA Polymerase†, 10X Buffer A, 10X Buffer B, 25mM $MgCl_2$, dNTPs, three Control Primers, and DNA Template)	200 rxns	FB6100
Core Reagent Set A (*Taq* DNA Polymerase, 10X Buffer A, and dNTPs)	80 rxns	FB6210
	400 rxns	FB6225
Core Reagent Set B (*Taq* DNA Polymerase, 10X Buffer B, $MgCl_2$ and dNTPs)	80 rxns	FB6245
	400 rxns	FB6260
Individual Components		
Taq DNA Polymerase (5U/µL)	250U	FB6111
10X Buffer A (with $MgCl_2$)	1000µL	BP6112
10X Buffer B (without $MgCl_2$)	1000µL	BP6113
25mM $MgCl_2$	1000µL	BP6114
PCR Nucleotide Mix (10mM each dNTP)	200µL	BP2565-2K
Lambda DNA Template (1ng/µL)	100µL	BP6115
Control Primer 1 (20µM), 5′—GATGAGTTCGTGTCCGTACAACTG—3′	100µL	BP6116
Control Primer 2 (20µM), 5′—GGTTATCGAAATCAGCCACAGCGCC—3′	100µL	BP6117
Control Primer 3 (20µM), 5′—CCACATCCATACCGGGTTTCAC—3′	100µL	BP6118

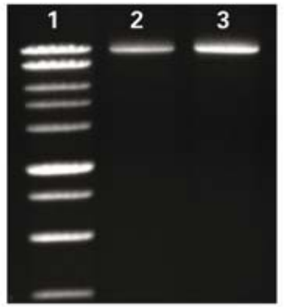
† Purchase of this product includes an immunity from suit under patents specified in the product insert to use only the amount purchased for the purchaser's own internal research. No other patent rights (such as 5' Nuclease Process patent rights) are conveyed expressly, by implication, or by estoppel. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.
‡ One reaction is defined as a 50µL PCR reaction using 1.25U Taq.

Fisher BioReagents* *ex*ACTG*ene** dNTPs

Ultrapure dNTPs ideal for use in PCR, DNA labeling, and DNA sequencing

- >99% triphosphate
- Chemically synthesized to meet a high purity standard
- Ensure consistent results and optimum sensitivity for many rigorous applications
- Tested for purity by HPLC, performance in long-template PCR, and absence of DNase, RNase, and protease activity to ensure dependable performance and lot-to-lot consistency
- Ultrapure dNTPs will enhance results for the following procedures: qPCR, high-fidelity PCR, long template (>8kb) PCR, RT-PCR, fluorescent sequencing, cDNA synthesis, Pyrosequencing*, and in vitro mutagenesis

STORAGE CONDITIONS: Store at -20°C.



Performance of ultrapure dNTPs in long template PCR. Impurities in PCR reagents can often inhibit PCR reactions. To demonstrate this effect, a 10kb fragment from Lambda DNA was amplified using *ex*ACTG*ene* PCR dNTP Mix (BP2595-200) (lane 3) and a competitor's standard dNTP mix of lower purity (lane 2).

Description	Concentration	Quantity	MFR No.
dATP	100mM	250µL	BP2590-250
dCTP	100mM	250µL	BP2592-250
dGTP	100mM	250µL	BP2591-250
dTTP	100mM	250µL	BP2593-250
dNTP Mix	10mM soln. of dATP, dCTP, dGTP, and dTTP	200µL	BP2595-200
		1000µL	BP2595-1
dNTP Set	100mM	500µL of each	BP2594-500

This product is distributed for laboratory research use only. Under no circumstances may it be used for diagnostic purposes. The safety and efficacy of this product in diagnostic or other clinical uses has not been established.

PCR Nucleotide Mix
10mM solution of each dATP, dCTP, dGTP, dTTP

packaging		Mfr. No
200 µℓ	PolyMicroTube	BP2565-2
1 mℓ	PolyMicroTube	BP2565-1

Functional analysis ..... Pass Test

Applications: This premixed solution is used for PCR.
Supplied as 10mM solution in purified water (pH 7.5).
Functionally tested in PCR.
High purity:> 98% triphosphate.
[1927-31-7 (dATP)] ; [18423-43-3 (dTTP)] ; [93919-41-6 (dGTP)] ; [102783-51-7 (dCTP)]
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Mineral Oil
Clear, Viscous Liquid

packaging		Mfr. No
1 ℓ	PolyBottle,EcoSafPak*	BP2629-1

CAS: 8012-95-1
EINECS: 232-384-2

Appearance ..... Clear, colorless, viscous liquid
DNase ..... None detected
Identification ..... Pass test
Limit of Polynuclear Compounds ..... Pass test
Neutrality ..... Pass test
Protease ..... None detected
Readily Carbonizable Substances ..... Pass test
RNase ..... None detected
Specific Gravity (at 25°C) 0.818-0.880
USP Protocol required ..... Pass test
Viscosity (at 40°C) ..... Not more than 33.5cs

Applications: Mineral Oil can be used in PCR applications.
Recommended Storage: RT

Taq DNA Polymerase

packaging		Mfr. No
100 units	Poly Tube	FB6000-10
5 x 100 units	Poly Tube	FB6000-15
500 units	Poly Tube	FB6000-25
5 x 500 units	Poly Tube	FB6000-30
2500 units	Poly Tube	FB6000-35
100 units	Poly Tube	FB6000-45
5 x 100 units	Poly Tube	FB6000-50
500 units	Poly Tube	FB6000-60
5 x 500 units	Poly Tube	FB6000-65
25 x 100 units	Poly Tube	FB6000-20
5 x 2500 units	Poly Tube	FB6000-40
25 x 100 units	Poly Tube	FB6000-55
2500 units	Poly Tube	FB6000-70
5 x 2500 units	Poly Tube	FB6000-75

CAS: 9012-90-2

Tested for ..... human genomic DNA using primers for the p53 gene.

Applications: Taq DNA Polymerase is a recombinant enzyme that is licensed for use in PCR. Provides superior performance in routine PCR and RT-PCR. Capable of amplifying large DNA target regions (up to 10kb). Well-suited for the following PCR applications:STR, RAPD, AFLP, and SNP analyses.
Description: Taq DNA Polymerase is a thermostable enzyme of approximately 94kDa size which was isolated originally from Thermus aquaticus. Replicates DNA optimally at 72°C and has a half-life of 40 minutes at 95°C allowing up to 45-50 thermal cycles without appreciable loss of enzyme activity.
The enzyme catalyzes the polymerization of nucleotides into double-stranded DNA in the 5'->3' direction in the presence of magnesium and it also has a 5'->3' exonuclease activity.
Source: Escherichia coli carrying a recombinant plasmid that encodes the T. aquaticus DNA polymerase gene.
Storage Buffer: 50mM Tris-HCl (pH 7.5), 0.1mM EDTA, 5mM DTT, added stabilizers, and 50% glycerol.
10X Buffer A: Supplied. Contains 500mM KCl, 15mM MgCl2, and 100mM Tris-HCl (pH 9.0 at 25°C).
10X Buffer B: Supplied. Contains 500mM KCl and 100mM Tris-HCl (pH 9.0 at 25°C). MgCl2 supplied separately.
Concentration: 5000 units/mℓ
Unit Definition: One unit catalyzes the incorporation of 10 nmole of total nucleotide into acid-insoluble product in 30 minutes at 70°C utilizing M13mp18 DNA as template.
Recommended Storage: -20°C

4-Chloro-1-naphthol
Crystalline Powder

packaging		Mfr. No
50 g	PolyBottle	BP1550-50

$C_{10}H_7ClO$
CAS: 604-44-4
MW: 178.62
H335, H319, H315

P261, P302+P352, P280, P305+P351+P338

Assay (GC) ..... >=98%
IR ..... Conforms to standard
Melting Point ..... 120°C ±3°C

Applications: 4-Chloro-1-naphthol is a chromogenic substrate for Horseradish Peroxidase used in immunostaining, ELISA, and EIA.
Recommended Storage: -20°C

5-Bromo-4-chloro-3-indolyl Phosphate, p-Toluidine Salt
White to Off-white Powder

packaging		Mfr. No
100 mg	AmberGlass	BP1610-100
500 mg	AmberGlass	BP1610-500

$C_{15}H_{15}BrClN_2O_4P$ EINECS: 229-506-1
CAS: 6578-06-9
MW: 433.61

Assay ..... >=99%
Lambda Max. (2mg in 100mℓ of 0.1N NaOH) ..... 289nm ±2nm
Protease ..... Not detected
TLC ..... To pass test

Applications: BCIP is used in conjunction with Nitro Blue Tetrazolium (NBT) in the colorimetric detection of Alkaline Phosphatase. It is suitable for use in immunohistochemistry, immunoblot staining, and ELISA applications.
Recommended Storage: <0°C

Bovine Serum Albumin (BSA) — Microbial Grade

packaging		Mfr. No
100 g	Poly Bottle	BP9700-100

CAS: 9048-46-8

Appearance ..... Beige powder
Heavy metals (as Pb) ..... <=20 ppm
Loss on Drying (at 105°C) ..... <=6
pH (1% in 0.15M NaCl) ..... Inclusive between 6.8-7.2
Protein ..... >=95%
Purity (albumin) ..... >=95%
Sulfated ash ..... <=2%

Applications: Immunological studies, Blocking non-specific sites
Description: Purified by a modified cold ethanol procedure.
Recommended storage: 4°C

Bovine Serum Albumin (Fraction V)
Cold-ethanol Precipitated

packaging		Mfr. No
100g	PolyBottle	BP1605-100

CAS: 9048-46-8

Heavy Metals (Pb) ..... <=10ppm
pH (1% Solution in 0.9% NaCl) ..... 7.0 ±0.3
Protease ..... Not Detected
Protein ..... >96%
Purity (albumin) ..... >98%
Solubility (0.4g/10mℓ H_2O) ..... Clear and haze-free
Sulfated ash ..... <=2%
Water Content ..... <5%

Applications: Cold-ethanol Precipitated Bovine Serum Albumin is used as a stabilizer for enzymes or enzymatic reactions, or as a blocker of nonspecific sites.
Recommended Storage: 4°C

Bovine Serum Albumin (BSA) — DNase- and Protease-Free Powder

packaging		Mfr. No
100 g	Poly Bottle	BP8805-100

CAS: 9048-46-8

Appearance ..... Pale Yellow Flakes
Bioburden ..... <100 CFU/g
DNase ..... Not detected
pH (1% in 0.15M NaCl) 6.4-7.4
Protease ..... Not detected
Purity (albumin) ..... >=97%
RNase ..... Not detected

Applications: Immunological studies, Blocking non-specific sites
Description: Purified by proprietary heat shock process.
Recommended storage: 4°C

Bovine Serum Albumin (Fraction V)
Heat-shock Treated

packaging		Mfr. No
100g	PolyBottle	BP1600-100

CAS: 9048-46-8

Heavy Metals (Pb) ..... <=10ppm
Loss on Drying (at 105°C) ..... <=5%
pH (1% Solution in 0.9% NaCl) ..... 7.0 ±0.3
Protein ..... >96%
Purity (albumin) ..... >98%
Solubility (0.4g/10mℓ H_2O) ..... Clear and haze-free
Sulfated ash ..... <=2%
Water Content ..... <5%

Applications: Heat-shock Treated Bovine Serum Albumin is suitable for immunological studies.
Recommended Storage: 4°C

Bovine Serum Albumin (BSA) — Fatty Acid-Free Powder

packaging		Mfr. No
100 g	Poly Bottle	BP9704-100

CAS: 9048-46-8

Appearance ..... Beige to slightly yellow powder
Free fatty acids ..... <=0.02%
Loss on Drying (at 105°C) ..... <=5
pH (1% in 0.15M NaCl) ..... Inclusive between 6.5-7.5
Protein ..... >=96%
Purity (albumin) ..... >=98%
Sulfated ash ..... <=3%

Applications: Immunological studies, Blocking non-specific sites
Description: Purified by a heat shock process with additional treatments; Fatty Acids: <=0.02%.
Recommended storage: 4°C

Bovine Serum Albumin (BSA) — Low Endotoxin Powder

packaging		Mfr. No
100 g	Poly Bottle	BP9705-100

CAS: 9048-46-8

Appearance	Beige to slightly yellow powder
Endotoxin	<=1.0 EU/mg
Heavy metals (as Pb)	<=20 ppm
Loss on Drying (at 105°C)	<=5
pH (1% in 0.15M NaCl)	Inclusive between 6.5-7.5
Purity (albumin)	95%
Sulfated ash	<=2%

Applications: Immunological studies, Blocking non-specific sites
Description: Purified by a heat shock process with additional treatments; Endotoxin: <=0.1 EU/mg.
Recommended storage: 4°C

Bovine Serum Albumin (BSA) — Protease-Free Powder

packaging		Mfr. No
100 g	Poly Bottle	BP9703-100

CAS: 9048-46-8

Appearance	Off-white crystalline powder
Heavy metals (as Pb)	=<10 ppm
Loss on Drying (at 105°C)	<=5
pH (1% in 0.15M NaCl)	Inclusive between 6.8-7.2
Protein	>=96%
Purity (albumin)	>=98%
Sulfated ash	<=2%

Applications: Immunological studies, Blocking non-specific sites
Description: Purified by a heat shock process; Protease-Free.
Recommended storage: 4°C

Sulfosalicylic Acid Dihydrate
Fine White Crystals

packaging		Mfr. No
500 g	AmberGlass	BP177-500

$C_7H_6O_6S.2H_2O$
CAS: 5965-83-3
MW: 254.22
H314, H302

P301+P330+P331, P280, P305+P351+P338, P310, P303+P361+P353

Assay	99.0-101.0%
Chloride (Cl)	<=0.001%
Heavy Metals (Pb)	<=0.002%
Insoluble matter	<=0.02%
Iron	<=0.001%
Residue after ignition	<=0.1%
Salicylic Acid (HOC_6H_4COOH)	<=0.04%
Sulfate (SO_4)	To pass test (about 0.02%)

Applications: Sulfosalicylic Acid is used for fixing proteins in agarose and polyacrylamide gels.
Recommended Storage: RT
UN 2585; DOT Class 8:Corrosive

p-Nitrophenyl Phosphate Disodium Salt, Hexahydrate

packaging		Mfr. No
500 mg	AmberGlass	BP2534-500
1 g	AmberGlass	BP2534-1
5 g	AmberGlass	BP2534-5
10 g	AmberGlass	BP2534-10
50 g	AmberGlass	BP2534-50

$C_6H_4NNa_2O_6P.6H_2O$ EINECS: 224-246-5
CAS: 4264-83-9
MW: 371.13

Assay	>99%
description	Pale Yellow Crystalline Powder
Free p-Nitrophenol	0.005%
Water Content (Hexahydrate)	27-31%

Applications: p-Nitrophenyl Phosphate is suitable for use as a substrate for alkaline and acid phosphatase.
Recommended Storage: Store below 0°C

2.2,2-Trifluoroethanol — Peptide Synthesis

packaging		Mfr. No
100 mℓ	AmberGlass	BP622-100

$C_2H_3F_3O$
CAS: 75-89-8
MW: 100.04
EINECS: 200-913-6
H226, H315, H318, H302,

H312, H332, H361f
P280, P301+P351+P338, P310, P302+P352, P301+P312, P304+P340, P210

Assay	>=99%
Boiling Range	74°-78°C
Water	<=0.1%

Applications: Trifluoroethanol is often used in peptide synthesis procedures.
Recommended Storage: RT
UN 1992; DOT Class 3:Flammable Liquid

Cacodylic Acid
Crystalline

packaging		Mfr. No
100 g	PolyBottle/PoisonPack	BP324-100

$C_2H_7AsO_2$
CAS: 75-60-5
MW: 138.01
EINECS: 200-883-4

H331, H301, H410
P301+P310, P304+P340, P273

Assay (dry basis)	>=99%
IR	Conforms to standard
Melting Point	195°-196°C
Solubility (10g/100mℓ H_2O)	Clear and colorless

Applications: Cacodylic Acid is used in buffers for DNA sequencing and recombinant DNA procedures.
Recommended Storage: RT
UN 1572; DOT Class 6.1:Poison

Dansyl Chloride
Crystalline (Yellow)

packaging		Mfr. No
1 g	AmberGlass	BP427-1

$C_{12}H_{12}ClNO_2S$
CAS: 605-65-2
MW: 269.75
H302, H314, EUH029

P301+P330+P331, P280, P305+P351+P338, P310, P402+P404, P301+P312

Assay	>=99.0%

Applications: Dansyl Chloride is a fluorochrome useful in the detection of N-terminal amino acids in proteins and peptides.
It is also used in the preparation of fluorescent derivatives of amino acids.
Recommended Storage: 0°C
UN 1759; DOT Class 8:Corrosive

N-Methylmorpholine — Peptide Synthesis

packaging		Mfr. No
500 mℓ	AmberGlass	BP610-500

$C_5H_{11}NO$
CAS: 109-02-4
MW: 101.15
EINECS: 203-640-0
H225, H314, H312, H332, H302

P301+P330+P331, P305+P351+P338, P310, P302+P352, P304+P340, P210, P240, P280

Assay (GC)	>=99.0%
Boiling Range (ACS)	114°-116°C

Applications: N-Methylmorpholine is used in peptide synthesis protocols.
Recommended Storage: RT
UN 2535; DOT Class 3:Flammable Liquid

N,N'-Diisopropylcarbodiimide — Peptide Synthesis

packaging		Mfr. No
100 mℓ	AmberGlass	BP590-100

$C_7H_{14}N_2$
CAS: 693-13-0
MW: 126.2
H226, H315, H317, H335,

H330, H334, H318
P305+P351+P338, P310, P260, P280, P302+P352, P210

Assay	>=99%
Boiling Point	147°-149°C
Color (APHA)	<=100
IR	Conforms to standard
Refractive Index (at 20°C)	1.4330 ±0.0015

Applications: N,N'-Diisopropylcarbodiimide is used as an alternative to dicyclohexylcarbodiimide in peptide synthesis reactions.
Recommended Storage: RT
UN 1993; DOT Class 3:Flammable Liquid (n.o.s.)

p-Nitrophenol — Peptide Synthesis
Yellow Crystals or Powder

packaging		Mfr. No
1 kg	AmberGlass	BP612-1

$C_6H_5NO_3$
CAS: 100-02-7
MW: 139.11
EINECS: 202-811-7

H373, H302, H312, H332
P280, P304+P340, P302+P352, P260

Assay (GC)	>=99%
Melting Point	112°-114°C

Applications: Nitrophenol is commonly used in peptide synthesis procedures.
Recommended Storage: RT
UN 1663; DOT Class 6.1:Poison

N,N-Diisopropylethylamine — Peptide Synthesis

packaging		Mfr. No
500 mℓ	AmberGlass	BP592-500

$C_8H_{19}N$
CAS: 7087-68-5
MW: 129.24
EINECS: 230-392-0
H225, H302, H314, H412

P301+P330+P331, P305+P351+P338, P280, P308+P313, P273, P210

Assay	>=99%
Color (APHA)	<=20
IR	Conforms to standard
Refractive Index (at 25°C)	1.4133 ±0.002
Water (Karl Fischer)	<=0.2%

Applications: N,N-Diisopropylethylamine is commonly used in peptide synthesis reactions.
Recommended Storage: RT
UN 1993; DOT Class 3:Flammable Liquid (n.o.s.)

Sodium Cacodylate Trihydrate
White Crystals or Crystalline Powder

packaging		Mfr. No
50 g	PolyBottle/PoisonPack	BP325-50

$C_2H_6AsNaO_2.3H_2O$
CAS: 6131-99-3
MW: 214.03
H331, H410, H301, H350

P301+P310, P201, P308+P313, P304+P340, P273

Assay	>=97%
Loss on Drying (at 105°C)	25%±2%
pH of 5% Solution (at 25°C)	8.0 to 9.0
Solubility in H_2O (5g/100mL)	Clear and colorless

Applications: Sodium Cacodylate is a component of the DMS reaction buffer in Maxam-Gilbert sequencing and is also used as a buffer in terminal transferase reactions.
Recommended Storage: RT
UN 1688; DOT Class 6.1:Poison

Triethylamine
Peptide Synthesis

packaging		Mfr. No
500 mℓ	AmberGlass	BP616-500

$C_6H_{15}N$
CAS: 121-44-8
MW: 101.19
EINECS: 204-469-4
H225, H311, H302, H332, H314, H335

P280, P302+P350, P305+P351+P338, P304+P340, P308+P313, P261, P210

Assay	>=99%
Refractive Index (at 2°C)	1.400±0.003

Applications: Triethylamine is used as a solvent in automated synthesis protocols.
Recommended Storage: RT

Trifluoroacetic Acid
Peptide Synthesis Grade

packaging		Mfr. No
500 mℓ	AmberGlass	BP618-500

$C_2HF_3O_2$
CAS: 76-05-1
MW: 114.02
EINECS: 200-929-3
H314, H332, H412

P301+P330+P331, P280, P305+P351+P338, P310, P273, P304+P340

Assay	>=99.5%
Chloride (Cl)	<=5ppm
Fluoride	<=14ppm
Sulfate (SO_4)	<=2ppm
UV Absorbance at 275nm	<=0.06
UV Absorbance at 300nm	<=0.03
Water	<=0.02%

Applications: Trifluoroacetic acid is used in peptide sythesis and sequencing protocols.

4-Methylumbelliferyl Phosphate Disodium Salt
Off-white Powder

packaging		Mfr. No
25 mg	AmberGlass	BP2666-250

$C_{10}H_7Na_2O_6P.3H_2O$
CAS: 22919-26-2
MW: 354.16
EINECS: 245-325-0

FTIR	Conforms to Standard
Loss on drying	16%
Melting Point	193°-203°C
Purity	>=97%

Applications: 4-Methylumbelliferyl Phosphate is a biochemical substrate for membrane-bound phosphodiesterases.
Recommended Storage: Store below 0°C

α-Cyclodextrin
White Powder

packaging		Mfr. No
5 g	AmberGlass	BP2501-5
25 g	AmberGlass	BP2501-25

$C_{36}H_{60}O_{30}$
CAS: 10016-20-3
MW: 972.9
EINECS: 233-007-4

Loss on drying	<=13%
Optical Rotation (c = 1, H_2O)	+148° ±5°

Applications: α-Cyclodextrin is used in chromatographic separations and purification methods. Useful for selective precipitation of enantiomeric, positional or structural isomers.
Recommended Storage: RT

β-Mercaptoethylamine Hydrochloride
White Powder

packaging		Mfr. No
5 g	AmberGlass	BP2664-5
25 g	AmberGlass	BP2664-25
100 g	AmberGlass	BP2664-100

$C_2H_7NS.HCl$
CAS: 156-57-0
MW: 113.61
EINECS: 205-858-1
H315, H319, H302, H335

P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay	98%
FTIR	Conforms to Standard
Melting Point	58°-73°C

Applications: β-Mercaptoethylamine HCl is used as an antioxidant in several biochemical procedures.
Recommended Storage: 4°C, desiccate

Forskolin From Coleus forskohlii
Off-white Powder

packaging		Mfr. No
1 mg	Amberglass	BP2520-1
5 mg	AmberGlass	BP2520-5
10 mg	AmberGlass	BP2520-10
25 mg	AmberGlass	BP2520-25
50 mg	AmberGlass	BP2520-50

$C_{22}H_{34}O_7$
CAS: 66575-29-9
MW: 410.5
EINECS: 266-410-9

H312
P280, P302+P352

Applications: Forskolin is a molecular biology reagent.
Forskolin functions as an antihypertensive and vasodilator.
Adenylcyclase activator.
Recommended Storage: RT, desiccate
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Polyvinylpyrrolidone

packaging		Mfr. No
100 g	PolyBottle	BP431-100
500 g	PolyBottle	BP431-500

$(C_6H_9NO)n$
CAS: 9003-39-8

Arsenic	<=0.0002%
Ash	<=0.05%
Assay (dry basis)	>=95%
Heavy Metals (Pb)	<=0.001%
pH (5% in H_2O at Room Temperature)	3.0-7.0
Viscosity (at 23°C)	1.2 to 1.3 Centistokes

Applications: Polyvinyl Pyrrolidone is a component of Denhardt's Reagent, commonly used in nucleic acid hybridization procedures.
Average Molecular Wt.:40.000
Recommended Storage: RT

Protease
From S. aureus, strain V8

packaging		Mfr. No
5 mg	AmberGlass	BP2674-5

CAS: 9001-92-7

Guaranteed analysis

Activity	From S. aureus, strain V8

Applications: Protease is an enzyme that will cleave peptide bonds on the carboxyl-terminal side of either aspartate or glutamate residues.
Unit Definition: One unit will change A280nm 0.001 per minute at 37°C, pH 7.8, using casein as the substrate.
Activity:500 units/mg
Recommended Storage: -20°C

Pyridoxal 5-Phosphate Monohydrate
Off-white Crystalline Powder

packaging		Mfr. No
1 g	AmberGlass	BP2676-1
5 g	AmberGlass	BP2676-5
25 g	AmberGlass	BP2676-25

$C_8H_{10}NO_6P$
CAS: 54-47-7
MW: 247.14
EINECS: 200-208-3

FTIR	Conforms to standard
Purity	98%

Applications: Pyridoxal 5-Phosphate is useful for modifying lysyl and valyl residues in proteins.
Recommended Storage: Store below 0°C

Sorbitol

packaging		Mfr. No
500 g	AmberGlass	BP439-500

$C_6H_{14}O_6$
CAS: 50-70-4
MW: 182.17
EINECS: 200-061-5

Arsenic	<=3ppm
Assay	91.0-100.5%
Chloride (Cl)	<=0.005%
Heavy Metals (as Pb) (USP method)	<=0.001%
Reducing Sugars	To pass test
Sulfate (SO_4)	<=0.01%
Total Sugar	To pass test

Applications: Sorbitol is used in the preparation of isoelectric focusing gels.
Recommended Storage: RT

Yeast DNA PFGE Markers

packaging		Mfr. No
5 blocks	PolyMicroTube	BP2659-40

Applications: For sizing DNA molecules from 225kb-1.9Mb.
Consists of the 16 chromosomes of Saccharomyces cerevisiae YNN295.
Supplied in 100μℓ agarose (0.5%) blocks in 1% lauroyl sarcosine, 0.5M EDTA (pH 9.0); each block contains 3μg DNA from 2 x 105 cells.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Pyridoxal Hydrochloride
Off-white Powder

packaging		Mfr. No
1 g	AmberGlass	BP2675-1
5 g	AmberGlass	BP2675-5
25 g	AmberGlass	BP2675-25
100 g	AmberGlass	BP2675-100

$C_8H_9NO_3.HCl$
CAS: 65-22-5
MW: 203.62

FTIR	Conforms to standard
Melting Point	170°-180°C
pH (0.1% aqueous solution)	2.7-3.5
Solubility Test (0.1% aqueous solution, 15 min.)	Clear, colorless solution
UV/VIS lambda max (water)	253-5, 290-1, 316-8nm

Applications: Pyridoxal Hydrochloride is useful for labeling amino acids and for their detection in the picomole range.
Recommended Storage: 0°C, desiccate, protect from light.

Acrylamide Solution
Electrophoresis
40%

packaging		Mfr. No
1 ℓ	AmberGlass	BP1402-1

C_3H_5NO
CAS: 79-06-1
MW: 71.08
H315, H319, H372, H311,

H350, H302, H340, H317, H361f
P280, P312, P302+P350, P201, P308+P313, P260

Acrylic Acid	<=0.003%
Conductivity (at 25°C)	<=5μmhos/cm
DNase	Not detected
Electrophoresis	To pass test
pH (at 25°C)	6.5 ±0.5
Protease	Not detected
RNase	Not detected

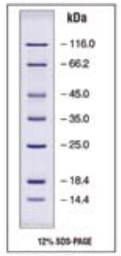
Applications: 40% Acrylamide Solution is made from 3X recrystallized acrylamide and is suitable for electrophoretic separation of proteins and nucleic acids.
BP1402 is made from Acrylamide that meets BP170 specifications.
Recommended Storage: 4°C
UN 2810; DOT Class 6.1:Poison

Fisher BioReagents* EZ-Run* Protein Marker

Mixture of seven purified proteins optimized to produce uniform, compact bands when analyzed by SDS-PAGE and stained with Coomassie* Blue

- Supplied in gel loading buffer for direct application to SDS-PAGE gels
- Ideal for molecular weight determination of polypeptides analyzed in various gel systems

STORAGE CONDITIONS: Store at -20°C.



BP3600-500

Purified proteins contained in Marker		
Protein	**Source**	**Molecular Weight (kDa)**
β-galactosidase	*E. coli*	116.0
Bovine serum albumin	Bovine plasma	66.2
Ovalbumin	Chicken egg white	45.0
Lactate dehydrogenase	Porcine muscle	35.0
Restriction endonuclease *Bsp*981	*E. coli*	25.0
β-lactoglobulin	Bovine milk	18.4
Lysozyme	Chicken egg white	14.4

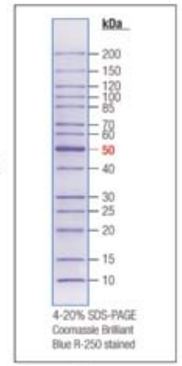
Molecular Weight Range	No. of Bands	Quantity	MFR No.
14.4 to 116.0kDa	7	500µL (100 loadings)	BP3600-500
		2 × 500µL (200 loadings)	BP3600-1

Fisher BioReagents* EZ-Run* *Rec* Protein Ladder

Mixture of 14 highly purified recombinant proteins optimized for precise sizing of proteins by SDS-PAGE and Western blotting

- Ladder is ideal for precise molecular weight determination of polypeptides in denaturing PAGE and Western blots
- Each protein contains an integral Strep-tag* II sequence[1] and may be detected on Western blots using Strep-Tactin*-AP conjugate[2] or an antibody against Strep-tag II
- 50kDa protein band has greater intensity than other bands to serve as a reference
- Supplied in gel loading buffer

STORAGE CONDITIONS: Store at -20°C.



BP3602 Series

Molecular Weight Range	No. of Bands	Quantity	MFR No.
10 to 200kDa	14	500µL (100 loadings)	BP3602-500
		2 × 500µL (200 loadings)	BP3602-1

[1] *Strep-tag technology for protein purification and detection is covered by U.S. Patent No. 5,506,121, U.K. Patent No. 2272698, and French Patent No. 93 13 066.*
[2] *Strep-Tactin is covered by U.S. Patent No. 6,103,493.*

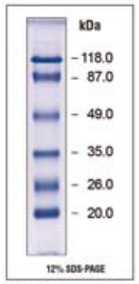
Fisher BioReagents* EZ-Run* Prestained Protein Marker

Ideal for monitoring protein separation during electrophoresis without staining and for verifying electroblotting of proteins onto membranes

- Comprised of six purified proteins covalently coupled to a blue chromophore
- Optimized to produce well-defined blue bands after SDS-PAGE
- Supplied in gel loading buffer

APPLICATIONS: The Prestained Protein Marker is designed for monitoring protein separation during electrophoresis without staining. It is also used to verify electroblotting of proteins onto membranes.

STORAGE CONDITIONS: Store at -20°C.



BP3601-1

NOTE: The covalently coupled chromophore affects protein mobility; this prestained marker should only be used for approximating the molecular weight of separated proteins.

Purified proteins contained in Marker		
Protein	**Source**	**Molecular Weight (kDa)**
β-galactosidase	*E. Coli*	118.0
Bovine serum albumin	Bovine plasma	87.0
Ovalbumin	Chicken egg white	49.0
Lactate dehydrogenase	Bovine erythrocytes	35.0
β-lactoglobulin	Bovine milk	26.0
Lysozyme	Chicken egg white	20.0

Molecular Weight Range	No. of Bands	Quantity	MFR No.
20 to 118kDa	6	500µL (100 loadings)	BP3601-500
		2 × 500µL (200 loadings)	BP3601-1

Fisher BioReagents* EZ-Run* Prestained *Rec* Protein Ladder

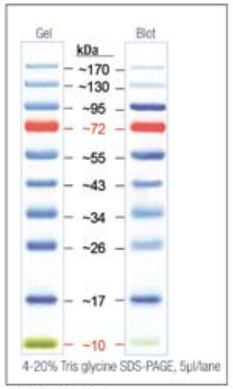
Comprised of 10 recombinant proteins covalently coupled to a blue chromophore plus 10 and 72kDa reference bands tagged with green and orange dyes, respectively

- Ladder is ideal for monitoring protein separation during SDS-PAGE, verifying Western transfer efficiency, and approximating the molecular weight of blotted proteins
- Supplied in gel loading buffer

STORAGE CONDITIONS: Store at -20°C.

NOTE: The covalently coupled chromophore affects protein mobility; this prestained marker should only be used for approximating the molecular weight of separated proteins.

This product is manufactured under the license for Strep-tag* technology covered by U.S. Patent No. 5,506,121; U.K. Patent No. 2272698; and French Patent No. 93 13 066.



BP3603 Series

Molecular Weight Range	No. of Bands	Quantity	MFR No.
10 to 170kDa	10	500µL (100 loadings)	BP3603-500
		2 × 500µL (200 loadings)	BP3603-1

Fisher BioReagents* EZ-Run* Protein Gel Staining Solution

Ready-to-use solution for highly sensitive staining of proteins separated in polyacrylamide gels

EZ-Run Protein Gel Staining Solution contains Coomassie* Brilliant Blue G-250. Due to the property of the dye to form colloidal particles, proteins are preferentially stained without significant background staining of the gel matrix.

- Detection is linear over two orders of magnitude with as little as 5ng protein detected
- Sensitivity: 5ng BSA in 10% SDS-PAGE, 1.0mm thick gel, well width 3mm
- Does not contain toxic methanol or acetic acid
- Provides rapid destaining with simple water washes
- Can be reused twice without significant loss of sensitivity
- Tested for staining sensitivity in minigels using purified proteins and Protein Molecular Weight Standards

STORAGE CONDITIONS: Store at 4°C.

Quantity	MFR No.
1L	BP3620-1
4L	BP3620-4

Fisher BioReagents* EZ-Run* Protein Gel Solutions

Resolution equal to or better than gradient precast gels!

A ready-to-use premixed solution of acrylamide, bisacrylamide, buffer, and SDS that enables ultra-fine resolution of protein bands by denaturing PAGE. This novel formulation provides the resolution of a gradient gel with less preparative work than a standard discontinuous gel system.

- Ready-to-pour EZ-Run Protein Gel Solution for 1-D or 2-D PAGE—just add APS and TEMED
- Wide separation range—from 3 to 200kDa on same minigel
- Continuous gel system—no stacking gel necessary
- Proprietary (patent-pending) gel chemistry

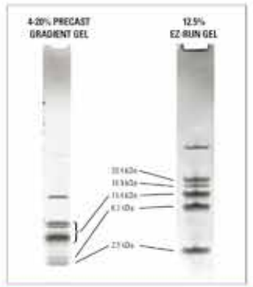
APPLICATIONS: Compatible with post-electrophoresis applications such as Western blotting, MALDI analysis, and protein sequencing. Suitable for all commonly used gel staining methods including Coomassie* blue, silver staining and fluorescent dyes.

STORAGE CONDITIONS: Store at room temperature.

NOTE: EZ-Run Protein Gel Solution comes with an optimized proprietary running buffer; other traditional SDS-PAGE buffers should not be used with the EZ-Run gel solution.

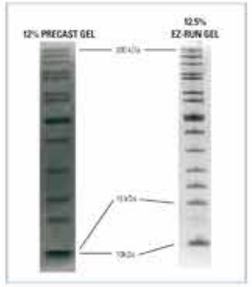
Product Specifications	
Appearance	Clear, colorless solution
Conductivity (1:20, water)	
10% Gel Solution	460-520uS
12.5% Gel Solution	460-510uS
15% Gel Solution	440-500uS
Electrophoresis	To pass test
pH (at 25°C)	6.8-7.2
Polymerization Time	30 minutes
Protease	Not detected

Description	Quantity	MFR No.
10% EZ-Run Protein Gel Solution with buffer	30mL	BP7710-30
10% EZ-Run Protein Gel Solution with buffer	100mL	BP7710-100
10% EZ-Run Protein Gel Solution with buffer	500mL	BP7710-500
12.5% EZ-Run Protein Gel Solution with buffer	30mL	BP7712-30
12.5% EZ-Run Protein Gel Solution with buffer	100mL	BP7712-100
12.5% EZ-Run Protein Gel Solution with buffer	500mL	BP7712-500
15% EZ-Run Protein Gel Solution with buffer	100mL	BP7715-100
15% EZ-Run Protein Gel Solution with buffer	500mL	BP7715-500
EZ-Run Running Buffer 20X	500mL	BP7700-500



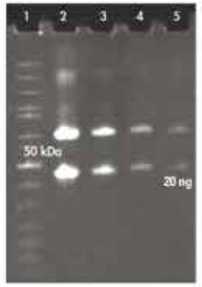
Resolution equal to or better than gradient precast gels!

EZ-Run Protein Gel Solution provides superior separation of closely spaced, small proteins (<20kDa) compared to a commercial gradient precast gel.



Separate wide range of protein sizes (3–200kDa) on the same minigel

The EZ-Run continuous gel system enables separation of small peptides and high MW proteins on the same minigel. For example, a commercial 12% precast discontinuous gel is not capable of resolving the 10 and 15kDa proteins compared to the 12% EZ-Run gel.



EZ-Run gel matrix compatible with common gel staining methods such as fluorescent dyes

Serial dilution of BSA (66kDa) and Ovalbumin (45kDa) are loaded in lanes 2 to 5 of an EZ-Run gel and detected with SYPRO® Ruby fluorescent protein stain. Protein standard in lane 1 is BP3602 EZ-Run Rec Protein Ladder.

Acrylamide — Electrophoresis
White, Needle-like Crystals

packaging		Mfr. No
100 g	PolyBottle	**BP170-100**
500 g	PolyBottle	**BP170-500**
5 kg	PolyPail	**BP170-5**

C_3H_5NO
CAS: 79-06-1
MW: 71.08
H315, H319, H301, H317, H332, H350, H340, H372, H361f, H312

P301+P310, P280, P302+P350, P201, P308+P313, P260, P304+P340, P305+P351+P338

Acrylic Acid	<=0.002%
Appearance	To pass test
Arsenic	<=1ppm
Assay	>=99.9%
Conductivity of a 50% Solution	<=2.50µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
Insoluble in Methanol	<=0.005%
Insoluble in H_2O	<=0.005%
Iron	<=1ppm
Lead	<=1ppm
Mercury	<=1ppm
pH of 10% Solution in 0.1M NaCl	6.5±0.5
Protease	Not detected
RNase	Not detected

Applications: This Acrylamide is 3X recrystallized to obtain a high-purity crystalline material suitable for electrophoretic separation of proteins and nucleic acids.
Recommended Storage: RT
UN 2074; DOT Class 6.1:Poison

Acrylamide: Bis-Acrylamide 19:1 — Electrophoresis
Powder

packaging		Mfr. No
100 g	PolyBottle	**BP1364-100**

Conductivity (30% aqueous solution)	<=10µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
Protease	Not detected
RNase	Not detected
Solubility (30% aqueous solution)	Clean and clear

Applications: This dry powder mix is premixed for 5% cross-linking and is suitable for DNA sequencing and separation of low-molecular-weight proteins.
BP1364 is made from Acrylamide and Bis-Acrylamide that meet BP170 and BP171 specifications, including being DNase-, RNase-, and Protease-free.
[79-06-1 (Acrylamide)] ; [110-26-9 (Methylene Diacrylamide)]
Recommended Storage: RT
UN 2074; DOT Class 6.1:Poison

Acrylamide: Bis-Acrylamide 19:1 — Electrophoresis
40% Solution

packaging		Mfr. No
1 ℓ	PolyBottle	**BP1406-1**

H315, H319, H372, H311, H350, H302, H340, H317, H361f
P280, P312, P302+P350, P201, P308+P313,
P260

Conductivity (at 25°C)	<=10µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
Protease	Not detected
RNase	Not detected

Applications: This Acrylamide Solution is premixed for 5% cross-linking and is suitable for DNA sequencing and separation of low-molecular-weight proteins.
BP1406 is made from Acrylamide and Bis-Acrylamide that meet BP170 and BP171 specifications, including being DNase-, RNase-, and Protease-free.
[79-06-1 (Acrylamide)] ; [110-26-9 (Methylene Diacrylamide)]
Recommended Storage: 4°C
UN 2810; DOT Class 6.1:Poison

Acrylamide: Bis-Acrylamide 29:1 — Electrophoresis
Powder

packaging		Mfr. No
100 g	PolyBottle	**BP1366-100**

Conductivity (30% aqueous solution)	<=10µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
Protease	Not detected
RNase	Not detected
Solubility (30% aqueous solution)	Clean and clear

Applications: This dry powder mix is premixed for 3.3% cross-linking and is suitable for DNA sequencing and separation of proteins.
[79-06-1 (Acrylamide)] ; [110-26-9 (Methylene Diacrylamide)]
Recommended Storage: RT
UN 2074; DOT Class 6.1:Poison

Acrylamide: Bis-Acrylamide 29:1 — Electrophoresis
40% Solution

packaging		Mfr. No
1 ℓ	PolyBottle	**BP1408-1**

H315, H319, H372, H311, H350, H302, H340, H317, H361f
P280, P312, P302+P350, P201, P308+P313,
P260

Conductivity (at 25°C)	<=10µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
Protease	Not detected
RNase	Not detected

Applications: This Acrylamide Solution is premixed for 3.3% cross-linking and is suitable for DNA sequencing and separation of proteins.
BP1408 is made from Acrylamide and Bis-Acrylamide that meet BP170 and BP171 specifications, including being DNase-, RNase-, and Protease-free.
[79-06-1 (Acrylamide)] ; [110-26-9 (Methylene Diacrylamide)]
Recommended Storage: 4°C
UN 2810; DOT Class 6.1:Poison

Acrylamide: Bis-Acrylamide 37.5:1 — Electrophoresis
Powder

packaging		Mfr. No
100 g	PolyBottle	**BP1368-100**

Conductivity (30% aqueous solution)	<=10µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
Protease	Not detected
RNase	Not detected
Solubility (30% aqueous solution)	Clean and clear

Applications: This dry powder mix is premixed for 2.6% cross-linking and is suitable for separation of high-molecular-weight proteins.
BP1368 is made from Acrylamide and Bis-Acrylamide that meet BP170 and BP171 specifications, including being DNase-, RNase-, and Protease-free.
[79-06-1 (Acrylamide)] ; [110-26-9 (Methylene Diacrylamide)]
Recommended Storage: RT
UN 2074; DOT Class 6.1:Poison

Acrylamide: Bis-Acrylamide 37.5:1 — Electrophoresis
40% Solution

packaging		Mfr. No
1 ℓ	PolyBottle	**BP1410-1**

H315, H319, H372, H311, H350, H302, H340, H317, H361f
P280, P312, P302+P350, P201, P308+P313,
P260

Conductivity (at 25°C)	10µmhos/cm
DNase	Not detected
Electrophoresis	To pass test
Protease	Not detected
RNase	Not detected

Applications: This Acrylamide Solution is premixed for 2.6% cross-linking and is suitable for separation of high-molecular-weight proteins.
BP1410 is made from Acrylamide and Bis-Acrylamide that meet BP170 and BP171 specifications,including being DNase-, RNase-, and Protease-free.
[79-06-1 (Acrylamide)] ; [110-26-9 (Methylene Diacrylamide)]
Recommended Storage: 4°C
UN 2810; DOT Class 6.1:Poison

Agarose — IEF Grade
Isoelectric Focusing of Proteins

packaging		Mfr. No
10 g	PolyBottle	**BP163-10**
25 g	PolyBottle	**BP163-25**

$C_{12}H_{18}O_9$
CAS: 9012-36-6
MW: 306.12

EEO (-Mr)	Not detectable
Gel Strength	>500g/cm2
Gelation Temperature	<45°C
Moisture Content	<10%
Sulfate Content	<0.2%

Applications: Highly purified agarose for separating proteins by isoelectric focusing.
Recommended Storage: RT

Ammonium Persulfate — Electrophoresis
Colorless-to-white Crystals

packaging		Mfr. No
25 g	AmberGlass	**BP179-25**
100 g	AmberGlass	**BP179-100**

$H_8N_2O_8S_2$
CAS: 7727-54-0
MW: 228.19
EINECS: 231-786-5
H272, H334, H335, H315, H317, H319, H302
P342+P311, P280, P301+P312, P302+P352, P305+P351+P338, P210

Assay	>=98.0%
Chloride and Chlorate (as Cl)	<=0.001%
Heavy Metals (Pb)	<=0.005%
Insoluble matter	<=0.005%
Iron	<=0.001%
Manganese	<=0.5ppm
Residue after ignition	<=0.05%
Titratable Free Acid	<=0.04mEq/g

Applications: Electrophoresis-grade Ammonium Persulfate is an initiator of acrylamide polymerization for the preparation of polyacrylamide electrophoresis gels.
Recommended Storage: RT
UN 1444; DOT Class 5.1:Oxidizer

Ammonium Sulfate

packaging		Mfr. No
1 kg	Glass	**BP212R-1**
2.5 kg	PolyBottle	**BP212-212**

$H_8N_2O_4S$
CAS: 7783-20-2
MW: 132.13

Arsenic	<=0.5ppm
Assay	>=99.5%
Heavy Metals (Pb)	<=5ppm
Iron	<=5ppm
Nitrate	<=0.001%
Optical Absorbance at 260nm	<=0.03
Optical Absorbance at 280nm	<=0.025
pH of 5% Solution (at 25°C)	5 to 6
Protease	Not detected
Residue on Ignition (sulfated)	<=0.005%

Applications: This enzyme-grade Ammonium Sulfate is suitable for use in the purification of proteins.
Recommended Storage: RT

Bis-Acrylamide Solution — Electrophoresis
2% w/v

packaging		Mfr. No
250 mℓ	AmberGlass	**BP1404-250**

$C_7H_{10}N_2O_2$
CAS: 110-26-9
MW: 154.17
EINECS: 203-750-9

Electrophoresis	To pass test

Applications: Bis-Acrylamide Solution is a cross-linker commonly used in the preparation of polyacrylamide electrophoresis gels.
BP1404 is made from Bis-Acrylamide that meets BP171 specifications.
Recommended Storage: 4°C

Bis-Acrylamide — Electrophoresis

packaging		Mfr. No
25 g	PolyBottle	BP171-25
100 g	PolyBottle	BP171-100

$C_7H_{10}N_2O_2$
CAS: 110-26-9
MW: 154.17
EINECS: 203-750-9
H319, H315, H335, H302,
H312, H332
P280, P302+P352,
P305+P351+P338, P261,
P270, P308+P313

Absorbance of a 1% Solution (at 290nm)	<=0.2
Assay	>=95%
DNase	Not detected
Electrophoresis	To pass test
pH of 1% Solution in 0.1M NaCl	>=5.0
Protease	Not detected
RNase	Not detected

Applications: Bis-Acrylamide is a cross-linker commonly used in the preparation of polyacrylamide electrophoresis gels.
Recommended Storage: 4°C

Glycine
White Crystals or Crystalline Powder

packaging		Mfr. No
500 g	PolyBottle	BP381-500
1 kg	PolyBottle	BP381-1
5 kg	PolyPail	BP381-5

$C_2H_5NO_2$
CAS: 56-40-6
MW: 75.07
EINECS: 200-272-2

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Chloride (Cl)	<=0.003%
Color of 10% Solution	<=10
Conductivity of 1.5% Solution	<=25µmhos/cm
Heavy Metals (Pb)	<=10ppm
Iron	<=7ppm
Loss on drying	<=0.20%
Optical Absorbance of 1M Solution (at 280nm)	<=0.1 AU
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%

Applications: Glycine is used in the preparation of Tris-Glycine electrophoresis buffers and culture media.
Recommended Storage: RT

Brilliant Blue G-250

packaging		Mfr. No
25 g	AmberGlass	BP100-25
50 g	AmberGlass	BP100-50

$C_{47}H_{48}N_3NaO_7S_2$
CAS: 6104-58-1
MW: 854.02

$E^{1\%}_{1cm}$	>=600g-1cm-1
Lambda Max.	610nm ±2nm
Loss on Drying (at 105°C)	<=5%
Solubility	To pass test

Applications: General protein stain.
Recommended storage: RT
C.I. 42655

Lithium Dodecyl Sulfate — Molecular Biology
Powder or Flakes

packaging		Mfr. No
5 g	PolyBottle	BP1309-5
25 g	PolyBottle	BP1309-25

$C_{12}H_{25}LiO_4S$
CAS: 2044-56-6
MW: 272.33
H228, H335, H302, H315, H332, H319
P261, P301+P312,
P304+P340, P302+P352,
P305+P351+P338, P233,
P210

Absorbance of a 3% Solution at 230nm	<=0.3
Absorbance of a 3% Solution at 280nm	<=0.05
Absorbance of a 3% Solution at 405nm	<=0.01
Assay	>=99.0%
Heavy Metals (Pb)	<=5ppm
pH (at 25°C, 3% aqueous solution)	7.0±1.0
Phosphate (PO_4)	<=1ppm

Recommended storage: RT

Brilliant Blue R-250

packaging		Mfr. No
25 g	mberGlass	BP101-25
50 g	AmberGlass	BP101-50

$C_{45}H_{44}N_3NaO_7S_2$
CAS: 6104-59-2
MW: 825.96

$E^{1\%}_{1cm}$	>=700g-1cm-1
Lambda Max.	592nm ±2nm
Loss on Drying (at 105°C)	<=5%
Solubility	To pass test

Applications: Staining proteins in polyacrylamide gels.
Recommended storage: RT
C.I. 42660

MES
Fine White Crystals

packaging		Mfr. No
100 g	PolyBottle	BP300-100

$C_6H_{13}NO_4S$
CAS: 4432-31-9
MW: 195.24
EINECS: 224-632-3
H315, H335, H319
P280, P305+P351+P338,
P261, P302+P352, P264,
P271

Assay	>=98%
DNase	Not detected
Moisture	<=10%
PKa (at 25°C)	6.09±0.2
RNase	Not detected

Applications: This biological buffer has a usable pH range of 5.5 to 6.7.
Recommended Storage: RT

Ponceau S

packaging		Mfr. No
10 g	AmberGlass	BP103-10

$C_{22}H_{12}N_4Na_4O_{13}S_4$
CAS: 6226-79-5
MW: 760.54
H319, H335, H315
P261, P302+P352, P280,
P305+P351+P338

$E^{1\%}_{1cm}$	>=350 g-1cm-1 min
Lambda Max.	514nm±2nm
Solubility	To pass test

Applications: Staining serum and plasma proteins on nitrocellulose and cellulose acetate membranes

Potassium Persulfate
Fine, Colorless-to-white Crystals

packaging		Mfr. No
100 g	PolyBottle	BP180-100

$K_2O_8S_2$
CAS: 7727-21-1
MW: 270.3
EINECS: 231-781-8
H272, H334, H302, H319,
H335, H315, H317
P304+P341, P342+P311,
P261, P301+P312,
P302+P352, P280,
P305+P351+P338, P210

Assay	>=99.0%
Chlorine Compounds (as Cl)	<=0.001%
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.005%
Iron	<=5ppm
Manganese	<=2ppm

Applications: Potassium Persulfate is a strong oxidizing agent and initiator of acrylamide polymerization. It can also be used as an initiator in the immobilization of cells and enzymes in an acrylamide matrix.
Recommended Storage: RT
UN 1492; DOT Class 5.1:Oxidizer

Protein Gel-Loading Dye for SDS-PAGE — Electrophoresis
Dark-purple Liquid - 2X

packaging		Mfr. No
1 mℓ	PolyTube	BP637-1
5 mℓ	PolyBottle	BP637-5

DNase	Not detected
Optical Absorbance (dilution 1250 with deionized water) at 525nm	0.15-0.35
Optical Absorbance (dilution 1250 with deionized water) at 588-594nm	0.32-0.47
Optical Absorbance (dilution 1250 with deionized water) at 635-641nm	0.25-0.40
Protease	Not detected
RNase	Not detected

Applications: This dye is added to protein samples prior to electrophoresis on SDS-PAGE gels.
Components: Sodium Dodecyl Sulfate (<5%), Glycerol (<12%), Tris (<1.0%), Proprietary Component (<2%), and Water (80%).
[151-21-3 (Sodium Dodecyl Sulfate)] ; [56-81-5 (Glycerol)] ; [126-72-7 (Tris)]
Recommended Storage: RT

Sodium Dodecyl Sulfate — Electrophoresis
White Powder

packaging		Mfr. No
100 g	PolyBottle	BP166-100
500 g	PolyBottle	BP166-500
5 kg	PolyPail	BP166-5

$C_{12}H_{25}NaO_4S$
CAS: 151-21-3
MW: 288.38
EINECS: 205-788-1
H228, H311, H302, H335,
H315, H319
P280, P302+P352, P210,
P270, P301+P312,
P305+P351+P338

Absorbance of a 0.1% Solution at 230nm	<=0.4
Absorbance of a 0.1% Solution at 280nm	0.1
Assay (as Fatty Alcohol Sulfate)	>=99%
Assay (as C_{12}-OH)	98%
DNase	Not detected
Electrophoresis	To pass test
Lead	<=5ppm
Phosphate (PO_4)	<=0.0001%
RNase	Not detected

Applications: Sodium Dodecyl Sulfate (SDS) is the most commonly used detergent in protein purification and electrophoresis. It is used as a protein denaturing agent during both extraction procedures and SDS polyacrylamide gel electrophoresis.
Recommended Storage: RT

Sodium Dodecyl Sulfate — Electrophoresis
10% solution

packaging		Mfr. No
200 mℓ	PolyBottle	BP2436-200
1 ℓ	PolyBottle	BP2436-1

$C_{12}H_{25}NaO_4S$
CAS: 151-21-3
MW: 288.38
EINECS: 205-788-1
H319, H335, H315
P280, P261, P302+P352,
P305+P351+P338

Assay (as Fatty Alcohol Sulfate)	>=99%
Chloride (Cl)	<=0.1%
Concentration	10.0±0.5%
Copper	<=0.0005%
DNase	Not detected
Lead	<=0.0005%
Optical Absorbance of a 0.1% Solution at 230nm	<=0.4
Optical Absorbance of a 0.1% Solution at 280nm	<=0.1
Phosphate (PO_4)	<=0.0005%
Protease	Not detected
RNase	Not detected

Applications: Sodium Dodecyl Sulfate (SDS) is the most commonly used detergent in protein purification and electrophoresis. It is used as a protein denaturing agent during both extraction procedures and SDS polyacrylamide gel electrophoresis.
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Sodium Dodecyl Sulfate — Electrophoresis/Molecular Biology
20% Solution

packaging		Mfr. No
200 mℓ	PolyBottle	BP1311-200
1 ℓ	PolyBottle	BP1311-1

$C_{12}H_{25}NaO_4S$
CAS: 151-21-3
MW: 288.38
EINECS: 205-788-1

H319, H335, H315
P280, P261, P302+P352, P305+P351+P338

Assay (as Fatty Alcohol Sulfate)	>=99%
Chloride (Cl)	<=0.1%
Concentration	20 ±0.5%
Copper	<=0.0005%
DNase	Not detected
Lead	<=0.0005%
Optical Absorbance of a 0.1% Solution at 230nm	<=0.4
Optical Absorbance of a 0.1% Solution at 280nm	<=0.1
Phosphate (PO_4)	<=0.0005%
Protease	Not detected
RNase	Not detected

Filtered through a 0.2-micron filter.
Recommended storage: RT

Sodium Persulfate, >98%
White Crystalline Powder

packaging		Mfr. No
1 kg	PolyBottle	BP2637-1

$Na_2O_8S_2$
CAS: 7775-27-1
MW: 238.09
H272, H315, H302, H317, H334, H319, H335

P261, P280, P308+P313, P302+P352, P210, P305+P351+P338

Assay	>=98.0%

Applications: Sodium Persulfate is used as a promoter for polymerization reactions.
Recommended Storage: RT
UN 1505; DOT Class 5.1:Oxidizer

Tris-Glycine-SDS — Electrophoresis
Dry Powder Mix of Tris/Glycine/SDS

packaging		Mfr. No
92 g	PolyBottle	BP1398-92

H335, H319, H315
P261, P264, P302+P352, P280, P305+P351+P338

Electrophoresis	To pass test
pH of 1X Buffer (at 25°C)	8.3 ±0.2
Solubility (buffer in final volume of 1 liter in H2O)	Clear solution

Components in 1X buffer: 0.025M Tris, 0.192M glycine, and 0.1% SDS.
Components: Glycine (82.3%), Tris (17.1%), and SDS (0.6%) [56-40-6 (Glycine)] ; [77-86-1 (Tris)] ; [151-21-3 (SDS)]
Recommended Storage: RT
Makes 1 liter of 5X buffer. Final concentrations of components in 1X buffer: 0.025M Tris, 0.192M glycine, and 0.1% SDS.

Sucrose Gel-Loading Dye for DNA Gels — Electrophoresis
5X, Contains 40% Sucrose

packaging		Mfr. No
1 mℓ	PolyTube	BP655-1
5 mℓ	PolyBottle	BP655-5

DNase	Not detected
Electrophoresis	To pass test
Optical Absorbance (dilution 1:500 with deionized water) at 525nm	0.30-0.45
Optical Absorbance (dilution 1:500 with deionized water) at 588-594nm	0.50-0.65
Optical Absorbance (dilution 1:500 with deionized water) at 635-641nm	0.47-0.62
RNase	Not detected

Applications: This dye includes sucrose instead of glycerol. Add the dye to DNA samples prior to electrophoresis on agarose gels.
Components: Sucrose (40%), Proprietary Component (<3%), and Water.
[57-50-1 (Sucrose)]
Recommended Storage: RT

Silver Nitrate — Certified ACS
Crystalline

packaging		Mfr. No
100 g	AmberGlass	BP2546-100

$AgNO_3$
CAS: 7761-88-8
MW: 169.87

Assay	>=99.7%
Chloride (Cl)	<=5ppm
Clarity of Solution	To pass test
Copper	<=2ppm
Free Acid	To pass test
Iron	<=2ppm
Lead	<=0.001%
Substances not Precipitated by HCl	<=0.01%
Sulfate (SO_4)	<=0.002%

Applications: Silver Nitrate is used in biochemistry to stain agarose and acrylamide gels.
Recommended Storage: RT
UN 1493; DOT Class 5.1:Oxidizer

TEMED — Electrophoresis

packaging		Mfr. No
20 g	AmberGlass	BP150-20
100 g	AmberGlass	BP150-100

$C_6H_{16}N_2$
CAS: 110-18-9
MW: 116.21

EINECS: 203-744-6

Assay (by titration)	>=97%
DNase	Not detected
Electrophoresis	To pass test
Protease	Not detected
RNase	Not detected

Applications: TEMED is a commonly used catalyst for the polymerization of acrylamide/bis-acrylamide.
Recommended Storage: RT
UN 2372; DOT Class 3:Flammable Liquid

Tris-Glycine-SDS — Electrophoresis
10X Powder

packaging		Mfr. No
1	FoilPack	BP1342-1

H315, H319
P280, P305+P351+P338

Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.4±0.1
Protease	Not detected

Applications: Tris-Glycine-SDS is commonly used as a buffer in SDS-PAGE.
Each pack contains preweighed powder to make 1ℓ of a 10X solution (0.25M Tris Base, 1.92M Glycine, and 1.0% w/v SDS).
[77-86-1 (Tris)] ; [56-40-6 (Glycine)] ; [151-21-3 (SDS)]
Recommended Storage: RT

Tris-Glycine — Electrophoresis
1X Solution

packaging		Mfr. No
4 ℓ	PolyPac*	BP2439-4
20 ℓ	PolyPac*	BP2439-20

DNase	Not detected
Electrophoresis	To pass test
pH (at 25°C)	8.4±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-Glycine is commonly used as a buffer in native polyacrylamide gel electrophoresis.
0.025M Tris Base and 0.192M Glycine [77-86-1 (Tris)] ; [56-40-6 (Glycine)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-Glycine — Electrophoresis
10X Powder

packaging		Mfr. No
1	FoilPack	BP1307-1

CAS: [77-86-1 (Tris)], [56-40-6 (Glycine)]
H315, H319
P305+P351+P338, P280

DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.4±0.1
Protease	Not detected
RNase	Not detected

Recommended storage: RT

Tris-Glycine-SDS — Electrophoresis
10X Solution

packaging		Mfr. No
1 ℓ	PolyBottle	BP1341-1
4 ℓ	PolyPac*	BP1341-4

DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.4±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-Glycine-SDS is commonly used as a buffer in SDS-PAGE.
Components: 0.25M Tris Base, 1.92M Glycine, and 1.0% (w/v) SDS.
[77-86-1 (Tris)] ; [56-40-6 (Glycine)] ; [151-21-3 (SDS)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tris-Glycine — Electrophoresis
10X Solution

packaging		Mfr. No
1 ℓ	PolyBottle	BP1306-1
4 ℓ	PolyPac*	BP1306-4

CAS: [77-86-1 (Tris)], [56-40-6 (Glycine)]

DNase	Not detected
Electrophoresis	To pass test
pH (1X solution) (at 25°C)	8.3-8.5
Protease	Not detected
RNase	Not detected

Filtered through a 0.2-micron filter.
Recommended storage: RT

Tris-Glycine-SDS — Electrophoresis
1X Solution

packaging		Mfr. No
4 ℓ	PolyPac*	BP2440-4
20 ℓ	PolyPac*	BP2440-20

DNase	Not detected
Electrophoresis	To pass test
pH of 1X solution (at 25°C)	8.3±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-Glycine-SDS is commonly used as a buffer in SDS-PAGE.
0.025M Tris Base, 0.192M Glycine, and 0.1% (w/v) SDS.
[56-40-6 (Glycine)] ; [77-86-1 (Tris)] ; [151-21-3 (SDS)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Tween* 20

packaging		Mfr. No
100 mℓ	PolyBottle	BP337-100
500 mℓ	PolyBottle,EcoSafPak*	BP337-500

CAS: 9005-64-5

Arsenic	<=0.0003%
Arsenic (As)	<=0.0003%
Copper	<=0.0005%
Copper (Cu)	<=0.0005%
Hydroxyl Number	96-108
Hydroxyl number	96-108
Lead	<=0.0005%
Lead (Pb)	<=0.0005%
Protease	Not detected
Residue after ignition	<=0.25%
Water	<=3%

Applications: This nonionic detergent is used in the isolation of water-soluble membrane proteins.
Recommended Storage: RT
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Tween* 80

packaging		Mfr. No
500 mℓ	AmberGlass,EcoSafPak*	BP338-500

CAS: 9005-65-6

Arsenic	<=0.0001%
Copper	<=0.0005%
Hydroxyl Number	65-80
Lead	<=0.0005%
Residue after ignition	<=0.25%
Water	<=3.0%

Applications: This nonionic detergent is used in the isolation of water-soluble membrane proteins.
Recommended Storage: RT
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Urea — Molecular Biology
Colorless-to-white Crystals or Crystalline Powder

packaging		Mfr. No
500 g	PolyBottle	BP169-500
2.5 kg	PolyBottle	BP169-212
10 kg	PolyPail	BP169-10

CH_4N_2O
CAS: 57-13-6
MW: 60.06
EINECS: 200-315-5
H315
P302+P352

Absorbance of a 5M Solution at 280nm	<=0.05
Assay	>=99.0%
Biuret Test	Negative
CNO	<=5ppm
Copper	<=1ppm
DNase	Not detected
Heavy Metals (Pb)	<=5ppm
Iron	<=2ppm
Melting Point	132°-135°C
Protease	Not detected
RNase	Not detected
Solubility of an 8M Solution	To pass test

Applications: Urea is used as a denaturing agent for DNA and proteins.
Recommended Storage: RT

2-Mercaptoethanol — Electrophoresis

packaging		Mfr. No
100 g	AmberGlass/PoisonPack	BP176-100

C_2H_6OS
CAS: 60-24-2
MW: 78.13
H302, H411, H315, H335, H311, H319
P280, P312, P302+P350, P261, P273, P301+P312, P305+P351+P338

Assay	>=98%
DNase	Not detected
Electrophoresis	To pass test
RNase	Not detected
Total Disulfide (S-S) Absorbance of a 0.02M Solution (at 285nm)	<=0.05

Applications: 2-Mercaptoethanol reduces disulfide linkages in proteins and peptides and is used in many enzymatic reactions as a protein stabilizer.
Recommended Storage: RT
UN 2966; DOT Class 6.1:Poison

4-(2-Aminoethyl)benzenesulfonyl Fluoride Hydrochloride
White Powder

packaging		Mfr. No
10 mg	AmberGlass	BP2644-10
50 mg	AmberGlass	BP2644-50
100 mg	AmberGlass	BP2644-100
500 mg	AmberGlass	BP2644-500
1 g	AmberGlass	BP2644-1

$C_8H_{10}FNO_2S.ClH$
CAS: 30827-99-7
MW: 239.7
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353, P210

FTIR	Conforms to reference
Melting Point	175°-185°C
Purity (by HPLC)	>=97%

Applications: 4-(2-Aminoethyl)benzenesulfonyl Fluoride Hydrochloride is a covalent binding serine protease inhibitor.
Similiar in structure to the commonly used inhibitor PMSF, AEBSF offers better solubility in water, lower toxicity, greater stability and higher inhibitory activity. AEBSF belongs to the family of irreversible sulfonyl fluoride inhibitors that block trypsin and chymotrypsin-type enzymes.
Recommended Storage: RT, protect from light.
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

AEBSF Hydrochloride
White to Off-white Crystals

packaging		Mfr. No
50 mg	PolyMicroTube	BP635-50
100 mg	PolyMicroTube	BP635-100
500 mg	PolyMicroTube	BP635-500

$C_8H_{10}FNO_2S.ClH$
CAS: 30827-99-7
MW: 239.7
H314
P280, P301+P330+P331, P310, P305+P351+P338, P303+P361+P353, P210

Assay (TLC, HPLC)	>=98.0%
Carbon	40.09% ±0.5%
Hydrogen	4.62% ±0.04%
Melting Point	182.0°-190.0°C
Nitrogen	5.84% ±0.2%
Solubility	TIUTrypsin Inhibitor Units determined using Pefachrome TRY.
Solubility 20g in 100mℓ Water	To pass test
Solubility 7.5g in 100mℓ Absolute Alcohol	To pass test
Solubility Inhibitor Activity	>250TIU/g
Sulfur	13.38% ±0.1%

Applications: This specific, irreversible inhibitor of serine proteases is a stable, nontoxic alternative to PMSF.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Benzamidine Hydrochloride Hydrate
White Crystalline Powder

packaging		Mfr. No
25 g	PolyBottle	BP435-25
1 kg	AmberGlass	BP435-1

$C_7H_8N_2.HCl$
CAS: 1670-14-0
MW: 156.61
EINECS: 216-795-4
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay	>=99.0%
Heavy Metals (Pb)	<=0.005%
Lambda Max. (in Methanol)	230nm ±5nm
Solubility (1% in H_2O at Room Temp.)	Clear and haze-free
Water (internal)	<=15%

Applications: Benzamidine Hydrochloride is commonly used as a protease inhibitor.
Recommended Storage: 4°C

Brij* 35

packaging		Mfr. No
500 g	AmberGlass	BP345-500

$C_{58}H_{118}O_{24}$
CAS: 9002-92-0
MW: 1199.56
H302, H315, H319, H335
P280, P305+P351+P338, P330, P264, P301+P312

Hydroxyl Number	40-60
Water	<=3.0%

Applications: This nonionic detergent is used for solubilizing proteins and isolating membrane complexes.
Avg. Molecular Wt.:~600
Recommended Storage: RT

CHAPS
White Crystalline Powder

packaging		Mfr. No
1 g	AmberGlass	BP571-1
5 g	AmberGlass	BP571-5

$C_{32}H_{58}N_2O_7S$
CAS: 75621-03-3
MW: 614.9
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Assay (TLC)	>=98%
Conductivity of a 10% Aqueous Solution (at 24°C)	<50µmhos/cm
FTIR	Conforms to standard
Optical Absorbance (1%) at 260nm	<=0.1
Optical Absorbance (1%) at 280nm	<=0.1
pH of 10% Solution	5.0-7.0
Solubility (0.5g/50mL)	Clear and colorless liquid

Applications: CHAPS is a Zwitterionic detergent used for solubilizing membrane proteins.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

CHAPSO
White Powder

packaging		Mfr. No
500 mg	AmberGlass	BP575-500

$C_{32}H_{58}N_2O_8S$
CAS: 82473-24-3
MW: 630.88
H302, H312, H332, H315, H319, H335
P280, P305+P351+P338

Assay (N_2)	>=99%
Conductivity of a 0.5M Aqueous Solution (at 24°C)	<=100µmhos/cm
Optical Absorbance (1%) at 260nm	<=0.05
pH of 1% Aqueous Solution	5.0-8.0
Residue after ignition	<=0.1%
Solubility (10% in Water)	Clear, haze-free
TLC	Comparable to reference
Water (Karl Fischer)	<=7.5%

Applications: CHAPSO is a Zwitterionic detergent used for protein solubilization.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Dithioerythritol — Electrophoresis
White Crystals or Powder

packaging		Mfr. No
5 g	PolyBottle	BP173-5

$C_4H_{10}O_2S_2$
CAS: 6892-68-8
MW: 154.24
EINECS: 229-998-8
H302, H335, H319, H315
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay	>=99%
Corrected Absorbance of Disulfide (S-S) in 0.02M Solution (at 285nm)	<=0.13
Electrophoresis	To pass test
IR	Conforms to standard
Melting Point	83° ±2°C

Applications: Dithioerythritol is used to reduce disulfide bonds in proteins and peptides and is added in low concentrations as an enzyme stabilizer during protein purification and enzymatic reactions.
Recommended Storage: -20°C

Dithiothreitol — Electrophoresis
White Crystals or Powder

packaging		Mfr. No
5 g	AmberGlass	BP172-5
25 g	AmberGlass	BP172-25

$C_4H_{10}O_2S_2$
CAS: 3483-12-3
MW: 154.24
H302, H335, H319, H315
P261, P301+P312, P302+P352, P280, P305+P351+P338

Assay	>=99%
Corrected Absorbance of Disulfide (S-S) in 0.02M Solution (at 280nm)	<=0.04
DNase	Not detected
Electrophoresis	To pass test
IR	Conforms to standard
Melting Point	41° ±2°C
Protease	Not detected
RNase	Not detected

Applications: Dithiothreitol is used to reduce disulfide bonds in proteins and peptides and is added in low concentrations as an enzyme stabilizer during protein purification and enzymatic reactions.
Recommended Storage: -20°C

Leupeptin Hemisulfate
White Powder

packaging		Mfr. No
1 mg	AmberGlass	BP2662-1
5 mg	AmberGlass	BP2662-5
25 mg	AmberGlass	BP2662-25
100 mg	AmberGlass	BP2662-100

$C_{20}H_{38}N_6O_4.0.5H_2O_4S$ P280, P301+P312,
CAS: 103476-89-7 P305+P351+P338, P302+P352
MW: 475.6
H302, H312, H332

Applications: Leupeptin Hemisulfate is a biochemical used as an inhibitor for trypsin, plasmin, papain, and cathepsin B.
Recommended Storage: -20°C, desiccate, protect from light.
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Thapsigargin
Clear or Whitish Oil

packaging		Mfr. No
1 mg	GlassAmpule	BP629-1

$C_{34}H_{50}O_{12}$ P301+P310, P280, P312,
CAS: 67526-95-8 P302+P350, P304+P340
MW: 650.76
H311, H331, H301

Assay (TLC) ..... >=98.0%
Solubility (10mg/mℓ in Acetonitrile, DMSO, and Ethanol) ..... To pass test

Applications: This compound is useful as an inhibitor of microsomal calcium-ATPase and as a potent cell-permeable, intracellular calcium releaser that is independent of IP3.
Isolated from Thapsia garganica ℓ.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 2811; DOT Class 6.1:Poison

Amikacin From Kanamycin A
White Crystalline Powder

packaging		Mfr. No
250 mg	AmberGlass	BP2643-250
1 g	AmberGlass	BP2643-1

$C_{22}H_{43}N_5O_{13}$ Crystalline Powder
CAS: 37517-28-5 EINECS: 253-538-5
MW: 585.61
Melting point: White

Loss on drying ..... <=9%
pH (1% Aqueous Solution) 9.5-11.5
Potency 900µg/mg

Melting Point:203°-204°C
Recommended Storage: 0° to 5°C, desiccate.
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Ampicillin Sodium Salt
Crystalline Powder

packaging		Mfr. No
5 g	PolyBottle	BP1760-5
25 g	PolyBottle	BP1760-25

$C_{16}H_{18}N_3NaO_4S$ P261, P304+P341,
CAS: 69-52-3 P342+P311, P280
MW: 371.39
H317, H334

Dimethylaniline ..... <0.002%
Moisture ..... <2.0%
pH of 1% Aqueous Solution 8.0-10.0
Potency 845-988µg/mg

Recommended Storage: 4°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Pepstatin A
White Powder

packaging		Mfr. No
5 mg	AmberGlass	BP2671-5
10 mg	AmberGlass	BP2671-10
25 mg	AmberGlass	BP2671-25
100 mg	AmberGlass	BP2671-100
250 mg	AmberGlass	BP2671-250

$C_{34}H_{63}N_5O_9$ EINECS: 247-600-0
CAS: 26305-03-3
MW: 685.9

FTIR ..... Conforms to Standard
Melting Point ..... 230°-240°C

Applications: Pepstatin A is an inhibitor for pepsin, renin, cathepsin D, and other acid proteases.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Triton* X-100
Electrophoresis

packaging		Mfr. No
100 mℓ	PolyBottle	BP151-100
500 mℓ	PolyBottle,EcoSafPak*	BP151-500

$C_{34}H_{62}O_{11}$ P280, P305+P351+P338,
CAS: 9002-93-1 P310, P273,
MW: 646.85 P301+P312
H412, H318, H302

Cloud Point (1% in H_2O) ..... 63-69°C
IR ..... Conforms to standard
pH of 5% Solution (at 25°C) 6-8
Solubility (1 in 10mℓ H2O) ..... Colorless, slightly hazy solution

Applications: This nonionic detergent is used to solubilize membranes.
Recommended Storage: RT
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Amphotericin B
Yellow Powder

packaging		Mfr. No
250 mg	AmberGlass	BP928-250

$C_{47}H_{73}NO_{17}$ H315, H319, H335
CAS: 1397-89-3 P280, P305+P351+P338
MW: 924.09
EINECS: 215-742-2

Amphotericin A ..... <=15%
Loss on Drying (at 105°C) ..... <=5.0%

Applications: Amphotericin B is an antibiotic used for controlling microbial contamination in tissue culture applications.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Ampicillin Trihydrate
Off-white Powder

packaging		Mfr. No
25 g	PolyBottle	BP902-25

$C_{16}H_{19}N_3O_4S.3H_2O$ P261, P304+P341,
CAS: 7177-48-2 P342+P311, P280
MW: 403.45
H317, H334

Assay ..... >=90%
pH of 1% Solution (at 25°C) 3.5-6.0
Potency (Anhydrous) ..... Inclusive between 950-1050µg/mg

Recommended Storage: 4°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Actinomycin-D
Red Crystals

packaging		Mfr. No
5 mg	PolyMicroTube	BP606-5
10 mg	PolyMicroTube	BP606-10

$C_{62}H_{86}N_{12}O_{16}$ H301
CAS: 50-76-0 P301+P310
MW: 1255.44
EINECS: 200-063-6

Assay ..... >=98.0%
E Max 24700
Maximum Absorbance (lambda Max.) 441nm
Melting Point ..... 245°-252°C
Solubility (10mg/mℓ in Methanol and Methylene Chloride) ..... To pass test

Applications: This antibiotic is a widely used transcription inhibitor.
Isolated from Streptomyces parvuius.
Recommended Storage: 4°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Amphotericin B 250µg/mℓ
Yellow Solution

packaging		Mfr. No
20 mℓ	PolyBottle	BP2645-20
50 mℓ	PolyBottle	BP2645-50

$C_{47}H_{73}NO_{17}$ EINECS: 215-742-2
CAS: 1397-89-3
MW: 924.1

Concentration ..... 250 µg/mℓ
pH at 25°C ..... Inclusive between 6.5-7.5
Sterility ..... Sterile filtered

Applications: Amphotericin B is effective against yeast and fungi. An antibiotic solution used in cell biology.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Antibiotic A23187 Free Acid
Off-white Crystalline Powder

packaging		Mfr. No
5 mg	PolyMicroTube	BP2502-5

$C_{29}H_{37}N_3O_6$ H319, H335
CAS: 52665-69-7 P302+P352, P280, P261,
MW: 523.63 P301+P312, P304+P340,
EINECS: 258-084-1 P305+P351+P338
H302, H312, H332, H315,

Di-n-butyl ether ..... >=99.0%
Purity (HPLC) ..... >=99.0%

Applications: Antibiotic A23187 is a biochemical tool used to study the role of divalent cations in various biological systems. This antibiotic demonstrates weak in vitro activity against gram-positive bacteria and fungi. A widely used ionophore. It has the ability to increase the intracellular concentrations of cations and is widely used to increase the intracellular levels of calcium.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Sarkosyl

packaging		Mfr. No
500 g	PolyBottle	BP234-500

$C_{15}H_{28}NNaO_3$ EINECS: 205-281-5
CAS: 137-16-6
MW: 293.39

Assay (dry basis) ..... >=95%
pH of 10% Solution 7.5-8.5

Applications: This anionic detergent is used for the solubilization of membrane proteins.
Recommended Storage: RT

Bacitracin
White or Almost White Powder

packaging		Mfr. No
1 g	Amber Glass	BP2950-1
5 g	Amber Glass	BP2950-5

$C_{66}H_{103}N_{17}O_{16}S$ EINECS: 215-786-2
CAS: 1405-87-4
MW: 1422.71

Loss on drying	<=5.0%
pH at 25°C	Inclusive between 5.5-7.5
Potency	>70 U/mg
Source	Bacillus licheniforms

Applications: Inhibitor of protein disulfide isomerase. Interferes with the building blocks of peptidoglycan bacterial cell wall. Antimicrobial spectrum: Gram-positive bacteria.
Recommended storage: 4°C

Blasticidin S Hydrochloride From Streptomyces griseochromogenes
White Powder

packaging		Mfr. No
25 mg	AmberGlass	BP2647-25
50 mg	AmberGlass	BP2647-50
100 mg	AmberGlass	BP2647-100

$C_{17}H_{26}N_8O_5.HCl$ H300, H312
CAS: 3513-03-9 P301+P310, P280,
MW: 458.69 P302+P352

Potency (Assay)	>=900µg/mg
Purity	>=99.0%
Solubility (5mg/ml): Water	Clear, slight yellow solution

Recommended Storage: 0° to 5°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Carbenicillin Disodium Salt
White Powder

packaging		Mfr. No
250 mg	AmberGlass	BP2648-250
1 g	AmberGlass	BP2648-1
5 g	AmberGlass	BP2648-5

$C_{17}H_{16}N_2Na_2O_6S$ H317, H334
CAS: 4800-94-6 P280, P305+P351+P338
MW: 422.36
EINECS: 225-360-8

pH (at 25°C, 1% water)	6.5-8.0
Potency	>=770µg/mg
Water Content	<=6.0%

Recommended Storage: 0° to 5°C

Cefotaxime, Sodium Salt
White or Almost White Powder

packaging		Mfr. No
1 g	Amber Glass	BP2951-1

$C_{16}H_{16}N_5NaO_7S_2$ P261, P304+P341,
CAS: 64485-93-4 P342+P311, P280,
MW: 477.44 P302+P352, P305+P351+P338
H334, H315, H319, H335, H317

Bacterial endotoxins-kinetic	<2 EU/mg
Individual impurity	<1%
Loss on drying	<3%
pH at 25°C	Inclusive between 4.5-6.5
Potency	Inclusive between 916-964 u/µg
Specific rotation at 25°C	Inclusive between 58-64
Total impurities	<3%

Applications: Inhibits bacterial cell wall synthesis. Antimicrobial spectrum: Broad spectrum third generation cephalosporin antibiotic.
Recommended storage: 4°C

Chloramphenicol Crystalline Powder

packaging		Mfr. No
100 g	PolyBottle	BP904-100

$C_{11}H_{12}Cl_2N_2O_5$ H350
CAS: 56-75-7 P201, P308+P313
MW: 323.13
EINECS: 200-287-4

Chromatography purity	To pass test
Melting Range	149°-153°C
pH (2.5%) at 25°C	Inclusive between 4.7-7.5
Purity	Inclusive between 97-103%
Specific Rotation (25°C ±0.5°C)	+17° to +20°

Recommended Storage: RT
Not for drug use.

Doxorubicin Hydrochloride
Reddish-orange Powder

packaging		Mfr. No
1 mg	AmberGlass	BP2516-1
5 mg	AmberGlass	BP2516-5
10 mg	AmberGlass	BP2516-10
50 mg	AmberGlass	BP2516-50

$C_{27}H_{29}NO_{11}.HCl$ H315, H335, H361fd
CAS: 25316-40-9 P280, P305+P351+P338,
MW: 579.98 P310, P201,
EINECS: 246-818-3 P303+P361+P353
H350, H340, H302, H318,

Acetone	<=0.50%
Assay (HPLC)	>=95%
Carbon tetrachloride	<=1.0%
Doxorubicinone	<=0.50%
FTIR	Conforms to standard
pH	Inclusive between 4.0-5.5
Propan--2-ol	<=2.2 U/mg
Purity (HPLC)	>=99.0%
Solubility: In Acetone & Ethanol	Practically insoluble
Solubility: In Methanol	Slightly soluble
Solubility: In Water	Completely soluble
Total impurities	<=1.0%
Water	<=4.0%

Applications: Doxorubicin HCL is a chemotherapeutic agent. Antitumor, immunosuppressive, and antibiotic agent. It blocks RNA polymerase and reverse transcriptase. Also inhibits nucleic acid synthesis.
Recommended Storage: 2° to 8°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Doxycycline Hydrochloride
Yellow Powder

packaging		Mfr. No
1 g	AmberGlass	BP2653-1
5 g	AmberGlass	BP2653-5

$C_{22}H_{24}N_2O_8.ClH$ H319, H335
CAS: 10592-13-9 P261, P270, P280,
MW: 480.91 P305+P351+P338,
EINECS: 234-198-7 P308+P313, P302+P352
H302, H312, H332, H315,

Carbon tetrachloride	Inclusive between 4.3-6.0%
FTIR	Conforms to standard
Heavy metals	<=50 ppm
Potency	Inclusive between 800-920µg/mg
Purity	>=98.0
Sulfated ash	<=0.4%
Water	Inclusive between 1.4-2.8%

Recommended Storage: 0° to 5°C, light sensitive, desiccate.
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Erythromycin
White Crystalline Powder

packaging		Mfr. No
25 g	PolyBottle	BP920-25

$C_{37}H_{67}NO_{13}$ EINECS: 204-040-1
CAS: 114-07-8
MW: 733.94

IR	Conforms to standard
Limit of related substances	<=5%
Moisture (KF)	<=10%
pH (0.07% water at 25°C)	Inclusive between 8.0-10.5
pH of 0.4% Solution in 5% Methanol in Water	8.0-10.5
Purity	Inclusive between 85.0-100.5%
Residue after ignition	<0.2%
Specific rotation	Inclusive between -78 to +71%
Thiocynate	<=0.3%

Applications: Erythromycin is used as an inhibitor in cell-free protein biosynthesis.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

G418 Sulfate
White to Off-white Powder

packaging		Mfr. No
1 g	AmberGlass	BP673-1
5 g	AmberGlass	BP673-5

$C_{20}H_{40}N_4O_{10}.2H_2SO_4$ P261, P304+P341,
CAS: 108321-42-2 P342+P311, P280, P201,
MW: 692.7 P308+P313
H334, H317, H360FD

ABS 280nm (1mg/ℓ solution)	<0.015
ABS 570nm (100mg/ℓ solution)	<0.10
Biological potency test ED50-resistant assay	>=2500µg/mℓ
Biological potency test ED50-sensitive assay	<=400µg/mℓ
Biological potency test Solubility in Water	To pass test
Potency (B. subtilis)	760±40µg/mg

Applications: This antibiotic inhibits microbial contamination in tissue culture and molecular biology applications. The effective killing concentration of G418 varies with the cell type, media, growth conditions, and the cells' metabolic rate and position in the cell cycle. Effective concentrations have been reported from 100µg/mℓ up to 5mg/mℓ.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Gentamycin Sulfate
White Powder

packaging		Mfr. No
1 g	AmberGlass	BP918-1

$C_{21}H_{43}N_5O_7.H_2SO_4$ H317, H334, H360FD
CAS: 1405-41-0 P261, P280, P201,
MW: 575.67 P308+P313, P285
EINECS: 215-778-9

Fluoride (F)	Inclusive between 3.5-5.5
pH of Solution (1:25)	3.5 to 5.5
Potency (Assay)	>590µg/mg
Residue after ignition	<1%
Specific rotation	Inclusive between +107 to +121 °

Applications: Gentamycin Sulfate inhibits protein synthesis, preventing microbial contamination in tissue culture applications. It is also used to confer antibiotic resistance/sensitivity in molecular biology procedures.
Recommended Storage: 4°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Hygromycin B
Liquid, Dark Brown Solution

packaging		Mfr. No
2 mℓ	Amber Glass	BP2952-1MU

$C_{20}H_{37}N_3O_{13}$ P302+P350,
CAS: 31282-04-9 P305+P351+P338, P310,
MW: 527.5 P261, P304+P341,
H300, H317, H334, H310, H318 P342+P311
P301+P310, P280, P361,

Purity	>80%
Source	Streptomyces hygroscopicus
Sterile filtered	To pass test

Applications: Used as a selection agent for hygromycin resistance gene transformed cells. Blocks polypeptide synthesis and inhibits elongation.
Description: Sterile-Filtered
Recommended storage: 4°C

Ionomycin, Calcium Salt
From Streptomyces conglobatus

packaging		Mfr. No
1 mg	PolyMicroTube	BP2527-1
5 mg	PolyMicroTube	BP2527-5

$C_{41}H_{70}CaO_9$
CAS: 56092-82-1
MW: 747.07

1.4-Dichlorobenzene	Clear solution
Melting Point	197°-207°C
Purity (by NP TLC)	>=98.0%
Purity (by RP TLC)	>=99.0%
Solubility (5mg/ml): Methanol	Clear solution

Recommended Storage: 4°C, protect from light
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Kanamycin Sulfate
White Powder

packaging		Mfr. No
5 g	PolyBottle	BP906-5

$C_{18}H_{36}N_4O_{11}.H_2SO_4$
CAS: 25389-94-0
MW: 582.59
EINECS: 246-933-9

H334, H335, H360D
P261, P304+P341, P342+P311, P201, P308+P313

Chromatographic Purity	To pass USP test
Ignition residue	<1.0%
Kanamycin B	<4.0%
pH of a 1% solution	Inclusive between 6.5-8.5
Potency	>750µg/mg

Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Ketoconazole
White Powder

packaging		Mfr. No
50 mg	AmberGlass	BP2734-50
100 mg	AmberGlass	BP2734-100
500 mg	AmberGlass	BP2734-500
1 g	AmberGlass	BP2734-1

$C_{26}H_{28}Cl_2N_4O_4$
CAS: 65277-42-1
MW: 531.44
EINECS: 265-667-4

H360F, H301, H373, H410
P264, P270, P201, P281, P308+P313, P273

FTIR	Conforms to standard
Melting Point	148°-152°C
Purity	>=99%

Applications: Ketoconazole is a cytochrome P450 inhibitor and demonstrates anti-psoriatic activity. An antifungal agent.
Recommended Storage: RT
UN 2811; DOT Class 6.1:Poison

Metolazone
White Crystalline Powder

packaging		Mfr. No
25 mg	AmberGlass	BP2667-25
50 mg	AmberGlass	BP2667-50
100 mg	AmberGlass	BP2667-100

$C_{16}H_{16}ClN_3O_3S$
CAS: 17560-51-9
MW: 365.84

EINECS: 241-539-3

FTIR	Conforms to Reference
Melting Point	245°-260°C

Applications: Metolazone is an anti-hypertensive.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Miconazole
Free Base

packaging		Mfr. No
1 g	AmberGlass	BP2668-1
5 g	AmberGlass	BP2668-5
25 g	AmberGlass	BP2668-25

$C_{18}H_{14}Cl_4N_2O$
CAS: 22916-47-8
MW: 416.13

EINECS: 245-324-5

Chromatography purity	To pass test
Ignition residue	<0.2%
Loss on drying	<0.5%
Purity	Inclusive between 98-102%
Residual solvents	To pass test

Applications: Miconazole is used as an antifungal agent.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Mitomycin C

packaging		Mfr. No
2 mg	AmberGlass	BP2531-2
10 mg	AmberGlass	BP2531-10
20 mg	AmberGlass	BP2531-20

$C_{15}H_{18}N_4O_5$
CAS: 50-07-7
MW: 334.32
EINECS: 200-008-6

H301, H351
P301+P310, P281

Potency	>850µg/mg
Purity (by HPLC)	>=99.0%
Solubility (10mg/ml): Methanol	Clear blue solution

Applications: Mitomycin C is used in biochemical research applications.
Recommended Storage: 4°C

Nalidixic Acid

packaging		Mfr. No
25 g	PolyBottle	BP908-25

$C_{12}H_{12}N_2O_3$
CAS: 389-08-2
MW: 232.24
EINECS: 206-864-7

H317, H334, H351
P261, P304+P341, P342+P311, P280, P281

Assay	>=98%
Heavy Metals (Pb)	<=0.002%
Loss on Drying (at 105°C)	<=0.5%
Melting Range	225°-231°C

Applications: Nalidixic Acid functions as a DNA polymerase inhibitor by interfering with DNA gyrase activity.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Neomycin Sulfate
White Powder

packaging		Mfr. No
5 g	AmberGlass	BP2669-5
25 g	AmberGlass	BP2669-25

$C_{23}H_{46}N_6O_{13}.3H_2O_4S$
CAS: 1405-10-3
MW: 908.87
EINECS: 215-773-1

H334, H317, H361d
P261, P304+P341, P342+P311, P280, P281

FTIR	Conforms to Standard
Loss on drying	<=8%
pH (3.3% aqueous solution)	5-7.5
Potency	>=630µg neomycin/mg
Purity	>=98% of Neomycin B

Applications: Neomycin Sulfate is an antibiotic and is used in tissue culture studies. It can act as an inhibitor of protein biosynthesis.
Recommended Storage: RT, desiccate, protect from light.

Nystatin
White or Almost White Powder

packaging		Mfr. No
5 g	Amber Glass	BP2949-5

$C_{47}H_{75}NO_{17}$
CAS: 1400-61-9
MW: 926.1

EINECS: 215-749-0
Fungicidin Mycostatin

Loss on drying	<=5.0%
pH at 25°C	Inclusive between 6.0-8.0
Potency	>4400 U/mg
Source	Streptomyces noursei
Suspendibility	To pass test

Applications: Increases the permeability of the cell membrane of sensitive fungi by binding to sterols. Antimicrobial spectrum: Yeasts and molds.
Recommended storage: 0°C

Paromomycin Sulfate
Dry, White or Off-White Crystalline Powder

packaging		Mfr. No
1 g	Amber Glass	BP2953-1

$C_{23}H_{45}N_5O_{14}.H_2SO_4$
CAS: 1263-89-4
MW: 713.71
EINECS: 215-031-7
Aminosidine Sulfate

H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Loss on drying	<5%
Potency	>675 U/mg
Source	Streptomyces krestomuceticus

Applications: Used to study bacterial protein synthesis at the level of 16S ribosomal RNA and 30S ribosome assembly. Inhibits initiation and elongation during protein synthesis. Antimicrobial spectrum: Gram-negative and Gram-positive bacteria.
Recommended storage: RT

Penicillin G Sodium Salt
Dry, Fine White Powder

packaging		Mfr. No
5 g	Amber Glass	BP2955-5

$C_{16}H_{17}N_2NaO_4S$
CAS: 69-57-8
MW: 356.38
Benzylpenicillin sodium salt

H317, H334
P261, P304+P341, P342+P311, P280

Loss on drying	<1.5%
pH	Inclusive between 5.0-7.5
Potency	Inclusive between 1500-1750 U/mg
Source	Penicillum fungi

Applications: Inhibits bacterial cell wall synthesis; Antimicrobial spectrum: Gram-positive bacteria.
Recommended storage: RT

Penicillin/Streptomycin Mixture
Clear Solution

packaging		Mfr. No
50 mℓ	Plastic Bottle	BP2959-50

CAS: Penicillin (69-57-8); Streptomycin(3810-74-0)
H334, H317, H360FD
P261, P304+P341, P342+P311, P280, P201, P308+P313

Penicillin concentration	10000 U/mℓ
pH	Inclusive between 5.0-7.5
sodium chloride	0.9%
Sterile-filtered	To pass test
Streptomycin concentration	10 mg/mℓ

Applications: Interferes with synthesis of bacterial cell wall. Inhibits protein synthesis; binds to 30S ribosomal subunit.
Description: Sterile-Filtered; Penicillin: 10.000U/ml; Streptomycin: 10mg/mℓ
Recommended storage: <0°C

Penicillin/Streptomycin/Glutamine Mixture
Clear Solution

packaging		Mfr. No
50 mℓ	Plastic Bottle	BP2960-50

CAS: Penicillin (69-57-8); Streptomycin(3810-74-0); Glutamine (56-85-9)
H317, H334, H360FD
P261, P304+P341, P342+P311, P280, P201, P308+P313

Glutamine concentration	200 mM
Penicillin concentration	10000 U/mℓ
pH	Inclusive between 6.0-7.0
sodium chloride	0.9%
Sterile-filtered	To pass test
Streptomycin concentration	10 mg/mℓ

Applications: Interferes with synthesis of bacterial cell wall. Inhibits protein synthesis. Interferes with bacterial cell division.
Description: Sterile-Filtered; Penicillin: 10.000U/ml; Streptomycin: 10mg/ml; Glutamine: 200mM
Recommended storage: <0°C

Penicillin/Streptomycin/Neomycin Mixture
Clear Solution

packaging		Mfr. No
50 mℓ	Plastic Bottle	BP2961-50

CAS: Penicillin (69-57-8); Streptomycin(3810-74-0); Neomycin (1405-10-3)
H317, H334, H360FD
P261, P304+P341, P342+P311, P280, P201, P308+P313

Neomycin concentration	10 mg/mℓ
Penicillin concentration	5000 U/mℓ
pH	Inclusive between 6.3-6.9
sodium chloride	0.9%
Sterile-filtered	To pass test
Streptomycin concentration	5 mg/mℓ

Applications: Interferes with synthesis of bacterial cell wall. Inhibits protein synthesis. Interferes with bacterial cell division.
Description: Sterile-Filtered; Penicillin: 5.000U/ml; Streptomycin: 5mg/ml; Neomycin: 10mg/mℓ
Recommended storage: <0°C

Penicillin-G Potassium Salt
White to Off-white Powder

packaging		Mfr. No
100 g	PolyBottle	BP914-100

$C_{16}H_{17}KN_2O_4S$
CAS: 113-98-4
MW: 372.47
EINECS: 204-038-0
H334, H317
P261, P304+P341, P342+P311, P280, P302+P352, P308+P313

Assay	>=85%
Loss on Drying (at 105°C)	<=1.0%
pH of 0.6% Solution	5.5-7.5

Applications: Penicillin inhibits microbial contamination in tissue culture applications.
Not for drug use.
Recommended Storage: RT

Phleomycin, 2% solution in water
Clear Blue Solution

packaging		Mfr. No
100 mg	Plastic Bottle	BP2962-100

$C_{55}H_{85}CuO_{21}N_{20}S_2.HCl$
CAS: 11006-33-0
MW: 1526.5
Phleomycin complex
H317
P280

Concentration	20 mg/mℓ
Source	Streptomyces verticillus
Sterile-filtered	To pass test
UV abs (200 ug/mℓ at 244 nM)	Inclusive between 0.75-1.05

Applications: Disrupts the integrity of DNA, and blocks S-phase entry in the cell cycle.
Description: Concentration: 20mg/mℓ
Recommended storage: <0°C

Polymyxin B Sulfate
Dry, White or Off-White Powder

packaging		Mfr. No
1 g	Amber Glass	BP2954-1

$C_{55}H_{96}N_{16}O_{13}.2H_2SO_4$
CAS: 1405-20-5
MW: 1385.61
EINECS: 215-774-7
H302
P301+P312

Assay	>6000 U/mg
Loss on drying	<7%
pH	Inclusive between 5.0-7.5
Source	Bacillus polymyxa

Applications: Used as a immobilized (substrate bound) agent for removal of endotoxins. Mode of Action: Binds to and interferes with the permeability of the cytoplasmic membrane; Antimicrobial spectrum: Gram-negative bacteria.
Recommended storage: 4°C

Puromycin Dihydrochloride
Dry, White or Off-White Powder

packaging		Mfr. No
100 mg	Clear Glass	BP2956-100

$C_{22}H_{29}N_5O_5.2HCl.xH_2O$
CAS: 58-58-2
MW: 544.44
H302
P301+P312

Purity (HPLC)	>98%
Source	Streptomyces alboniger
Water (Karl Fischer)	<12%

Applications: For selection of cells transfected with puromycin N-acetyl transferase gene (pac).
Recommended storage: <0°C

Rapamycin
Dry, White or Off-White Powder

packaging		Mfr. No
1 mg	Clear Glass	BP2963-1

$C_{51}H_{79}NO_{13}$
CAS: 53123-88-9
MW: 914.2
(-)-Rapamycin; Sirolimus

Melting point	183-184
Purity (HPLC)	>98%

Applications: Possesses immunosuppressive properties. Blocks a protein that is involved in cell division. A type of serine/threonine kinase inhibitor.
Recommended storage: <0°C

Rifampicin
Bright Orange Powder

packaging		Mfr. No
250 mg	AmberGlass	BP2679-250
1 g	AmberGlass	BP2679-1
5 g	AmberGlass	BP2679-5
25 g	AmberGlass	BP2679-25

$C_{43}H_{58}N_4O_{12}$
CAS: 13292-46-1
MW: 822.94
EINECS: 236-312-0
H360Fd, H302
P264, P270, P201, P281, P308+P313

Heavy metals	<20 ppm
Loss on Drying (at 105°C)	<1.0%
Purity	Inclusive between 97-102%
Rifampicin quinine	<1.5%
Sulfated ash	<0.1%
UV/VIS (lambda max) methanol	237-239nm

Applications: Rifampicin inhibits DNA-dependent bacterial RNA Polymerase. Mammalian RNA polymerase is not affected.
Recommended Storage: 4°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Spectinomycin Pentahydrate Dihydrochloride
Dry, White or Almost White Powder

packaging		Mfr. No
1 g	Amber Glass	BP2957-1

$C_{14}H_{24}N_2O_7.2HCl.2H_2O$
CAS: 22189-32-8
MW: 495.35
Spectinomycin Dihydrochloride Hydrate
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay	>603 U/mg
pH at 25°C	Inclusive between 3.8-5.6
Residue after ignition	<1%
Source	Streptomyces spectabilis
Specific rotation	Inclusive between 15-21
Water (Karl Fischer)	Inclusive between 16-20%

Applications: For selection of transformed cells containing the spectinomycin resistance gene and inhibition of bacterial protein synthesis at the level of peptidyl tRNA translocation.
Recommended storage: 4°C

Staurosporine
From Streptomyces sp.

packaging		Mfr. No
100 µg	PolyMicroTube	BP2541-100
500 µg	PolyMicroTube	BP2541-500
1 mg	PolyMicroTube	BP2541-1

$C_{28}H_{26}N_4O_3$
CAS: 62996-74-1
MW: 466.5
H351
P281

Assay	>=98%

Applications: Staurosporine is a potent protein kinase inhibitor useful for studies on protein phosphorylation in the regulation of cellular functions.
Recommended Storage: 4°C, protect from light.
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Streptomycin Sulfate
White to Light Yellow Powder

packaging		Mfr. No
50 g	PolyBottle	BP910-50

$C_{42}H_{78}N_{14}O_{24}.3H_2SO_4$
CAS: 3810-74-0
MW: 1457.4
EINECS: 223-286-0
H317, H302, H334, H360FD
P261, P280, P201, P308+P313, P285

Loss on Drying (at 105°C)	<=5%
pH of a 20% solution	Inclusive between 4.5-7.0
Potency	Inclusive between 650-850µg/mg

Applications: Streptomycin Sulfate inhibits protein synthesis. It prevents microbial contamination in tissue culture applications and confers antibiotic resistance/sensitivity in molecular biology procedures.
Not for drug use.
Recommended Storage: 4°C

Tetracycline hydrochloride
Yellow Powder

packaging		Mfr. No
100 g	PolyBottle	BP912-100

$C_{22}H_{24}N_2O_8.HCl$
CAS: 64-75-5
MW: 480.9
H319, H361d
P281, P280, P305+P351+P338

4-epianhydrotetracycline	<=2.0%
Heavy metals	<=0.005%
Loss on Drying (at 105°C)	<=2.0%
pH of a 1% solution	Inclusive between 1.8-2.8
Potency (Assay)	>900µg/mg
Specific rotation	Inclusive between -255 to -240 °

Applications: Tetracycline blocks protein synthesis and is used to select tetracycline-resistant recombinant plasmids.
Not for drug use.
Recommended Storage: RT

Vancomycin Hydrochloride
Dry, White to Light Orange Powder

packaging		Mfr. No
1 g	Amber Glass	BP2958-1

$C_{66}H_{75}Cl_2N_9O_{24}.HCl$
CAS: 1404-93-9
MW: 1485.73
Vancocine Hydrochloride; Vancocin Hydrochloride
H319, H335, H315, H317
P280, P261, P302+P352, P305+P351+P338

Potency	>900 U/mg
Source	Streptomyces orientalis
Water (Karl Fischer)	<10%

Applications: Inhibits formation of peptidoglycan polymers of bacterial cell wall.
Recommended storage: <0°C

(-)-Nicotine Tartrate
White Solid

packaging		Mfr. No
250 mg	AmberGlass	BP2533-250
1 g	AmberGlass	BP2533-1

$C_{10}H_{14}N_2.2C_4H_6O_6.2H_2O$
CAS: 65-31-6
MW: 498.44

Melting Point	85°-95°C

Applications: (-)-Nicotine Tartrate is used in biochemical research applications.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

2′-Deoxyguanosine-5′-triphosphate trisodium salt dihydrate

packaging		Mfr. No
10 mg	AmberGlass	BP419-10

$C_{10}H_{13}N_5O_{13}P_3Na_3.2H_2O$
CAS: 2564-35-4
MW: 609.03
EINECS: 219-887-2

Molar Extinction Coefficient (253nm, phosphate buffer, pH 7.0)	>=13.100

Applications: The trisodium salt of dGTP is suitable for use in many molecular biology applications.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Adenosine 5′-Triphosphate Disodium Salt Trihydrate

packaging		Mfr. No
25 g	PolyBottle	BP413-25

$C_{10}H_{14}N_5Na_2O_{13}P_3.3H_2O$
CAS: 51963-61-2
MW: 605.19

Lead	<=0.002%
Solubility (5% in H_2O, 25°C)	Clear and haze-free

Applications: The disodium salt of ATP is suitable for use in many molecular biology applications.
Recommended Storage: Store below 0°C

Aphidicolin
White to Off-white Solid

packaging		Mfr. No
1 mg	PolyMicroTube	**BP615-1**

$C_{20}H_{34}O_4$
CAS: 38966-21-1
MW: 338.49

Assay	>=98%
Carbon	70.97% ±1%
Hydrogen	10.12% ±0.2%
Melting Point	226°-235°C
Solubility (10mg in 1mℓ Methanol)	To pass test

Applications: This compound is a reversible inhibitor of eukaryotic nuclear DNA replication.
Isolated from Nigrospora orycae.
Recommended Storage: 4°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Calcium Ionophore A23187
Free Acid

packaging		Mfr. No
1 mg	PolyMicroTube	**BP595-1**
5 mg	PolyMicroTube	**BP595-5**
10 mg	PolyMicroTube	**BP595-10**

$C_{29}H_{37}N_3O_6$ EINECS: 258-084-1
CAS: 52665-69-7
MW: 523.63

Assay (TLC, Ethylacetate:toluene (1:1))	>=98%
Carbon	66.52% ±1%
Hydrogen	-50.0° ±3°7.12% ±0.2%
Melting Point	186°-192°C
Nitrogen	8.02% ±0.2%
Optical Rotation α $^{25}_{D}$	-50.0° ±3°
Solubility (in DMSO, Ethylacetate, Methanol, and Chloroform)	To pass test

Applications: This widely used ionophore increases the permeability of biological membranes for bivalent cations.
Isolated from Streptomyces chartreusensis.
Recommended Storage: 4°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Citric Acid Anhydrous
Crystalline

packaging		Mfr. No
500 g	PolyBottle	**BP339-500**

$C_6H_8O_7$ H319
CAS: 77-92-9 P264, P305+P351+P338,
MW: 192.13 P337+P313, P280
EINECS: 201-069-1

Assay	>=99.5%
Chloride (Cl)	<=0.001%
Insoluble matter	<=0.005%
Iron	<=3ppm
Lead	<=2ppm
Oxalate	To pass test (about 0.05%)
Phosphate (PO_4)	<=0.001%
Residue after ignition	<=0.02%
Substances Carbonizable by H_2SO_4 (Tartrates, etc.)	To pass test
Sulfur compounds (as SO_4)	<=0.002%

Applications: Anhydrous citric acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

Coenzyme A Trilithium Salt Dihydrate
White Crystalline Powder

packaging		Mfr. No
25 mg	AmberGlass	**BP2510-25**
50 mg	AmberGlass	**BP2510-50**
100 mg	AmberGlass	**BP2510-100**
250 mg	AmberGlass	**BP2510-250**
1 g	AmberGlass	**BP2510-1**

$C_{21}H_{33}N_7O_{16}P_3SLi_3.2H_2O$
CAS: 18439-24-2
MW: 821.4

Assay	>=96%
OD250/OD260 (pH 2)	0.80-0.89

Applications: Coenzyme A is used in biochemical research applications.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Copper (II) Sulfate Pentahydrate
Crystalline (Blue)

packaging		Mfr. No
500 g	AmberGlass	**BP346-500**

$CuO_4S.5H_2O$ P273, P301+P312,
CAS: 7758-99-8 P302+P352, P280,
MW: 249.68 P305+P351+P338
H315, H410, H302, H319

Assay	98.0-102.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.001%
Insoluble matter	<=0.005%
Iron	<=0.003%
Nickel	<=0.005%
Nitrogen Compounds (as N)	<=0.002%
Potassium	<=0.01%
Sodium	<=0.02%

Applications: Copper Sulfate is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT
DOT Class 9:Miscellaneous

Cyanocobalamin
Crystalline (Dark Red)

packaging		Mfr. No
1 g	AmberGlass	**BP862-1**

$C_{63}H_{88}CoN_{14}O_{14}P$
CAS: 68-19-9
MW: 1355.38

Assay	>=98%

Applications: Cyanocobalamin is used as a supplement in cell culture and tissue culture media.
Not for human use.
Recommended Storage: -4°C

Cyclopiazonic Acid
White to Off-white Crystals

packaging		Mfr. No
5 mg	PolyMicroTube	**BP630-5**

$C_{20}H_{20}N_2O_3$ P301+P310, P302+P352,
CAS: 18172-33-3 P280, P312
MW: 336.39
H301

Assay (TLC-Methylene Chloride:Methanol (9:1))	>=98.0%
Carbon	71.41% ±1%
Hydrogen	5.99% ±0.2%
Maximum Absorbance (lambda Max.)	221 and 281nm
Nitrogen	8.33% ±0.2%
Solubility (10mg/mℓ in Methanol and Methylene Chloride)	To pass test

Applications: Inhibitor of Ca2+-ATPases.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 2811; DOT Class 6.1:Poison

D-(-)-Arabinose
White Powder

packaging		Mfr. No
25 g	AmberGlass	**BP2504-25**
100 g	AmberGlass	**BP2504-100**
1 kg	AmberGlass	**BP2504-1**

$C_5H_{10}O_5$
CAS: 28697-53-2
MW: 150.13

Assay	>=99%
FTIR	Conforms to standard
Melting Point	153°-164°C
Optical Rotation α $^{25}_{D}$	-97° to -105°

Applications: D-(-)-Arabinose is a component used for culture media.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

D-Glycogen
Beef Liver, White to Straw-yellow Crystals

packaging		Mfr. No
5 g	AmberGlass	**BP676-5**

$(C_6H_{10}O_5)n$
CAS: 9005-79-2
EINECS: 9005-79-2

Specific Rotation (c=0.25, H_2O)	+175° ±10°
TLC	Single spot

Applications: Glycogen is used as a carrier in precipitating DNA or RNA in place of sonicated DNA or tRNA.
Recommended Storage: 4°C

D-(-)-Ribose
White to Off-white Powder

packaging		Mfr. No
25 g	AmberGlass	**BP696-25**

$C_5H_{10}O_5$ EINECS: 200-059-4
CAS: 50-69-1
MW: 150.13

Assay	>=98%
Specific Rotation α $^{20}_{D}$	-20° ±1°
Melting Point	88° ±2°C
TLC	Single spot

Applications: This sugar is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

D-(+)-Maltose Monohydrate
White to Off-white Powder

packaging		Mfr. No
500 g	AmberGlass	**BP684-500**

$C_{12}H_{22}O_{11}.H_2O$
CAS: 6363-53-7
MW: 360.29

Assay	>=97%
Specific Rotation α $^{20}_{D}$	+130° ±2°
Melting Point	119°-139°C
TLC	Single spot

Applications: Maltose is suitable for use in cell culture systems requiring sugar additives.
Recommended Storage: RT

D-(+)-Trehalose, Dihydrate
White Powder

packaging		Mfr. No
10 g	PolyBottle	**BP2687-10**
25 g	PolyBag	**BP2687-25**
100 g	PolyBottle	**BP2687-100**
1 kg	PolyBottle	**BP2687-1**

$C_{12}H_{22}O_{11}.2H_2O$ H315
CAS: 6138-23-4 P302+P352
MW: 378.32

Assay	>=98%
FTIR	Conforms to standard
Loss on drying	8.5-10.5%

Applications: D-(+)-Trehalose is used in several biochemical techniques.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

D-(+)-Xylose
White to Off-white Powder

packaging		Mfr. No
250 g	AmberGlass	**BP708-250**

$C_5H_{10}O_5$
CAS: 58-86-6
MW: 150.13

Assay	>=98%
Specific Rotation α $^{20}_{D}$	+20° ±1°
TLC	Single spot

Applications: D-(+)-Xylose is often used as a cell culture additive.
Recommended Storage: RT

Dacarbazine
Pale Yellow Powder

packaging		Mfr. No
100 mg	AmberGlass	BP2513-100
250 mg	AmberGlass	BP2513-250
1 g	AmberGlass	BP2513-1
5 g	AmberGlass	BP2513-5

$C_6H_{10}N_6O$ EINECS: 224-396-1
CAS: 4342-03-4
MW: 182.19

Applications: Dacarbazine is an alkylating agent used in cancer research. Antineoplastic.
Recommended Storage: 4° C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

D-Biotin

packaging		Mfr. No
1 g	AmberGlass	BP232-1

$C_{10}H_{16}N_2O_3S$
CAS: 58-85-5
MW: 244.31

Assay	>99%
Specific Rotation α $^{20}_D$	+89° to +93°
IR	Conforms to standard

Applications: D-Biotin, which forms a stable complex with Avidin, is useful in the study of Avidin-Biotin interactions and in affinity chromatography.
Not for human use.
Recommended Storage: -20°C

Dextrose Anhydrous
Crystalline Granules — Molecular Biology

packaging		Mfr. No
500 g	AmberGlass	BP350-500
1 kg	AmberGlass	BP350-1

$C_6H_{12}O_6$ EINECS: 200-075-1
CAS: 50-99-7
MW: 180.16

Arsenic	<=0.00004%
Ash	<=0.02%
Assay	>=99.8%
Chloride (Cl)	<=0.01%
Specific Rotation α $^{20}_D$	+52.5° to +53.0°
DNase	Not detected
Heavy Metals (Pb)	<=0.0005%
Insolubles	<=0.005%
Iron	<=0.0005%
Moisture (105°C)	<=0.2%
RNase	Not detected
Sulfate and Sulfite	<=0.005%

Applications: Dextrose is often used as a cell culture additive.
Recommended Storage: RT

DL-Thioctic Acid

packaging		Mfr. No
1 g	AmberGlass	BP2682-1
5 g	AmberGlass	BP2682-5
25 g	AmberGlass	BP2682-25

$C_8H_{14}O_2S_2$ P261, P301+P312, P302+P352, P280, P305+P351+P338
CAS: 1077-28-7
MW: 206.32
EINECS: 214-071-2
H302, H335, H319, H315

Purity	98-99%

Applications: DL-Thioctic Acid is a growth factor for many bacteria and protozoa; prosthetic group, coenzyme, or substrate in plants, microorganisms, and animal tissue.
Recommended Storage: RT

D-Mannitol
White to Off-white Powder

packaging		Mfr. No
500 g	PolyBottle	BP686-500

$C_6H_{14}O_6$
CAS: 69-65-8
MW: 182.17

Assay	>=98%
Specific Rotation α $^{20}_D$ (c=8, HCl)	+24° ±1°
Melting Point	165°-168°C
TLC	Single spot

Applications: Mannitol is suitable for use in cell culture systems requiring sugar additives.
Recommended Storage: RT

D-Sucrose — Molecular Biology

packaging		Mfr. No
1 kg	PolyBottle	BP220-1
2.5 kg	PolyBottle	BP220-212
10 kg	PolyPail	BP220-10

$C_{12}H_{22}O_{11}$ EINECS: 200-334-9
CAS: 57-50-1
MW: 342.29

Assay	>=99.9%
Color of a 50% Solution (APHA)	<=10
Specific Rotation α $^{20}_D$	+66° to +67°
DNase	Not detected
Insoluble matter	<=0.005%
Invert Sugar	<=0.1%
Iron	<=5ppm
Lead	<=5ppm
Loss on Drying (at 105°C)	<=0.03%
Melting Point	160°-186°C
Protease	Not detected
Residue after ignition	<=0.01%
RNase	Not detected
Titratable Acid	<=0.0008mEq/g

Applications: D-Sucrose is suitable for the preparation of density gradients used in purification of proteins and nucleic acids by ultracentrifugation.
Recommended Storage: RT

Folic Acid
Yellow to Orange Powder

packaging		Mfr. No
5 g	AmberGlass	BP2519-5
10 g	AmberGlass	BP2519-10
25 g	AmberGlass	BP2519-25
100 g	AmberGlass	BP2519-100

$C_{19}H_{19}N_7O_6$
CAS: 59-30-3
MW: 441.4

Assay	>=95%
FTIR	Conforms to standard
Loss on drying	<=8.5%
Residue on Ignition (sulfated)	<=0.3%
UV/VIS lambda max (0.1N NaOH)	256 ± 3nm

Applications: Folic Acid is used in cell culture.
Recommended Storage: RT, protect from light

Upsilon -L-Glutamyl-p-Nitroanilide, Hydrochloride

packaging		Mfr. No
500 mg	AmberGlass	BP2656-500
1 g	AmberGlass	BP2656-1
5 g	AmberGlass	BP2656-5
10 g	AmberGlass	BP2656-10
25 g	AmberGlass	BP2656-25

$C_{11}H_{13}N_3O_5$.ClH
CAS: 67953-08-6
MW: 303.7

Lambda max (ethanol)	317nm ±5nm
Melting Point	210°-222°C
Optical Rotation α $^{25}_D$	+30° ±5°

Applications: Upsilon -L-Glutamyl-p-Nitroanilide, Hydrochloride is a water soluble form of GPNA suitable for use as substrate for Upsilon -glutamyl transpeptidase.
Recommended Storage: 0° to 5°C

Glutathione Reduced
White Crystalline Powder

packaging		Mfr. No
1 g	AmberGlass	BP2521-1
5 g	AmberGlass	BP2521-5
10 g	AmberGlass	BP2521-10
25 g	AmberGlass	BP2521-25
50 g	AmberGlass	BP2521-50
100 g	AmberGlass	BP2521-100

$C_{10}H_{17}N_3O_6S$ EINECS: 200-725-4
CAS: 70-18-8
MW: 307.32

Arsenic	<=1.0%
Assay	>=98.%
Heavy metals	<=10 ppm
Purity	>=98.0
Residue after ignition	<=0.01%
Specific Rotation (at 20°C)	-16° ±5°
Sulfate	<=0.048
Trichloroethylene	<=0.020%

Applications: Glutathione is a useful tripeptide involved in many aspects of metabolism, including transport of Upsilon -glutamyl amino acids and reductive cleavage of disulfide bonds.
Recommended Storage: 4°C

Glycyl-L-Glutamic Acid
White Fluffy Powder

packaging		Mfr. No
100 mg	AmberGlass	BP2522-100
500 mg	AmberGlass	BP2522-500
1 g	AmberGlass	BP2522-1

$C_7H_{12}N_2O_5$ EINECS: 231-019-4
CAS: 7412-78-4
MW: 204.18

Applications: Glycyl-L-Glutamic Acid is used in biochemical research applications.
Recommended Storage: 0°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Hematoxylin Trihydrate
Reddish-tan Powder

packaging		Mfr. No
5 g	AmberGlass	BP2523-5
25 g	AmberGlass	BP2523-25
100 g	AmberGlass	BP2523-100

$C_{16}H_{14}O_6$ EINECS: 208-237-3
CAS: 517-28-2
MW: 302.27

Loss on drying	Report
UV/VIS lambda max (MeOH)	290-292nm

Applications: Hematoxylin Trihydrate is used mainly as a stain in microscopy.
Recommended Storage: RT

Isopropyl-β-D-thiogalactopyranoside
Dioxane-free

packaging		Mfr. No
1 g	AmberGlass	BP1755-1
10 g	AmberGlass	BP1755-10

$C_9H_{18}O_5S$ EINECS: 206-703-0
CAS: 367-93-1
MW: 238.31

Appearance	White powder or crystals
Assay (TLC)	>99.0%
Specific Rotation α $^{20}_D$	-31.5°±3.0°
Melting Point	110° to 114°C
NMR Analysis	Dioxane-free

Applications: Because IPTG induces β-Galactosidase activity in many bacteria, it is used to maximize the expression of cloned genes under control of the lac operon.
Recommended Storage: 4°C

Isopropyl-β-D-thiogalactopyranoside
Dioxane-free

packaging		Mfr. No
100 g	AmberGlass	BP1755-100

CAS: 367-93-1
EINECS: 206-703-0

Appearance	White powder or crystals
Assay (TLC)	>99.0%
Specific Rotation α $^{20}_D$	-31.5°±3.0°
Melting Point	110° to 114°C
NMR Analysis	Dioxane-free

Applications: Because IPTG induces β-Galactosidase activity in many bacteria, it is used to maximize the expression of cloned genes under control of the lac operon.
Recommended Storage: 4°C

Isopropyl-β-D-thiogalactopyranoside
White Powder, Dioxane Crystallized

packaging		Mfr. No
1 g	AmberGlass	BP1620-1
10 g	AmberGlass	BP1620-10

$C_9H_{18}O_5S$
CAS: 367-93-1
MW: 238.3
EINECS: 206-703-0
H351, H319, H335,

EUH019, EUH066
P280, P305+P351+P338,
P302+P350, P233

Optical Absorbance of a 5% Aqueous Solution at 300nm	<=0.13
Optical Absorbance of a 5% Aqueous Solution at 400nm	<=0.06
Solubility (5% in H_2O)	To pass test
Specific rotation	-27.0° ±1.0°
TLC	Single spot

Applications: Because IPTG induces β-Galactosidase activity in many bacteria, it is used to maximize the expression of cloned genes under the control of the lac operon.
Recommended Storage: -20°C

Kinetin (6-Furfurylaminopurine)
Off-white to Tan Powder

packaging		Mfr. No
1 g	AmberGlass	BP942-1

$C_{10}H_9N_5O$
CAS: 525-79-1
MW: 215.21
EINECS: 208-382-2
H315, H302, H335, H319

P261, P301+P312,
P302+P352, P280,
P305+P351+P338

Melting Point	265° ±3°C
TLC	Single spot
UV Extinction in 0.1N NaOH (=272nm)	17.000-18.000

Applications: Kinetin is a cytokine often used in plant cell culture research.
Recommended Storage: RT

L-Alanine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP369-100

$C_3H_7NO_2$ EINECS: 200-273-8
CAS: 56-41-7
MW: 89.09

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation α $^{20}_D$	+14.3° to +15.2°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Arginine, Free Base
White Powder

packaging		Mfr. No
100 g	PolyBottle	BP2505-100
500 g	PolyBottle	BP2505-500
1 kg	PolyBottle	BP2505-1

$C_6H_{14}N_4O_2$ H319
CAS: 74-79-3 P280, P305+P351+P338
MW: 174.2
EINECS: 200-811-1

Assay	>=99%
FTIR	Conforms to standard
Moisture	<=0.3%
Optical Rotation (c=1.6, 6N HCl)	+26.3° to +27.7°

Applications: L-Arginine is an essential amino acid used in biochemical research applications.
Recommended Storage: RT

L-Arginine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP370-100

$C_6H_{14}N_4O_2$ H319
CAS: 74-79-3 P280, P305+P351+P338
MW: 174.2
EINECS: 200-811-1

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation α $^{20}_D$	+26.9° to +27.9°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.5%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Arginine Hydrochloride
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP372-100

$C_6H_{14}N_4O_2.HCl$ EINECS: 214-275-1
CAS: 1119-34-2
MW: 210.67

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101%
Chloride (Cl)	16.58-17.00%
Specific Rotation α $^{20}_D$	+22° to +23° (+26.7° to +27.7° calc. as free base)
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	<1%
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: The hydrochloride salt of L-Arginine is suitable for use in tissue culture systems requiring additives and has many of the same applications as L-Arginine.
Recommended Storage: RT

L-Ascorbic Acid
White Crystalline Powder

packaging		Mfr. No
500 g	AmberGlass	BP351-500

$C_6H_8O_6$ EINECS: 200-066-2
CAS: 50-81-7
MW: 176.13

Assay	>=99.0%
Heavy Metals (Pb)	<=0.002%
Iron	<=0.001%
Residue after ignition	<=0.1%
Specific rotation	+20.5° to +21.5°

Applications: Ascorbic Acid is suitable for use in tissue culture systems requiring additives.
Not for human use.
Recommended Storage: RT

L-Asparagine Monohydrate
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP373-100

$C_4H_8N_2O_3.H_2O$
CAS: 5794-13-8
MW: 150.14

Ammonium (NH_4)	<=0.1%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation α $^{20}_D$	+33.5° to +36.5°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 130°C)	11.5-12.5%
Other Amino Acids	<=1.0%
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Aspartic Acid
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP374-100

$C_4H_7NO_4$ EINECS: 200-291-6
CAS: 56-84-8
MW: 133.1

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-100.5%
Specific Rotation α $^{20}_D$	+24.8° to +25.8°
Heavy Metals (Pb)	<=10ppm
Loss on drying	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Cysteine Hydrochloride Monohydrate
White Crystals

packaging		Mfr. No
100 g	AmberGlass	BP376-100

$C_3H_7NO_2S.HCl.H_2O$ H315, H319, H335
CAS: 7048-04-6 P280, P305+P351+P338
MW: 175.64

Ammonium (NH_4)	<=0.02%
Arsenic (as As_2O_3)	<=1ppm
Assay	98.5-101%
Chloride (Cl)	19.89-20.29%
Specific Rotation α $^{20}_D$ (c=8, HCl)	+5.5° to +7.0° (+8.0° to +10.1° calc. as cysteine)
Heavy Metals (Pb)	<=10ppm
Loss on drying	8.5-12%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Cystine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP377-100

$C_6H_{12}N_2O_4S_2$ P261, P301+P312,
CAS: 56-89-3 P302+P352, P280,
MW: 240.3 P305+P351+P338
EINECS: 200-296-3
H315, H319, H302, H335

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation α $^{20}_D$	-215° to -225°
Heavy Metals (Pb)	<=10ppm
Loss on drying	<=0.30%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Glutamic Acid
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP378-100

$C_5H_9NO_4$ EINECS: 200-293-7
CAS: 56-86-0
MW: 147.13

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	99.0-100.5%
Specific Rotation α $^{20}_D$	+31.5° to +32.5°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.1%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Glutamine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP379-100

$C_5H_{10}N_2O_3$ EINECS: 200-292-1
CAS: 56-85-9
MW: 146.15

Ammonium (NH_4)	<=0.1%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation $\alpha\ ^{20}_D$	+6.3° to +7.3°
Heavy Metals (Pb)	<=10ppm
Loss on drying	<=0.20%
Other Amino Acids	<=1.0%
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=95.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Isoleucine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP384-100

$C_6H_{13}NO_2$
CAS: 73-32-5
MW: 131.17

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation $\alpha\ ^{20}_D$	+39.5° to +41.5°
Heavy Metals (Pb)	<=10ppm
Loss on drying	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Histidine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP382-100

$C_6H_9N_3O_2$ EINECS: 200-745-3
CAS: 71-00-1
MW: 155.16

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation $\alpha\ ^{20}_D$	+12.5° ±0.5°
Heavy Metals (Pb)	<=10ppm
Loss on drying	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Leucine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP385-100

$C_6H_{13}NO_2$
CAS: 61-90-5
MW: 131.17

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation $\alpha\ ^{20}_D$	+14.9° to +16.1°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.2%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Histidine Hydrochloride Monohydrate
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP383-100

$C_6H_9N_3O_2.HCl.H_2O$
CAS: 5934-29-2
MW: 209.64

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Chloride (Cl)	16.66-17.08%
Specific Rotation $\alpha\ ^{20}_D$	+8.9° to +9.5° (+12.0° to +12.8° calc. as free base)
Heavy Metals (Pb)	<=10ppm
Loss on drying	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: L-Histidine Hydrochloride is suitable for use in tissue culture systems or as an amino acid standard.
Recommended Storage: RT

L-Lysine Hydrochloride
White Powder

packaging		Mfr. No
100 g	AmberGlass	BP386-100

$C_6H_{14}N_2O_2.HCl$ EINECS: 211-519-9
CAS: 657-27-2
MW: 182.65

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-100.5%
Chloride (Cl)	19.12-19.51%
Specific Rotation $\alpha\ ^{20}_D$	+20.7° to +21.5° (+25.9° to 26.9° calc. as free base)
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.40%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Methionine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP388-100

$C_5H_{11}NO_2S$ EINECS: 200-562-9
CAS: 63-68-3
MW: 149.21

Ammonium (NH_4)	<=0.02%
Arsenic	<=1 ppm
Assay	98.5-100.5%
Specific Rotation $\alpha\ ^{20}_D$	+23.0° to +24.5°
Heavy Metals (Pb)	<=10 ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Proline
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP392-100

$C_5H_9NO_2$ EINECS: 205-702-2
CAS: 147-85-3
MW: 115.13

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation $\alpha\ ^{20}_D$	-84.5° to -86.0°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.30%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Ornithine Hydrochloride
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP389-100

$C_5H_{12}N_2O_2.HCl$ EINECS: 221-678-6
CAS: 3184-13-2
MW: 168.62

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation $\alpha\ ^{20}_D$	+23.0° to +25.0° (+29.3° to +31.9° calc. as free base)
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Serine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP393-100

$C_3H_7NO_3$ EINECS: 200-274-3
CAS: 56-45-1
MW: 105.09

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-101.0%
Specific Rotation $\alpha\ ^{20}_D$	+14.4° to +15.5°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Phenylalanine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP391-100

$C_9H_{11}NO_2$ EINECS: 200-568-1
CAS: 63-91-2
MW: 165.19

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-100.5%
Specific Rotation $\alpha\ ^{20}_D$	-33.5° to -35.0°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Threonine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	BP394-100

$C_4H_9NO_3$
CAS: 72-19-5
MW: 119.12

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-100.5%
Specific Rotation $\alpha\ ^{20}_D$	-27.6° to -29.0°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Tryptophan
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	**BP395-100**

$C_{11}H_{12}N_2O_2$
CAS: 73-22-3
MW: 204.23

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-100.5%
Specific Rotation α $^{20}_D$	-30° to -33°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=95.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Tyrosine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	**BP396-100**

$C_9H_{11}NO_3$
CAS: 60-18-4
MW: 181.19
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-100.5%
Specific Rotation α $^{20}_D$	-11.3° to -12.1°
Heavy Metals (Pb)	<=10ppm
Loss on drying	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=95.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

L-Valine
White Crystals or Crystalline Powder

packaging		Mfr. No
100 g	AmberGlass	**BP397-100**

$C_5H_{11}NO_2$
CAS: 72-18-4
MW: 117.15

Ammonium (NH_4)	<=0.02%
Arsenic	<=1ppm
Assay	98.5-100.5%
Specific Rotation α $^{20}_D$	+27.6° to +29.0°
Heavy Metals (Pb)	<=10ppm
Loss on Drying (at 105°C)	<=0.20%
Other Amino Acids	Chromatographically not detectable
Residue on Ignition (sulfated)	<=0.10%
State of Solution	>=98.0% transmittance

Applications: This amino acid is suitable for use in tissue culture systems requiring additives.
Recommended Storage: RT

Lymphocyte Separation Medium

packaging		Mfr. No
500 mℓ	PolyBottles	**BP2663-500**

Applications: LSM is formulated for isolation of mononuclear cells from defribinated or heparinized whole human blood.
One-step centrifugation permits separation of mononuclear lymphocytes from erythrocytes, polynuclear lymphocytes and most platelets.
LSM is a sterile-filtered solution of a sucrose polymer and diatrizoate salts at a specific gravity of 1.077-1.080 g/mℓ at 20°C.
Recommended Storage: 0° to 5°C

Methotrexate
Yellow Powder

packaging		Mfr. No
10 mg	AmberGlass	**BP2665-10**
100 mg	AmberGlass	**BP2665-100**

$C_{20}H_{22}N_8O_5.2H_2O$
CAS: 59-05-2
MW: 490.47
H340, H301, H360FD,
H315, H319, H335
P281, P305+P351+P338, P308+P313

Chromatographic Purity	Pass test
Moisture	<12%
Organic Volatile Impurities	Pass test
Purity	>98%
Residue after ignition	<0.1%
Specific rotation	+19° to +24°

Applications: Methotrexate is a folic acid antagonist.
Recommended Storage: 0°C
UN 2811; DOT Class 6.1:Poison

Methyl α-D-Mannopyranoside
White Crystalline Powder

packaging		Mfr. No
10 g	AmberGlass	**BP2530-10**
25 g	AmberGlass	**BP2530-25**
100 g	AmberGlass	**BP2530-100**
500 g	AmberGlass	**BP2530-500**

$C_7H_{14}O_6$
CAS: 617-04-9
MW: 194.18

Assay	>=99%
FTIR	Conforms to standard
Loss on drying	<0.5%
Melting Point	187-197°C
Optical Rotation α $^{25}_D$	+76° to +85°

Applications: Methyl α-D-Mannopyranoside is used in biochemical research applications.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Nitro Blue Tetrazolium

packaging		Mfr. No
1 g	AmberGlass	**BP108-1**

$C_{40}H_{30}Cl_2N_{10}O_6$
CAS: 298-83-9
MW: 817.65
EINECS: 206-067-4
H319, H335, H315, H302
P312, P270, P264, P261, P280, P305+P351+P338

$E^{1\%}_{1cm}$	>=650 g-1cm-1 min
Lambda Max.	260nm±2nm
Solubility	To pass test

Applications: Used in conjunction with BCIP as a substrate for acid and alkaline phosphatases.
Recommended storage: 4 C

Nitrilotriacetic Acid
White Powder
Certified ACS

packaging		Mfr. No
100 g	PolyBottle	**BP2670-100**
500 g	PolyBottle	**BP2670-500**
1 kg	PolyBottle	**BP2670-1**

$C_6H_9NO_6$
CAS: 139-13-9
MW: 191.14
EINECS: 205-355-7
H319, H302, H315, H351
P281, P301+P312, P302+P352, P280, P305+P351+P338

Purity	>=98%

Applications: Nitrilotriacetic Acid is a chelating and sequestering agent. A builder in synthetic detergents.
Recommended Storage: RT

o-Phenylenediamine
Tan to Brown Solid

packaging		Mfr. No
50 g	AmberGlass	**BP2537-50**
250 g	AmberGlass	**BP2537-250**
1 kg	AmberGlass	**BP2537-1**

$C_6H_8N_2$
CAS: 95-54-5
MW: 108.14
EINECS: 202-430-6

FTIR	Conforms to standard
Melting Point	Report

Recommended Storage: RT
UN 1673; DOT Class 6.1:Poison
Free Base

Phosphate Buffered Saline
10X Solution

packaging		Mfr. No
500 mℓ	PolyBottle	**BP399-500**
1 ℓ	PolyBottle	**BP399-1**
4 ℓ	PolyPac*	**BP399-4**
20 ℓ	PolyPac*	**BP399-20**

Chloride Concentration of a 1X Solution	0.140 ±0.004 moles/ℓ
Conductivity of a 1X Solution	14.000 to 17.800µmhos
DNase	Not detected
pH of 10X solution (at 25°C)	6.7-6.9
pH of 1X solution (at 25°C)	7.3-7.5
Protease	Not detected
RNase	Not detected

Applications: A concentrated, standard phosphate buffer solution.
Components: 1.37M Sodium Chloride, 0.027M Potassium Chloride, and 0.119M Phosphate Buffer [7647-14-5 (Sodium Chloride)] ; [7447-40-7 (Potassium Chloride)] ; [7558-79-4 (Sodium Phosphate Dibasic)] ; [7778-77-0 (Potassium Phosphate Monobasic)]
Recommended Storage: RT

Phosphate Buffered Saline
1X Solution

packaging		Mfr. No
4 ℓ	PolyPac*	**BP2438-4**
20 ℓ	PolyPac*	**BP2438-20**

Chloride Concentration of a 1X Solution	0.140 ±0.004 moles/ℓ
Conductivity of a 1X Solution	14.000 to 17.800µmhos/cm
DNase	Not detected
pH of 1X solution (at 25°C)	7.3-7.5
Protease	Not detected
RNase	Not detected

Applications: A standard phosphate buffer used in many biomolecular procedures.
Components:0.137M Sodium Chloride, 0.0027M Potassium Chloride, and 0.0119M Phosphates.
[7647-14-5 (Sodium Chloride)] ; [7447-40-7 (Potassium Chloride)] ; [7558-79-4 (Sodium Phosphate Dibasic)] ; [7778-77-0 (Potassium Phosphate Monobasic)]
Recommended Storage: RT
Filtered through a 0.2-micron filter.

Phorbol 12-Myristate 13-Acetate
Clear or Whitish Film

packaging		Mfr. No
1 mg	GlassAmpule	**BP685-1**
5 mg	GlassAmpule	**BP685-5**
10 mg	GlassAmpule	**BP685-10**

$C_{36}H_{56}O_8$
CAS: 16561-29-8
MW: 616.84
H315, H312
P302+P352, P280

Assay (HPLC)	>=99.0%
NMR	Identical to standard reference
Solubility (in DMSO, Methanol, Ethanol, Acetone, Ether, and DMF)	To pass test

Applications: PMA is an activator of Protein Kinase C; it is a skin irritant and mouse skin tumor promoter.
Film adheres to inside of vial.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Pleiotrophin
Human, Recombinant

packaging		Mfr. No
50 µg	PolyMicroTube	BP2536-50

Assay ..... >=97%
description ..... White Lyophilized Powder

Applications: Pleiotrophin is a biochemical that enhances neurite outgrowth of cerebral cortical neurons.
Sf 21 Expressed.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Polyethylene Glycol 8000

packaging		Mfr. No
100 g	AmberGlass	BP233-100
1 kg	PolyBottle	BP233-1

$H(OCH_2CH_2)nOH$
CAS: 25322-68-3
MW: 7000-8000

description ..... White powder
Identification ..... Pass test

Applications: PEG 8000 is suitable as a medium for the fusion of mammalian cells. It is also used to precipitate bacteriophage from lysed cell supernatants.
Recommended Storage: RT

Pyridoxine Hydrochloride
White Powder

packaging		Mfr. No
10 g	AmberGlass	BP2677-10
50 g	AmberGlass	BP2677-50
100 g	AmberGlass	BP2677-100

$C_8H_{11}NO_3.HCl$
CAS: 58-56-0
MW: 205.64
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Chloride Content ..... 16.9-17.6 on dried basis
FTIR ..... Conforms to standard
Heavy Metals (Pb) ..... <=0.003%
Loss on drying ..... <=0.5%
Melting Point ..... 202°-214°C
pH (10% aqueous) 2.0-4.0
Purity ..... >=98%
Residue on Ignition (sulfated) ..... <=0.1%

Applications: Pyridoxine HCl is used as a vitamin (enzyme cofactor).
Recommended Storage: RT, protect from light.

Riboflavin — Electrophoresis
Fine, Orange-yellow Crystals

packaging		Mfr. No
50 g	AmberGlass	BP167-50

$C_{17}H_{20}N_4O_6$
CAS: 83-88-5
MW: 376.36
EINECS: 201-507-1

Assay (by UV-VIS) ..... >=95%
Electrophoresis ..... To pass test

Applications: Riboflavin is a photoinitiator of acrylamide/bis-acrylamide polymerization.
Not for human use.
Recommended Storage: RT

Sodium Oxalate
White Crystals or Powder

packaging		Mfr. No
500 g	PolyBottle	BP353-500

$C_2Na_2O_4$
CAS: 62-76-0
MW: 134

Ammonium (NH_4) ..... <=0.002%
Assay ..... >=99.0%
Chloride (Cl) ..... <=0.002%
Heavy Metals (Pb) ..... <=0.002%
Insoluble matter ..... <=0.005%
Iron ..... <=0.001%
Loss on Drying (at 105°C) ..... <=0.05%
Neutrality ..... To pass test
Potassium ..... <=0.005%
Substances Darkened by Hot H_2SO_4 ..... To pass test
Sulfate (SO_4) ..... <=0.002%

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT
UN 2811; DOT Class 6.1:Poison

Sodium Pyruvate
White Powder

packaging		Mfr. No
100 g	AmberGlass	BP356-100

$C_3H_3NaO_3$
CAS: 113-24-6
MW: 110.04
EINECS: 204-024-4
H319, H315
P302+P352, P280, P305+P351+P338

Assay (by titration) ..... >=99%
Free Acid (as Pyruvic Acid) ..... <=1.0%
Solubility (6g/100mℓ H_2O) ..... Clear, haze-free

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Sodium Sulfate Anhydrous
White Granules

packaging		Mfr. No
500 g	AmberGlass	BP354-500

Na_2O_4S
CAS: 7757-82-6
MW: 142.04

Assay ..... >=99.0%
Calcium (Ca) ..... <=0.01%
Chloride (Cl) ..... <=0.001%
Heavy Metals (Pb) ..... <=5ppm
Insoluble matter ..... <=0.01%
Iron ..... <=0.001%
Loss on ignition ..... <=0.5%
Magnesium (Mg) ..... <=0.005%
Nitrogen Compounds (as N) ..... <=5ppm
pH of 5% Solution (at 25°C) 5.2-9.2
Phosphate (PO_4) ..... <=0.001%
Potassium ..... <=0.01%

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Sodium Sulfite Anhydrous
White Crystals or Crystalline Powder

packaging		Mfr. No
500 g	AmberGlass	BP355-500

Na_2O_3S
CAS: 7757-83-7
MW: 126.04

Assay ..... >=98.0%
Chloride (Cl) ..... <=0.02%
Free Acid ..... To pass test
Heavy Metals (Pb) ..... <=0.001%
Insoluble matter ..... <=0.005%
Iron ..... <=0.001%
Phosphate (PO_4) ..... <=5ppm
Titratable Free Base ..... <=0.03mEq/g

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Sodium Tartrate Dihydrate
Colorless Crystals

packaging		Mfr. No
500 g	AmberGlass	BP352-500

$C_4H_4Na_2O_6.2H_2O$
CAS: 6106-24-7
MW: 230.08

Ammonium (NH_4) ..... <=0.003%
Assay 99.0-101.0%
Calcium (Ca) ..... <=0.01%
Chloride (Cl) ..... <=0.005%
Heavy Metals (Pb) ..... <=0.001%
Insoluble matter ..... <=0.005%
Iron ..... <=0.001%
Loss on Drying (at 150°C) 15.61-15.71%
pH of 5% Solution (at 25°C) ..... 7.0 to 9.0
Phosphate (PO_4) ..... <=5ppm
Sulfate (SO_4) ..... <=0.005%

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Succinic Acid
White Crystals

packaging		Mfr. No
500 g	AmberGlass	BP336-500

$C_4H_6O_4$
CAS: 110-15-6
MW: 118.09
EINECS: 203-740-4
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Arsenic ..... <=0.0003%
Ash ..... <=0.025%
Assay ..... >=99.5%
Heavy Metals (Pb) ..... <=0.001%
Melting Range ..... 185°-190°C

Applications: Succinic Acid is used in the preparation of cell culture and tissue culture media.
Recommended Storage: RT

Thiamine Hydrochloride
White Powder

packaging		Mfr. No
100 g	AmberGlass	BP892-100

$C_{12}H_{17}ClN_4OS.HCl$
CAS: 67-03-8
MW: 337.26
EINECS: 200-641-8
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Assay ..... >=98%
Nitrate ..... None detected
Residue after evaporation ..... <=0.2%
Water ..... <=6.0%

Applications: This vitamin is suitable for use in systems requiring additives.
Not for human use.
Recommended Storage: RT

Thimerosal
White Powder

packaging		Mfr. No
10 g	AmberGlass	BP2542-10
25 g	AmberGlass	BP2542-25
100 g	AmberGlass	BP2542-100
500 g	AmberGlass	BP2542-500

$C_9H_9HgNaO_2S$
CAS: 54-64-8
MW: 404.8
EINECS: 200-210-4
H310, H330, H373, H410, H300
P260, P280, P301+P310, P302+P350, P304+P340, P273

Assay (anhydrous) ..... >=97%
Loss on drying ..... <=0.5%
Melting Point ..... 225°-236°C
pH of 1% Aqueous Solution 6.0-7.4

Recommended Storage: RT, protect from light, desiccate.

Transferrin From Guinea Pig
Golden-Tan Frozen Liquid

packaging		Mfr. No
1 mg	AmberGlass	BP2544-1
5 mg	AmberGlass	BP2544-5
10 mg	AmberGlass	BP2544-10

Assay ..... >=98%
Sterility ..... To pass test

Applications: Transferrin is an iron binding protein that displays bacteriostatic and fungistatic characteristics.
Purified by affinity chromatography; sterile filtered; concentrated.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Vimentin
From Bovine Lens

packaging		Mfr. No
100 µg	PolyMicroTube	BP2545-100
250 µg	PolyMicroTube	BP2545-250

CAS: 156289-80-4
MW: 57

Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

5-Bromo-4-chloro-3-indolyl- β-D-galactopyranoside

packaging		Mfr. No
100 mg	AmberGlass	BP1615-100
1 g	AmberGlass	BP1615-1

$C_{14}H_{15}BrClNO_6$
CAS: 7240-90-6
MW: 408.63

IR	Conforms to standard
Molar Extinction (292±2nm)	>=4000ℓ g-1cm-1
Solubility (5% in DMF)	Clear and colorless
Specific Rotation (c=0.1, 50% DMF)	-60° ±4°
TLC	Single spot

Applications: X-Gal is a chromogenic substrate for the enzyme β-Galactosidase used in the detection of recombinant bacteriophage. It is also used for immunoblotting and immunocytochemical assays.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Toluidine Blue O

packaging		Mfr. No
10 g	AmberGlass	BP107-10

$C_{15}H_{16}ClN_3S$ H302
CAS: 92-31-9 P301+P312
MW: 305.82

$E^{1\%}_{1cm}$	>=700ℓ g-1cm-1
Lambda Absorption Max.	620-638nm
Loss on Drying (at 105°C)	<=10%
Solubility	To pass test

Applications: Nuclear stain that may be used as an alternative to Methylene Blue
Recommended storage: RT
C.I. 52040

Ethylene Glycol

packaging		Mfr. No
1 ℓ	AmberGlass,EcoSafPak*	BP230-1
4 ℓ	AmberGlass,EcoSafPak*	BP230-4

$C_2H_6O_2$ H302
CAS: 107-21-1 P280, P301+P310
MW: 62.06
EINECS: 203-473-3

Assay	>=99%
Boiling Range	196°-199°C
Color (APHA)	<=10
Iron	<=5ppm
Titratable Acid	0.002mEq/g
Water	<=0.5%

Applications: Due to its property as an antifreeze, Ethylene Glycol may be used for the storage of enzymes at low temperatures.
Recommended Storage: RT
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Acridine Orange Hemizinc Salt

packaging		Mfr. No
10 g	AmberGlass	BP116-10

$C_{17}H_{19}N_3.HCl.0.5ZnCl_2$ H341, H302, H312, H332
CAS: 10127-02-3 P280
MW: 369.94
EINECS: 233-353-6

$E^{1\%}_{1cm}$	>=1100ℓ g-1cm-1
Lambda Max.	490nm ±2nm
Loss on Drying (at 105°C)	<=5%
Solubility	To pass test

Recommended storage: RT
C.I. 46005

Eosin Y
Disodium Salt

packaging		Mfr. No
25 g	AmberGlass	BP2419-25
100 g	AmberGlass	BP2419-100

$C_{20}H_6Br_4Na_2O_5$ H319
CAS: 17372-87-1 P280, P305+P351+P338
MW: 691.85
EINECS: 241-409-6

Assay	>=88%
Certification as Biological Stain	To pass test

Applications: Eosin Y is used in microbiological differential media or as a biological stain.
Recommended Storage: RT
C.I. 45380

Fast Green FCF

packaging		Mfr. No
10 g	AmberGlass	BP123-10

$C_{37}H_{34}N_2Na_2O_{10}S_3$ H341
CAS: 2353-45-9 P201, P202, P281,
MW: 808.84 P308+P313
EINECS: 219-091-5

Assay	>=90.0%
Lambda Max.	622nm ±2nm

Recommended storage: RT
C.I. 42053

Giemsa Stain
Crystalline

packaging		Mfr. No
5 g	AmberGlass	BP2422-5
10 g	AmberGlass	BP2422-10

$C_{14}H_{14}ClN_3S$ EINECS: 257-438-2
CAS: 51811-82-6
MW: 291.80

Certification as Biological Stain	To pass test

Applications: Giemsa is a biological stain used for thin blood films to differentiate leukocytes, for staining malarial parasites in thin and thick blood films, and for staining bone marrow to show cell morphology.
Recommended Storage: RT

Glutaraldehyde Solution
25%

packaging		Mfr. No
1 ℓ	AmberGlass,EcoSafPak*	BP2548-1
4 ℓ	AmberGlass,EcoSafPak*	BP2548-4

$C_5H_8O_2$ H334, H400
CAS: 111-30-8 P301+P330+P331,
MW: 100.12 P305+P351+P338, P310,
EINECS: 203-856-5 P280, P260,
H302, H331, H317, H314, P273

Assay	24.0-26.5%
Color (APHA)	<=20

Recommended Storage: RT
UN 2810; DOT Class 6.1:Poison
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Glutaraldehyde Solution
50%

packaging		Mfr. No
1 ℓ	AmberGlass,EcoSafPak*	BP2547-1

$C_5H_8O_2$ H301, H331, H400
CAS: 111-30-8 P280, P305+P351+P338,
MW: 100.12 P270, P260, P273,
EINECS: 203-856-5 P308+P313
H317, H335, H314, H334,

Assay	49.0-52.0%
Clarity of Solution	To pass test
Color (APHA)	<=125
pH (at 25°C)	3.7-4.5
Specific Gravity (at 20°C)	1.125-1.135

Recommended Storage: 4°C
UN 2927; DOT Class 6.1:Poison
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Hematoxylin
Crystalline

packaging		Mfr. No
25 g	AmberGlass	BP2424-25
100 g	AmberGlass	BP2424-100

$C_{16}H_{14}O_6$ EINECS: 208-237-3
CAS: 517-28-2
MW: 302.27

Certification as Biological Stain	To pass test

Applications: Hematoxylin is used as a stain in microscopy.
Recommended Storage: RT
C.I. 75290

Methylene Blue

packaging		Mfr. No
100 g	AmberGlass	BP117-100

$C_{16}H_{18}ClN_3S$ H302
CAS: 61-73-4 P301+P312
MW: 319.85

$E^{1\%}_{1cm}$	>=2000g-1cm-1
Lambda Max.	662nm±2nm
Loss on Drying (at 105°C)	8-18%
Solubility	To pass test

Recommended storage: RT
C.I. 52015

2M Calcium Chloride Solution
Microbial Cell Culture

packaging		Mfr. No
5x10mℓ	Poly Bottle	BP9742-10X5

$CaCl_2$ MW: 110.99
CAS: 10035-04-08 (Calcium H319
Chloride Dihydrate), P280+P305+P351+P338
7732-18-5 (Water)

Appearance	Clear solution
Cell culture tested-MTT	To pass test
Sterility	To pass test

Applications: Preparation of competent E. coli strains
Components: Calcium Chloride: 294g/ℓ
Recommended storage: RT

2M Magnesium Chloride Solution
Microbial Cell Culture

packaging		Mfr. No
5x10mℓ	Poly Bottle	BP9741-10X5

$MgCL_2$ MW: 95.21
CAS: 7791-18-6 H319
(Magnesium Chloride P280+P305+P351+P338
Hexahydrate), 7732-18-5 (Water)

Appearance	Clear solution
Cell culture tested-MTT	To pass test
Sterility	To pass test

Applications: Preparation of competent E. coli strains
Components: Magnesium Chloride: 406.6g/ℓ
Recommended storage: RT

2xYT Agar Molecular Genetics
Powder

packaging		Mfr. No
100 g	PolyBottle	BP2466-100
500 g	PolyBottle	BP2466-500
2 kg	PolyBottle	BP2466-2

CAS: 9002-18-0

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: 2xYT Agar is used for growth of hosts for replication of M13 vectors and plating.
Components in g/ℓ:Tryptone: 16g; Yeast Extract: 10g; NaCl: 5g; Agar:15g
Recommended Storage: RT

2X YT Broth Molecular Genetics
Powder

packaging		Mfr. No
100 g	PolyBottle	**BP2467-100**
500 g	PolyBottle	**BP2467-500**
2 kg	PolyBottle	**BP2467-2**
10 kg	PolyPail	**BP2467-10**

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: 2X YT Broth is used for growth of hosts for replication of M13 vectors.
Components in g/ℓ:Tryptone: 16g; Yeast Extract: 10g; NaCl: 5g
Recommended Storage: RT

2 XYT Broth
Capsules

packaging	Mfr. No
32x15.5 g Poly Bottle	**BP9736-500**

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2]

Appearance	Capsules
Color (prepared media)	Light to medium amber
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures; dust-free granules allow for easy weighing.
Description: Contains 32 x 15.5g capsules; Use two capsules to make 1ℓ broth
Components: (per liter) Peptone: 16g; Yeast Extract: 10g; Sodium Chloride: 5g
Recommended storage: RT

Agar
(80-100 Mesh)

packaging		Mfr. No
100 g	PolyBottle	**BP2641-100**
500 g	PolyBottle	**BP2641-500**
1 kg	PolyBottle	**BP2641-1**

CAS: 9002-18-0

Acid Insoluble Ash	<=0.5%
Arsenic	<=3ppm
Foreign Insoluble Matter	<=1.0%
Foreign Organic Matter	<=1.0%
Foreign Starch	To pass test
Gelatin	To pass test
Heavy Metals (Pb)	<=40ppm
Identity Test A	To pass test
Identity Test B	To pass test
Lead	<=10ppm
Microbial Limits (Salmonella)	Negative
Organic Volatile Impurities	To pass test
Total Ash (Dry Weight Basis)	<=6.5%
Water	<=20%
Water Absorption	To pass test

Agar Molecular Genetics
Granulated

packaging		Mfr. No
500 g	PolyBottle	**BP1423-500**
2 kg	PolyPail	**BP1423-2**

CAS: 9002-18-0

Gelling Point	32°-39°C
Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found
Melting Point	83°-89°C

Applications: Agar, Granulated, is used as a solidifying agent in preparing microbiological culture media.
Recommended Storage: RT

LB Broth, Lennox
Large Granules

packaging		Mfr. No
2 kg	Poly Pail	**BP9722-2**
500 g	Poly Bottle	**BP9722-500**

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2]

Color (APHA)	Light beige
E.coli test	To pass test
particle size	1 to 2 mm

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures; dust-free granules allow for easy weighing.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 5g
Recommended storage: RT

LB Broth, Lennox
Pre-Buffered Capsules

packaging	Mfr. No
500 x 1 g Capsules	**BP9733-500**

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Tris/Tris HCl: 77-86-1; 1185-53-1]
H315, H319
P280+P302+P352, P305+P351+P338

Appearance	Capsules
Color (prepared media)	Yellow to gold
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 5g; Tris/Tris-HCl: 1.5g
Recommended storage: RT

LB Broth, Lennox
Capsules

packaging	Mfr. No
25x20 g Capsules	**BP9730-500**

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Tris/Tris HCl: 77-86-1; 1185-53-1]
H315, H319
P280+P302+P352, P305+P351+P338

Appearance	Capsules
Color (prepared media)	Yellow to gold
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 5g; Tris/Tris-HCl: 1.5g
Recommended storage: RT

LB Broth, Lennox Molecular Genetics
Powder

packaging		Mfr. No
500 g	PolyBottle	**BP1427-500**
2 kg	PolyPail	**BP1427-2**

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: LB (Luria-Bertani) Broth, Lennox, is used for the culturing of E. coli in molecular biology procedures.
Components: (per liter) Tryptone 10g; Yeast Extract 5g; Sodium Chloride 5g pH:7.0±0.2 at 25°C
Recommended Storage: RT

LB Broth, Miller Molecular Genetics
Granular

packaging		Mfr. No
500 g	PolyBottle	**BP1426-500**
2 kg	PolyPail	**BP1426-2**

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: LB (Luria-Bertani) Broth, Miller, is used for the culturing of E. coli in molecular biology procedures.
Components: (per liter) Tryptone 10g; Yeast Extract 5g; Sodium Chloride 10g pH:7.0±0.2 at 25°C
Recommended Storage: RT

LB Agar, Miller
Large Granules

packaging		Mfr. No
2 kg	Poly Pail	**BP9724-2**
500 g	Poly Bottle	**BP9724-500**

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Agar: 9002-18-0]

Color (APHA)	Light beige
E.coli test	To pass test
particle size	1 to 2 mm

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures; dust-free granules allow for easy weighing.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 10g; Agar: 12g
Recommended storage: RT

LB Agar, Miller
Pre-Buffered Capsules

packaging	Mfr. No
500x1 g Capsules	**BP9735-500**

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Agar: 9002-18-0; Tris/Tris HCl: 77-86-1; 1185-53-1]

Appearance	Capsules
Color (prepared media)	Yellow to gold
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 10g; Agar: 15g; Tris/Tris-HCl: 1.5g
Recommended storage: RT

LB Agar, Miller
Pre-Buffered Capsules

packaging	Mfr. No
25x20 g Capsules	**BP9734-500**

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Agar: 9002-18-0; Tris/Tris HCl: 77-86-1; 1185-53-1]

Appearance	Capsules
Color (prepared media)	Yellow to gold
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 10g; Agar: 15g; Tris/Tris-HCl: 1.5g
Recommended storage: RT

LB Broth, Miller
Large Granules

packaging		Mfr. No
2 kg	Poly Pail	**BP9723-2**
500 g	Poly Bottle	**BP9723-500**

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2]

Color (APHA)	Light beige
E.coli test	To pass test
particle size	1 to 2 mm

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures; dust-free granules allow for easy weighing.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 10g
Recommended storage: RT

LB Broth, Miller — Pre-Buffered Capsules

packaging	Mfr. No
500x1 g Capsules	BP9732-500

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Tris/Tris HCl: 77-86-1; 1185-53-1]
H315, H319
P280+P302+P352, P305+P351+P338

Appearance	Capsules
Color (prepared media)	Yellow to gold
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 10g; Tris/Tris-HCl: 1.5g
Recommended storage: RT

LB Broth, Miller — Pre-Buffered Capsules

packaging	Mfr. No
25x20 g Capsules	BP9731-500

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Tris/Tris HCl: 77-86-1; 1185-53-1]
H315, H319
P280+P302+P352, P305+P351+P338

Appearance	Capsules
Color (prepared media)	Yellow to gold
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: (per liter) Peptone: 10g; Yeast Extract: 5g; Sodium Chloride: 10g; Tris/Tris-HCl: 1.5g
Recommended storage: RT

NZCYM Broth Molecular Genetics
Powder

packaging		Mfr. No
100 g	PolyBottle	BP2464-100
500 g	PolyBottle	BP2464-500
2 kg	PolyBottle	BP2464-2
10 kg	PolyPail	BP2464-10

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: NZCYM Broth is used for the maintenance and propagation of bacteriophage lambda.
Components: (per liter) Tryptone 10g; Yeast Extract 5g; Casamino Acids 1g; NaCl 5g; $MgSO_4$ 1g
Recommended Storage: RT

NZY Broth Molecular Genetics
Powder

packaging		Mfr. No
100 g	PolyBottle	BP2465-100
500 g	PolyBottle	BP2465-500
2 kg	PolyBottle	BP2465-2
10 kg	PolyPail	BP2465-10

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: NZY Broth is used for the maintenance and propagation of bacteriophage lambda.
Components: (per liter) Tryptone 10g; Yeast Extract 5g; NaCl 5g; $MgSO_4$ 2g
Recommended Storage: RT

Peptone Molecular Genetics
Powder

packaging		Mfr. No
100 g	PolyBottle	BP1420-100
500 g	PolyBottle	BP1420-500
2 kg	PolyBottle	BP1420-2

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: Peptone contains nitrogen in a form readily available to bacteria.
Recommended Storage: RT

Peptone — Large Granules

packaging		Mfr. No
500 g	Poly Bottle	BP9725-500
2 kg	Poly Pail	BP9725-2

CAS: 73049-73-7

Ash	<=15%
Color (APHA)	Light beige
Moisture	<=5%
particle size	1 to 2 mm
pH of a 2% solution	Inclusive between 6.5-7.5
Total nitrogen content	>=10%

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures; dust-free granules allow for easy weighing.
Description: Mixture of peptides and free amino acids from pancreatic hydrolysis of animal tissue; pH (at 25°C, 2% Solution): 6.5 to 7.5
Recommended storage: RT

SOB Broth — Capsules

packaging	Mfr. No
36x14 g Capsules	BP9737-500

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Magnesium Sulfate: 7487-88-9; Potassium Chloride: 7447-40-7]

Appearance	Capsules
Color (prepared media)	Light to medium amber
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: (per liter) Peptone: 20g; Yeast Extract: 5g; Sodium Chloride: 0.5g; Magnesium Sulfate: 2.4g; Potassium Chloride: 0.186g
Recommended storage: RT

SOC Medium

packaging	Mfr. No
5x10mℓ Poly Bottle	BP9740-10X5

CAS: [Peptone: 91079-40-2; Sodium Chloride: 7647-14-5; Yeast Extract: 8013-01-2; Magnesium Sulfate: 7487-88-9; Potassium Chloride: 7447-40-7; Magnesium Chloride: 7786-30-3; Glucose: 50-99-7]

Color (APHA)	Yellow to light brown
pH test	To pass test
Sterility	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: Peptone: 20g/ℓ, Yeast Extract: 5g/ℓ, Sodium Chloride: 0.58g/ℓ, Potassium Chloride: 0.19g/ℓ, Magnesium Chloride: 0.95g/ℓ, Magnesium Sulfate: 1.2g/ℓ, Glucose: 3.6g/ℓ
Recommended storage: 4°C

Terrific Broth Molecular Genetics
Powder

packaging		Mfr. No
100 g	PolyBottle	BP2468-100
500 g	PolyBottle	BP2468-500
2 kg	PolyBottle	BP2468-2
10 kg	PolyPail	BP2468-10

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: Terrific broth is a buffered enriched medium used to obtain high yields of plasmid DNA from transformed E. coli.
Components: (per liter) Tryptone 12g; Yeast Extract 24g; K2HPO4 12.5g; KH2PO4 2.3g
Recommended Storage: RT

Terrific Broth, Modified — Capsules

packaging	Mfr. No
25x24 g Poly Bottle	BP9729-600

CAS: [Peptone: 91079-40-2; Yeast Extract: 8013-01-2; Potassium Phosphate, Monobasic: 7778-77-0; Potassium Phosphate, Dibasic: 7758-11-4]

Appearance	Capsules
Color (prepared media)	Light to medium amber
E.coli test	To pass test

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Description: Contains 25 x 24g capsules; Use 2 capsules to make 1ℓ broth
Components: (per liter) Peptone: 12g; Yeast Extract: 24g; Potassium Phosphate, Monobasic: 2.2g; Potassium Phosphate, Dibasic: 9.4g.
Recommended storage: RT

Terrific Broth, Modified — Large Granules

packaging		Mfr. No
2 kg	Poly Pail	BP9728-2
500 g	Poly Bottle	BP9728-500

CAS: [Peptone: 91079-40-2; Yeast Extract: 8013-01-2; Potassium Phosphate, Monobasic: 7778-77-0; Potassium Phosphate, Dibasic: 7758-11-4]

Color (APHA)	Beige to yellow
E.coli test	To pass test
particle size	1 to 2 mm

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures.
Components: (per liter) Peptone: 12g; Yeast Extract: 24g; Potassium Phosphate, Monobasic: 2.2g; Potassium Phosphate, Dibasic: 9.4g.
Recommended storage: RT

Tryptone — Large Granules

packaging		Mfr. No
2 kg	Poly Pail	BP9726-2
500 g	Poly Bottle	BP9726-500

CAS: 91079-40-2

Ash	<=15%
Color (APHA)	Light beige
Moisture	<=5%
particle size	1 to 2 mm
pH of a 2% solution	Inclusive between 6.5-7.5
Total nitrogen content	>=10%

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures; dust-free granules allow for easy weighing.
Description: An enzymatic digest of casein, a milk protein; pH (at 25°C, 2% Solution): 6.5 to 7.3
Recommended storage: RT

Yeast Extract Molecular Genetics
Powder

packaging		Mfr. No
100 g	PolyBottle	**BP1422-100**
500 g	PolyBottle	**BP1422-500**
2 kg	PolyBottle	**BP1422-2**

CAS: 8013-01-2
EINECS: 232-387-9

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: Yeast Extract is the water-soluble portion of autolyzed yeast used in bacteriological culture media.
Recommended Storage: RT

Yeast Extract
Large Granules

packaging		Mfr. No
2 kg	Poly Pail	**BP9727-2**
500 g	Poly Bottle	**BP9727-500**

CAS: 8013-01-2
EINECS: 232-387-9

Color (APHA)	Light beige to brown
Moisture	<=6%
particle size	1 to 2 mm
pH of a 2% solution	Inclusive between 5.5-7.5
Total nitrogen content	>=8%

Applications: Standard bacteriological media for the propagation and maintenance of E. coli strains in molecular biology procedures; dust-free granules allow for easy weighing.
Description: Dried yeast autolysate with a high content of amino nitrogen and water soluble B complex vitamins
Recommended storage: RT

YPD Broth Molecular Genetics
Powder

packaging		Mfr. No
100 g	PolyBottle	**BP2469-100**
500 g	PolyBottle	**BP2469-500**
2 kg	PolyBottle	**BP2469-2**
10 kg	PolyPail	**BP2469-10**

Growth promotion ability E. coli	Found
Growth promotion ability S. aureus	Found

Applications: YPD Broth is used for the maintenance and propagation of yeast.
Recommended Storage: RT

n-Butanol
Clear Colorless Liquid

packaging		Mfr. No
25 mℓ	AmberGlass	**BP505-25**
500 mℓ	AmberGlass,EcoSafPak*	**BP505-500**

$C_4H_{10}O$
CAS: 71-36-3
MW: 74.12
EINECS: 200-751-6
H226, H315, H302, H336,
H318, H335
P280, P305+P351+P338, P301+P312, P304+P340, P210, P303+P361+P353

Acidity	<=0.005%
Aldehyde (HCHO)	None
Assay	>=99.8%
Chloride (Cl)	None
Color (APHA)	<=5
iso-Butanol	<=0.1%
Water	<=0.1%

Applications: n-Butanol is used as an analytical reagent and solvent.
Recommended Storage: RT
UN 1120; DOT Class 3:Flammable Liquid
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

ACES
Fine White Crystals

packaging		Mfr. No
100 g	AmberGlass	**BP303-100**

$C_4H_{10}N_2O_4S$
CAS: 7365-82-4
MW: 182.19
EINECS: 230-908-4

Assay	>=96%
IR	Conforms to standard
PKa (at 25°C)	6.78 ±0.2

Applications: ACES biological buffer has a usable pH range of 6.1 to 7.5.
Recommended Storage: RT

Amido Black 10B

packaging		Mfr. No
10 g	AmberGlass	**BP124-10**

$C_{22}H_{14}N_6Na_2O_9S_2$
CAS: 1064-48-8
MW: 616.48
EINECS: 213-903-1
H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

$E^{1\%}_{1cm}$	>=450ℓ g-1cm-1
Lambda Max.	618nm±2nm
Loss on Drying (at 105°C)	<=10%
Solubility	To pass test

Recommended storage: RT
C.I. 20470

Ammonium Bicarbonate
Fine, White Crystalline Powder

packaging		Mfr. No
500 g	PolyBottle	**BP2413-500**

CH_5NO_3
CAS: 1066-33-7
MW: 79.06
EINECS: 213-911-5
H302
P264, P270, P301+P312, P330

Assay (as NH_3)	21.30-21.73
Chloride (Cl)	<=5ppm
Heavy Metals (Pb)	<=5ppm
Iron	<=5ppm
Residue after ignition	<=0.005%
Sulfate (SO_4)	<=0.002%

Applications: Ammonium Bicarbonate is used for many biochemical applications.
Recommended Storage: RT

Ammonium Carbonate
Certified ACS
Lumps

packaging		Mfr. No
500 g	Amber Glass	**BP2414-500**

$CH_8N_2O_3$
CAS: 8000-73-5
MW: 96.09
Hartshorn salt
H302
P301+P312

Assay (as NH_3)	>=30%
Chloride (Cl)	<=5ppm
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iron (Fe)	<=3 ppm
Non-volatile matter	<=0.005%
Sulfur compounds (as SO_4)	<=0.002%

Applications: Ammonium Carbonate is used in many biochemical procedures.
Description: This product is a mixture of Ammonium bicarbonate and Ammonium carbonate.
Recommended storage: RT

Ammonium Phosphate, Monobasic
White Crystalline Powder

packaging		Mfr. No
500 g	PolyBottle	**BP2427-500**

H_6NO_4P
CAS: 7722-76-1
MW: 115.03
EINECS: 231-764-5

Assay	>=98.0%
Calcium (Ca)	<=0.001%
Chloride (Cl)	<=5ppm
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iron	<=0.001%
Magnesium (Mg)	<=0.0005%
Nitrate	<=0.001%
pH of 5% Solution (at 25°C)	3.8-4.4
Potassium	<=0.005%
Sodium	<=0.005%
Sulfate (SO_4)	<=0.01%

Applications: Ammonium Phosphate, Monobasic is used in several biochemical research applications.
Recommended Storage: RT

Ammonium Phosphate, Dibasic
Colorless Crystals

packaging		Mfr. No
500 g	PolyBottle	**BP361-500**

$H_9N_2O_4P$
CAS: 7783-28-0
MW: 132.06
H335, H315, H319
P261, P302+P352, P280, P305+P351+P338

Assay	98.0-101.0%
Calcium (Ca)	<=0.001%
Chloride (Cl)	<=5ppm
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.005%
Iron	<=0.001%
Magnesium (Mg)	<=0.0005%
Nitrate	<=0.003%
pH of 5% Solution (at 25°C)	7.7 to 8.1
Potassium	<=0.005%
Sodium	<=0.005%
Sulfate (SO_4)	<=0.01%

Applications: Ammonium Phosphate Dibasic is suitable for use in many biological applications.
Recommended Storage: RT

BES
White Crystalline Powder

packaging		Mfr. No
25 g	PolyBottle	**BP501-25**
100 g	PolyBottle	**BP501-100**
500 g	PolyBottle	**BP501-500**

$C_6H_{15}NO_5S$
CAS: 10191-18-1
MW: 213.25
EINECS: 233-465-5
H315, H319, H335
P261, P302+P352, P280, P305+P351+P338

Assay (as free acid)	>=99%
DNase	Not detected
Loss on Drying (at 105°C)	<=1%
PKa (at 25°C)	7.1 ±0.1
Protease	Not detected
RNase	Not detected

Applications: BES is a biological buffer with a usable pH range of 6.4 to 7.8.
Recommended Storage: RT

Bicine
White Powder

packaging		Mfr. No
100 g	PolyBottle	**BP2646-100**
250 g	PolyBottle	**BP2646-250**
1 kg	PolyBottle	**BP2646-1**

$C_6H_{13}NO_4$
CAS: 150-25-4
MW: 163.17
EINECS: 205-755-1

FTIR	Conforms to standard
OD260nm (10% aqueous solution)	<0.100
OD280nm (10% aqueous solution)	<0.100
pH of 1% Aqueous Solution	4.5-5.5

Applications: Bicine is one of the zwitterionic amino acids known as "Good" buffers. Used as a biological buffer and chelating agent.
Recommended Storage: RT

Bis-Tris
Fine White Crystals

packaging		Mfr. No
100 g	PolyBottle	BP301-100

$C_8H_{19}NO_5$
CAS: 6976-37-0
MW: 209.24
EINECS: 230-237-7
H290, H315, H319, H335

P234, P390, P261,
P302+P352, P280,
P305+P351+P338

Assay	>=99%
Melting Point	104°C ±2°C
PKa (at 25°C)	6.5 ±0.2

Applications: This biological buffer has a usable pH range of 5.8 to 7.2.
Recommended Storage: RT

CellPURE™ Bis-Tris Propane — Cell Culture-Tested
White crystalline powder

packaging		Mfr. No
100 g	Poly Bottle	BP2943-100

$C_{11}H_{26}N_2O_6$
CAS: 64431-96-5
MW: 282.33

Absorbance 33% w/w at 290nM	<=0.05
Cell culture test	To pass test
DNase	Not detected
Endotoxin	<=1.0 EU/mg
Heavy metals (as Pb)	<=5 ppm
Infrared scan	Conforms to ref.
Purity (by titration)	>=99.0%
Nickase	Not detected
NMR	<=0.5%
Protease	Not detected
RNase	Not detected
Solubility	Clear and colorless
Standard plate count	<=100CFU/gm
Water (Karl Fischer)	<=0.2%

Applications: Cell cultivation, isolation of cells, enzyme assays, and other biochemical applications
Description: Cell culture tested; Analyzed for the absence of nucleases and proteases; Tested for endotoxin and bioburden levels; pKa values mostly independent of temperature and concentration; High water solubility; Minimal permeability to biological membranes; Manufactured under strict quality control guidelines to ensure performance and reliability.
Recommended storage: RT

JustPURE™ BIS-TRIS Propane
Cellular and Molecular Biology - White Powder

packaging		Mfr. No
25 g	Poly Bottle	BP2929-25

$C_{11}H_{26}N_2O_6$
CAS: 64431-96-5
MW: 282.33

Aluminum (Al)	<=0.0005%
Ammonia	<=0.05%
Calcium (Ca)	<=0.0005%
Chloride	<=0.05%
Copper (Cu)	<=0.0005%
Iron (Fe)	<=0.0005%
Lead (Pb)	<=0.001%
Magnesium (Mg)	<=0.0005%
Purity (by titration)	>=99.0%
Optical Absorbance at 260nm	<=0.1
Optical Absorbance at 280nm	<=0.05
pH at 20°C	Inclusive between 10.0-12.0
Phosphorus	<=0.005%
Residue after ignition	<=0.1%
Sodium (Na)	<=0.005%
Solubility	Clear and colorless
Sulfate (SO_4)	<=0.005%

Applications: For high efficiency transfection of mammalian cells, gel electrophoresis of RNA, protein isolation applications, cell cultures and enzyme assays and bioanalytical methods, such as IEF, 2-D electrophoresis and SDS-PAGE.
Description: Ultra-pure zwitterionic buffers; Optimized for research in cellular and molecular biology; Minimal permeability to biological membranes; Low interference with biological reactions; pKa values mostly independent of temperature and concentration; High water solubility; Minimal absorption in spectral range 240 to 700nm.
Recommended storage: RT

Calcium Chloride Dihydrate
White Crystals to Powder

packaging		Mfr. No
100 g	PolyBottle	BP510-100
250 g	PolyBottle	BP510-250
500 g	PolyBottle	BP510-500

$CaCl_2.2H_2O$
CAS: 10035-04-8
MW: 147.02

H319
P280, P305+P351+P338

Assay	>=99-103.3%
DNase	Not detected
pH (5% solution in H_{20} at 25°C)	4.5-8.5
Protease	Not detected
RNase	Not detected

Applications: Calcium Chloride is suitable for use in the preparation of buffer solutions.
Recommended Storage: RT

Calcium Phosphate Dibasic Anhydrous
White Powder

packaging		Mfr. No
500 g	AmberGlass	BP441-500

$CaHO_4P$
CAS: 7757-93-9
MW: 136.06

Arsenic	<=8ppm
Assay (as Ca)	30.0-31.7%
Barium	To pass test
Chloride (Cl)	<=0.25%
Fluoride	<=0.005%
Heavy Metals (Pb)	<=0.003%
Loss on ignition	6.6-8.5%
Sulfate (SO_4)	<=0.5%

Applications: Calcium Phosphate can be used for column chromatography of proteins.
Recommended Storage: RT

CAPS
Fine White Crystals

packaging		Mfr. No
100 g	AmberGlass	BP321-100
500 g	AmberGlass	BP321-500

$C_9H_{19}NO_3S$
CAS: 1135-40-6
MW: 221.31
EINECS: 214-492-1
H335, H319, H315

P261, P301+P312,
P302+P352, P280,
P305+P351+P338

Assay	>=98%
IR	Conforms to standard
PKa (at 25°C)	10.4 ±0.2

Applications: This biological buffer has a usable pH range of 9.7 to 11.1.
Recommended Storage: RT

CHES
Fine White Crystals

packaging		Mfr. No
100 g	PolyBottle	BP318-100

$C_8H_{17}NO_3S$
CAS: 103-47-9
MW: 207.29
EINECS: 203-115-6

H335, H315, H319
P261, P302+P352, P280,
P305+P351+P338

Assay	>=98%
DNase	Not detected
PKa (at 25°C)	9.3 ±0.2
RNase	Not detected

Applications: This biological buffer has a usable pH range of 8.6 to 10.0.
Recommended Storage: RT

Cytoscint* Scintillation Cocktail — Molecular Biology

packaging		Mfr. No
4 ℓ	AmberGlass,EcoSafPak*	BP458-4

3H Background	<=50cpm
3H Efficiency	>=50%
Aqueous PBS Buffer Capacity	>=4.5%
Distilled Water Capacity	>=8.5%
GC, IR, TLC	Conforms to standard
Specific Gravity	0.88 ±0.02

Applications: Universal LSC Cocktail.
Components: 65-95% Pseudocumene, 0-35% Ethoxylated Nonylphenol, <0.1% 2.5-Diphenyloxazole, <1% 1.4-bis[2-(2-methylphenyl)ethenyl]-benzene [95-63-6 (Pseudocumene)] ; [9016-45-9 (Ethoxylated Nonylphenol)] ; [92-71-7 (2.5-Diphenyloxazole)] ; [13280-61-0 (1.4-Bis[2-(2-methylphenyl)ethenyl] -benzene)]
UN 1993; DOT Class 3:Flammable Liquid
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Deoxycholic Acid Sodium Salt

packaging		Mfr. No
100 g	PolyBottle	BP349-100

$C_{24}H_{39}NaO_4$
CAS: 302-95-4
MW: 414.58
EINECS: 206-132-7

Arsenic	<=0.001%
Assay (dry basis)	>=99%
Lead	<=0.001%
Moisture	<=5%
Sodium Choleate	<=2%

Applications: This anionic detergent is useful for solubilizing and isolating membrane-bound proteins in an active state.
Recommended Storage: RT

Dimethyl Sulfoxide

packaging		Mfr. No
100 mℓ	AmberGlass	BP231-100
1 ℓ	AmberGlass,EcoSafPak*	BP231-1
4 ℓ	AmberGlass,EcoSafPak*	BP231-4

C_2H_6OS
CAS: 67-68-5
MW: 78.13
EINECS: 200-664-3

A280nm	<=0.10
Assay	>=99.7%
Color (APHA)	<=10
Density (at 25°C)	1.095 ±0.005g/mℓ
Freezing Point	>=18.0°C
Residue after evaporation	<=0.001%
Water	<=0.2%

Applications: DMSO is a cryopreservation agent for cells, and may also be used in bacterial transformations.
Note: Sold for nonmedical use only. Not to be used or sold as a drug for humans or animals.
Recommended Storage: RT
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Electrode Storage Solution

packaging		Mfr. No
1 ℓ	PolyBottle	BP2418-1

pH (at 25°C)	3.9 ±0.1
Potassium chloride	6.2 ±0.3g/ℓ
Residue after evaporation	1.65 ±0.08%

Applications: Electrode Storage Solution is a safe and convenient method to maintain sensitivity by removing buildup from electrodes.
For use in storage of pH electrodes.
Recommended Storage: RT

JustPURE™ EPPS — Cellular and Molecular Biology
White Powder

packaging		Mfr. No
100 g	Poly Bottle	BP2933-100

$C_9H_{20}N_2O_4S$ EINECS: 240-198-8
CAS: 16052-06-5
MW: 252.33

Ammonia	<=0.1%
Bromide	<=0.1%
Calcium (Ca)	<=0.002%
Copper (Cu)	<=0.0005%
Iron (Fe)	<=0.0005%
Lead (Pb)	<=0.001%
Magnesium (Mg)	<=0.0005%
Purity (by titration)	>=99.5%
Optical Absorbance at 260nm	<=0.1
Optical Absorbance at 280nm	<=0.1
pH at 20°C	Inclusive between 5.0-7.0
Phosphorus	<=0.005%
Residue after ignition	<=0.1%
Sodium (Na)	<=0.005%
Solubility	Clear and colorless

Applications: For high efficiency transfection of mammalian cells, gel electrophoresis of RNA, protein isolation applications, cell cultures and enzyme assays and bioanalytical methods, such as IEF, 2-D electrophoresis and SDS-PAGE.
Description: Ultra-pure zwitterionic buffers; Optimized for research in cellular and molecular biology; Minimal permeability to biological membranes; Low interference with biological reactions; pKa values mostly independent of temperature and concentration; High water solubility; Minimal absorption in spectral range 240 to 700nm.
Recommended storage: RT

Ethylenediamine Tetraacetate, DEPC-Treated Solution
0.5M, pH 8.0

packaging		Mfr. No
100 mℓ	PolyBottle	BP2483-100
500 mℓ	PolyBottle	BP2483-500
1 ℓ	PolyBottle	BP2483-1

CAS: 60-00-4
H319
P280, P305+P351+P338

Molarity	0.475-0.525M
pH	8.0 ± 0.1
Protease	Not detected
RNase	Not detected

Applications: EDTA, DEPC-Treated solution is ideal for RNA work.
[60-00-4 (Ethylenediamine Tetraacetic Acid, <14.0%)] ; [1310-73-2 (Sodium Hydroxide, <4.0%)] ; [1609-47-8 (Diethyl Pyrocarbonate, 1.0%)]
Recommended Storage: RT

Ethylenediamine Tetraacetic Acid
White Crystalline Powder

packaging		Mfr. No
500 g	AmberGlass	BP118-500

$C_{10}H_{16}N_2O_8$ P264, P280,
CAS: 60-00-4 P305+P351+P338, P337+P313
MW: 292.23
H319, H332

Assay	>=99.5%
Insoluble in Dilute NH_4OH	Clear and haze-free
Iron	<=0.005%
Magnesium (Mg)	<=0.0005%
Nitrilotriacetic Acid ($N(CH_2COOH)_3$)	<=0.1%
pH of 5% Solution (at 25°C)	2.5-3.5
Residue after ignition	<=0.2%

Recommended storage: RT

Ethylenediamine Tetraacetic Acid, Dipotassium Salt Dihydrate
White Crystalline Powder

packaging		Mfr. No
500 g	AmberGlass	BP119-500

$C_{10}H_{14}K_2N_2O_8.2H_2O$ P261, P302+P352, P280,
CAS: 25102-12-9 P305+P351+P338
MW: 404.46
H335, H319, H315

Assay	>=99.0%
Chloride (Cl)	<=0.02%
Heavy Metals (Pb)	<=0.001%
Iron	<=0.001%
pH of 5% Solution (at 25°C)	4-5

Recommended storage: RT

Ethylenediamine Tetraacetic Acid, Disodium Salt Dihydrate
Crystalline Powder - Electrophoresis

packaging		Mfr. No
500 g	PolyBottle	BP120-500
1 kg	PolyBottle	BP120-1

$C_{10}H_{14}N_2Na_2O_8.2H_2O$ H332
CAS: 6381-92-6 P304+P312
MW: 372.23

Arsenic	<=2ppm
Assay	>=99%
Calcium (Ca)	<=20ppm
Electrophoresis	To pass test
Insoluble matter	<=0.005%
Iron	<=10ppm
Lead	<=5ppm
Mercury	<=2ppm
Nitrilotriacetic Acid ($N(CH_2COOH)_3$)	<=0.1%
pH of 5% Solution in Water (at 25°C)	4.0-6.0

Recommended storage: RT

Ethylenediamine Tetraacetic Acid, Tetrasodium Salt Dihydrate
White Powder

packaging		Mfr. No
500 g	AmberGlass	BP121-500

$C_{10}H_{12}N_2Na_4O_8.2H_2O$ P261, P280,
CAS: 10378-23-1 P301+P330+P331, P310,
MW: 416.2 P305+P351+P338
H302, H332, H318

Assay	>=98.0%
Assay (dry basis)	>=99%
Insoluble matter	<=0.005%
Nitrilotriacetic Acid ($N(CH_2COOH)_3$)	<=0.2%
Nitrolotriacetic acid	<=0.2%
pH of 1% w/w Solution	10.7-11.7
pH of a 1% w/w solution	Inclusive between 10.7-11.7

Recommended storage: RT

Ficoll* 400 — Molecular Biology
White to Off-white Powder

packaging		Mfr. No
5 g	PolyBottle	BP525-5
10 g	PolyBottle	BP525-10
25 g	PolyBottle	BP525-25
100 g	PolyBottle	BP525-100
500 g	PolyBottle	BP525-500

CAS: 26873-85-8
MW: 400.000

Specific Rotation α^{20}_D (c=4, H_2O)	52°±2°
DNase	Not detected
Protease	Not detected
RNase	Not detected

Applications: Ficoll 400 is used as a component of Denhardt's Reagent and in gel-loading buffers for DNA gels.
It is also used in forming density gradients to separate cells and subcellular components.
Recommended Storage: RT

Formamide Super Pure

packaging		Mfr. No
100 mℓ	AmberGlass	BP228-100

CH_3NO H360D
CAS: 75-12-7 P201, P308+P313
MW: 45.04
EINECS: 200-842-0

Assay	>=99.5%
Conductivity	<=100µmhos/cm
Copper	<=0.0001%
Freezing Point	1.0°-3.0°C
Iron	<=0.0005%
Lead	<=0.0005%
Optical Absorbance at 280nm	<0.05
Zinc	<=0.0005%

H2NCH:O; CH3NO; F.W. 45.04
Vacuum distilled and packaged under Nitrogen.
Applications: Super Pure Formamide has been pretreated with a mixed-bed resin so that it is ready for use in nucleic acid hybridization and sequencing.
Recommended Storage: 4°C

Glycerol — Molecular Biology

packaging		Mfr. No
1 ℓ	PolyBottle,EcoSafPak*	BP229-1
4 ℓ	PolyBottle,EcoSafPak*	BP229-4

$C_3H_8O_3$ EINECS: 200-289-5
CAS: 56-81-5
MW: 92.09

Assay	>=99.5%
Calcium (Ca)	<=5ppm
Color (APHA)	<=10
Density (at 20°C)	1.260 ±0.005g/mℓ
DNase	Not detected
Heavy Metals (Pb)	<=5ppm
Iron	<=5ppm
Magnesium (Mg)	<=1ppm
Protease	Not detected
RNase	Not detected
Zinc	<=2ppm

Applications: Glycerol is used for low-temperature storage of enzymes and bacterial cultures, purification of proteins, and as a component in electrophoresis loading buffers.
Recommended Storage: RT
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

JustPURE™ Gly-Gly — Cellular and Molecular Biology
White Powder

packaging		Mfr. No
50 g	Poly Bottle	BP2930-50

$C_4H_8N_2O_3$ EINECS: 209-127-8
CAS: 556-50-3 Diglycine, Glycyl-glycine
MW: 132.12

Ammonia	<=0.02%
Arsenic (As)	<=0.00001%
Bismuth (Bi)	<=0.0005%
Cadmium (Cd)	<=0.0005%
Calcium (Ca)	<=0.001%
Chloride	<=0.005%
Chromium (Cr)	<=0.0005%
Cobalt (Co)	<=0.0005%
Copper (Cu)	<=0.0005%
Iron (Fe)	<=0.0005%
Lead (Pb)	<=0.0005%
Lithium (Li)	<=0.0005%
Loss on Drying (at 110°C)	<=0.05
Magnesium (Mg)	<=0.0005%
Manganese (Mn)	<=0.0005%
Purity (by titration)	>=99.5%
Optical Absorbance at 260nm	<=0.075
Optical Absorbance at 280nm	<=0.072
pH at 20°C	Inclusive between 4.5-6.0
Sodium (Na)	<=0.005%
Solubility	Clear and colorless
Strontium (Sr)	<=0.0005%
Sulfate (SO_4)	<=0.005%

Applications: For high efficiency transfection of mammalian cells, gel electrophoresis of RNA, protein isolation applications, cell cultures and enzyme assays and bioanalytical methods, such as IEF, 2-D electrophoresis and SDS-PAGE.
Description: Ultra-pure zwitterionic buffers; Optimized for research in cellular and molecular biology; Minimal permeability to biological membranes; Low interference with biological reactions; pKa values mostly independent of temperature and concentration; High water solubility; Minimal absorption in spectral range 240 to 700nm.
Recommended storage: RT

HEPES Buffer
1M Solution, pH 7.3 — Molecular Biology

packaging		Mfr. No
100 mℓ	PolyBottle	**BP299-100**
500 mℓ	PolyBottle	**BP299-500**
1 ℓ	PolyBottle	**BP299-1**

$C_8H_{18}N_2O_4S$ EINECS: 230-907-9
CAS: 7365-45-9
MW: 238.31

Absorbance of a 0.1M Solution at 260nm	<=0.008
Absorbance of a 0.1M Solution at 280nm	<=0.004
DNase	Not detected
Molarity	1.0±0.05
pH (at 37°C)	7.3±0.1
Protease	Not detected
RNase	Not detected

Applications: HEPES is commonly used as a buffering agent.
Recommended Storage: RT

HEPES Sodium Salt
White Powder

packaging		Mfr. No
500 g	PolyBottle	**BP410-500**
1 kg	PolyBottle	**BP410-1**
2.5 kg	PolyBottle	**BP410-212**

$C_8H_{17}N_2NaO_4S$ EINECS: 278-169-7
CAS: 75277-39-3
MW: 260.27

Absorbance of a 0.1M Solution in Water (1cm) at 260nm	<=0.04
Absorbance of a 0.1M Solution in Water (1cm) at 280nm	<=0.02
Assay (dry weight basis)	>=99%
Endotoxin Assay (LAL)	<=0.06 EU/mℓ
Heavy Metals (Pb)	<=0.001%
Loss on Drying (at 110°C)	<=3.0%
pH of 1% Solution (at 25°C)	10.2 ±0.8
PKa (at 25°C)	7.55 ±0.1
Solubility (0.1M in water)	Clear, complete & colorless

Applications: HEPES Sodium Salt is used as a buffer for in vitro cell culture.
Recommended Storage: RT

HEPES
Fine White Crystals — Molecular Biology

packaging		Mfr. No
100 g	PolyBottle	**BP310-100**
500 g	PolyBottle	**BP310-500**
1 kg	PolyBottle	**BP310-1**
5 kg	PolyPail	**BP310-5**

$C_8H_{18}N_2O_4S$ EINECS: 230-907-9
CAS: 7365-45-9
MW: 238.3

Absorbance of a 0.1M Solution at 280nm	<=0.01
Assay	>=99%
DNase	Not detected
PKa (at 25°C)	7.5±0.2
Protease	Not detected
RNase	Not detected
Solubility (1.196g/100mℓ H2O)	Clear and colorless
TLC	Single spot

Applications: HEPES is commonly used as a buffering agent.
Recommended Storage: RT

Hyamine Hydroxide*
Clear Solution

packaging		Mfr. No
500 mℓ	AmberGlass	**BP2658-500**

$C_{28}H_{45}NO_3$ EINECS: 247-537-9
CAS: 26248-39-5
MW: 443.66

Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.
UN 2924; DOT Class 3:Flammable Liquid

Hydrogen Peroxide
30% in Water

packaging		Mfr. No
500 g	PolyBottle	**BP2633-500**

H_2O_2 H318, H302
CAS: 7722-84-1 P280, P305+P351+P338,
MW: 34 P301+P312
EINECS: 231-765-0

Ammonium (NH_4)	<=5µg/g
Assay (as H_2O_2, %wt)	29.0-32.0%
Chloride (Cl)	<=3µg/g
Color (APHA)	<=10
Heavy Metals (Pb)	<=1µg/g
Iron	<=0.5µg/g
Nitrate	<=2µg/g
Phosphate (PO_4)	<=2µg/g
Residue after evaporation	<=0.002%
Sulfate (SO_4)	<=5µg/g
Titratable Acid	<=0.0006mEq/g

Applications: Hydrogen Peroxide is used as an antiseptic and for decomposition of inorganic and organic samples.
Recommended Storage: RT
UN 2014; DOT Class 5.1:Oxidizer

Imidazole — Molecular Biology

packaging		Mfr. No
50 g	olyBottle	**BP305-50**

$C_3H_4N_2$ P301+P330+P331, P280,
CAS: 288-32-4 P305+P351+P338, P310,
MW: 68.08 P281, P301+P312
H302, H314, H360D

Absorbance of a 0.1M Solution at 260nm	<=0.2
Assay	>=99%
DNase	Not detected
Melting Point	90°±2°C
PKa (at 25°C)	6.99±0.2
Protease	Not detected
RNase	Not detected

HNCH:CHN:CH; C3H4N2; F.W. 68.08
Applications: Imidazole is an excellent biological buffer with a usable pH range of 6.2 to 7.8.
Recommended Storage: RT
UN 3263; DOT Class 8:Corrosive

Isoamyl Alcohol

packaging		Mfr. No
500 mℓ	AmberGlass,EcoSafPak*	**BP1150-500**

$C_5H_{12}O$ H226, H335, H332, EUH066
CAS: 123-51-3 P261, P304+P340,
MW: 88.15 P210
EINECS: 204-633-5

Acidity (as Acetic Acid)	<=0.01%
Assay (GC)	>=99%
Carbonyl (as C=O)	<=0.1%
Color (APHA)	20
Peroxides	Not detected
Residue after evaporation	<=0.003%
Water	<=0.5%

EcoSafPak is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.*
Applications: A mixture of Chloroform and Isoamyl Alcohol (24:1 v/v) is used to remove proteins during nucleic acid extraction procedures. It may also be used to extract Ethidium Bromide from nucleic acids.
Recommended storage: RT

Magnesium Acetate Tetrahydrate

packaging		Mfr. No
500 g	AmberGlass	**BP215-500**

$C_4H_6O_4Mg.4H_2O$
CAS: 16674-78-5
MW: 214.46

Assay	>=99.0%
Calcium (Ca)	<=0.01%
Chloride (Cl)	<=0.001%
Heavy Metals (as Pb) (ACS method)	<=5ppm
Iron	<=5ppm
Nitrogen Compounds	<=0.001%
pH of 5% Solution (at 25°C)	6.5-8.5
Sulfate (SO_4)	<=0.005%
Water-insoluble Matter	<=0.005%

Applications: Magnesium Acetate is suitable for use in the preparation of buffer solutions and is required as a stabilizer for all stages of bacteriophage purification.
Recommended Storage: RT

Magnesium Chloride Hexahydrate

packaging		Mfr. No
500 g	PolyBottle	**BP214-500**

$Cl_2Mg.6H_2O$ H335, H319
CAS: 7791-18-6 P261, P280,
MW: 203.31 P305+P351+P338

Ammonium (NH_4)	<=0.002%
Assay	>=99.0%
Calcium (Ca)	<=0.01%
Iron	<=0.0005%
Lead	<=5ppm
Nitrate	<=0.001%
Phosphate (PO_4)	<=5ppm
Sulfate (SO_4)	<=0.002%
Water-insoluble Matter	<=0.005%

Applications: Magnesium Chloride is suitable for use in the preparation of buffer solutions.
Recommended Storage: RT

Magnesium Sulfate Heptahydrate

packaging		Mfr. No
1 kg	AmberGlass	**BP213-1**

$MgO_4S.7H_2O$
CAS: 10034-99-8
MW: 246.48

Ammonium (NH_4)	<=0.002%
Assay	98-102.0%
Calcium (Ca)	<=0.02%
Chloride (Cl)	<=5ppm
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iron	<=5ppm
Manganese	<=5ppm
Nitrate	<=0.002%
pH of 0.5% solution (at 25°C)	5.0-8.2
Potassium	<=0.005%
Sodium	<=0.005%
Strontium	<=0.005%

Applications: Magnesium Sulfate is suitable for use in the preparation of buffer solutions.
Recommended Storage: RT

Manganese Chloride 1.0M Solution — Molecular Biology
Clear, Light-pink Solution

packaging		Mfr. No
10 mℓ	PolyTube	**BP541-1**
100 mℓ	PolyBottle	**BP541-100**

Cl_2 Mn H302, H373
CAS: 7773-01-5 P260, P301+P312
MW: 125.84

Concentration	1.0M±0.01
DNase	Not detected
Heavy Metals (Pb)	<=5.0ppm
Protease	Not detected
RNase	Not detected

Applications: Manganese Chloride is used for dC and dG tailing of DNA. 0.2-micron filtered solution in 18-megohm water.
Recommended Storage: RT

JustPURE™ MES Hydrate — Cellular and Molecular Biology
White Powder

packaging		Mfr. No
250 g	Poly Bottle	BP2920-250

$C_6H_{13}NO_4S.xH_2O$
CAS: 4432-31-9
MW: 195.23
EINECS: 224-632-3

H315, H319, H335
P280, P305+P351+P338,
P261, P302+P352, P264,
P271

Arsenic (As)	<=0.0001%
Bismuth (Bi)	<=0.0005%
Cadmium (Cd)	<=0.0005%
Calcium (Ca)	<=0.002%
Chloride	<=0.005%
Chromium (Cr)	<=0.0005%
Cobalt (Co)	<=0.0005%
Copper (Cu)	<=0.0005%
Iron (Fe)	<=0.0005%
Lead (Pb)	<=0.0005%
Lithium (Li)	<=0.0005%
Magnesium (Mg)	<=0.0005%
Purity (by titration)	>=99.5%
Optical Absorbance at 260nm	<=0.025
Optical Absorbance at 280nm	<=0.020
pH at 20°C	Inclusive between 2.5-4.0
Sodium (Na)	<=0.005%
Strontium (Sr)	<=0.005%

Applications: For high efficiency transfection of mammalian cells, gel electrophoresis of RNA, protein isolation applications, cell cultures and enzyme assays and bioanalytical methods, such as IEF, 2-D electrophoresis and SDS-PAGE.
Description: Ultra-pure zwitterionic buffers; Optimized for research in cellular and molecular biology; Minimal permeability to biological membranes; Low interference with biological reactions; pKa values mostly independent of temperature and concentration; High water solubility; Minimal absorption in spectral range 240 to 700nm.
Recommended storage: RT

Molecular Sieves, Grade 513
Type 4A; 4-8 Mesh

packaging		Mfr. No
500 g	PolyBottle	BP2634-500

CAS: 70955-01-0

Mesh Size	To pass test

Applications: Used for dehydration of gases.
Effective pore size:4Ã…
Base:Alumina-Silicate
Cation:Sodium [1344-28-1 (Aluminum Oxide)] ; [14808-60-7 (Quartz)]
Recommended Storage: RT

Molecular sieves, Grade 514 (Type 4A; 8-12 Mesh)
Type 4A; 8-12 Mesh

packaging		Mfr. No
500 g	PolyBottle	BP2631-500

CAS: 70955-01-0

Mesh Size	To pass test

Applications: Used for dehydration of liquids.
Effective pore size:4Ã…
Base:Alumina-Silicate
Cation:Sodium [1344-28-1 (Aluminum Oxide)] ; [14808-60-7 (Quartz)]
Recommended Storage: RT

MOPS — Molecular Biology
Fine White Crystals

packaging		Mfr. No
100 g	PolyBottle	BP308-100
500 g	PolyBottle	BP308-500

$C_7H_{15}NO_4S$
CAS: 1132-61-2
MW: 209.26
EINECS: 214-478-5

H315, H335, H319
P261, P302+P352, P280,
P305+P351+P338

Assay	>=97%
DNase	Not detected
PKa (at 25°C)	7.2±0.2
Protease	Not detected
RNase	Not detected

Applications: This biological buffer has a usable pH range of 6.5 to 7.9.
Recommended Storage: RT

CellPURE™ MOPS Sodium Salt — Cell Culture-Tested
White Crystalline powder

packaging		Mfr. No
25 g	Poly Bottle	BP2946-25

$C_7H_{14}NNaO_4S$
CAS: 71119-22-7
MW: 231.25

Absorbance 33% w/w at 290nM	<=0.05
Cell culture test	To pass test
DNase	Not detected
Endotoxin	<=0.1 EU/mg
Heavy metals (as Pb)	<=5 ppm
Infrared scan	Conforms to ref.
Purity (by titration)	>=99.5%
Nickase	Not detected
Protease	Not detected
RNase	Not detected
Solubility	Clear and colorless
Standard plate count	<=100CFU/gm

Applications: Cell cultivation, isolation of cells, enzyme assays, and other biochemical applications
Description: Cell culture tested; Analyzed for the absence of nucleases and proteases; Tested for endotoxin and bioburden levels; pKa values mostly independent of temperature and concentration; High water solubility; Minimal permeability to biological membranes; Manufactured under strict quality control guidelines to ensure performance and reliability.
Recommended storage: RT

JustPURE™ MOPS Sodium Salt — Cellular and Molecular Biology
White Powder

packaging		Mfr. No
100 g	Poly Bottle	BP2926-100

$C_7H_{14}NNaO_4S$
CAS: 71119-22-7
MW: 231.25

Ammonia	<=0.05%
Calcium (Ca)	<=0.001%
Chloride	<=0.05%
Copper (Cu)	<=0.0005%
Iron (Fe)	<=0.0005%
Lead (Pb)	<=0.001%
Magnesium (Mg)	<=0.0005%
Purity (by titration)	>=99.5%
Optical Absorbance at 260nm	<=0.1
Optical Absorbance at 280nm	<=0.1
pH at 20°C	Inclusive between 10.0-12.0
Phosphorus	<=0.005%
Solubility	Clear and colorless
Sulfate (SO_4)	<=0.05%
Water (Karl Fischer)	<=5%

Applications: For high efficiency transfection of mammalian cells, gel electrophoresis of RNA, protein isolation applications, cell cultures and enzyme assays and bioanalytical methods, such as IEF, 2-D electrophoresis and SDS-PAGE.
Description: Ultra-pure zwitterionic buffers; Optimized for research in cellular and molecular biology; Minimal permeability to biological membranes; Low interference with biological reactions; pKa values mostly independent of temperature and concentration; High water solubility; Minimal absorption in spectral range 240 to 700nm.
Recommended storage: RT

Heptane Sequencing
Peroxide-free

packaging		Mfr. No
500 mℓ	AmberGlass,EcoSafPak*	BP1115-500

C_7H_{16}
CAS: 142-82-5
MW: 100.2
EINECS: 205-563-8
H225, H315, H336, H304,

H400, H410
P261, P301+P310, P331,
P273, P302+P352,
P210

Aldehyde (HCHO)	Not detected
Assay	99.0%
Color (APHA)	<=10
Fluorescence Background (as Quinine Sulfate)	To pass test
Optical Absorbance at 200nm	<=0.75
Optical Absorbance at 215nm	<=0.20
Optical Absorbance at 254nm	<=0.014
Peroxides	Not detected
Refractive Index (at 25°C)	1.3845-1.3865
Residue after evaporation	<=5ppm
Water	<=0.02%

EcoSafPak is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.*
Applications: Solvent for other organics and is used as a carrier in chromatography.
Recommended storage: RT

n-Octyl-β-D-Glucopyranoside
White Crystalline Powder

packaging		Mfr. No
500 mg	PolyMicroTube	BP585-500
1 g	PolyMicroTube	BP585-1
5 g	AmberPolyBottle	BP585-5
25 g	AmberPolyBottle	BP585-25

$C_{14}H_{28}O_6$ EINECS: 249-887-8
CAS: 29836-26-8
MW: 292.36

Assay (GC)	>=98.0%
Specific Rotation α $^{20}_{D}$ (c=1, anhydrous MeOH)	-32.0° to -28.0°

Applications: n-Octyl-β-D-Glucopyranoside is a highly purified, nonionic detergent.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Phosphate Buffered Saline Tablets

packaging	Mfr. No
100 tablets g Poly Bottle	BP2944-100

CAS: [Sodium chloride: 7647-14-5; Sodium phosphate dibasic: 7558-79-4; Dihydrogen potassium phosphate: 7778-77-0; Potassium chloride: 7447-40-7]

Form	Round tablet
pH at 25°C	Inclusive between 7.2-7.6
Total weight	Inclusive between 1814-2005mg/tab

Applications: Specifically developed for use in immunoassay procedures. The need to weigh and mix individual components is eliminated.
Description: One tablet dissolved in 200mℓ water yields 0.01M phosphate buffer, 0.0027M KCl, and 0.137M NaCl, pH 7.4 at 25°C
Recommended storage: RT

Phosphate Buffered Saline with Tween 20* — White Powder

packaging		Mfr. No
10PK	Foil Pouches	BP2938-10

CAS: [Sodium chloride: 7647-14-5; Sodium phosphate dibasic: 7558-79-4; Tween 20: 9005-64-5; Di-hydrogen potassium phosphate: 7778-77-0; Potassium chloride: 7447-40-7]
PBST

pH at 25°C	Inclusive between 7.2-7.6
Total weight	Inclusive between 9.55-10.55grams

Applications: Used as a wash buffer and diluent for ELISA and Western blot.
Description: Dissolve the pre-weighed contents of one pouch in 1ℓ of water. Formulation per liter: 0.01M phosphate buffered saline, 0.138 M NaCl, 0.0027 M KCl, and 0.05% Tween 20, pH 7.4 at 25°C
Recommended storage: RT

Phosphate Buffered 10X Powder Concentrate
White Granular Powder

packaging		Mfr. No
2 blocks FoilPack		**BP665-1**

Chloride Concentration of a 1X Solution	0.140±0.004 moles/ℓ
Conductivity of a 1X Solution	14.000 to 17.800µmhos/cm
DNase	Not detected
pH of 10X solution (at 25°C)	6.7-6.9
pH of 1X solution (at 25°C)	7.3-7.5
Protease	Not detected
RNase	Not detected
Solubility (1% in water)	To pass test

Applications: This product provides a convenient way to make a 10X concentrated solution of standard Phosphate Buffer; each pack contains 98.8g for reconstitution in 1ℓ of water.
Components: Sodium Chloride (81%), Sodium Phosphate Dibasic (14%), Potassium Phosphate Monobasic (3.0%), and Potassium Chloride (2%). [7647-14-5 (Sodium Chloride)] ; [7558-79-4 (Sodium Phosphate Dibasic)] ; [7778-77-0 (Potassium Phosphate Monobasic)] ; [7447-40-7 (Potassium Chloride)]
Recommended Storage: RT

Phosphate Buffered 1X Powder Concentrate
White Granular Powder

packaging		Mfr. No
98.9 g	PolyBottle	**BP661-10**
492 g	PolyBottle	**BP661-50**

Chloride Concentration of a 1X Solution	0.140±0.004 moles/ℓ
Conductivity of a 1X Solution	14.000-17.800µmhos
DNase	Not detected
pH of 1X solution (at 25°C)	7.3-7.5
Protease	Not detected
RNase	Not detected
Solubility (1% in water)	To pass test

Applications: This product provides a convenient way to make large volumes of standard 1X Phosphate Buffer; each bottle contains 98.9g or 492g for reconstitution in 10ℓ or 50ℓ of water, respectively.
Components: Sodium Chloride (81%), Sodium Phosphate Dibasic (14%), Potassium Phosphate Monobasic (3.0%), and Potassium Chloride (2%). [7647-14-5 (Sodium Chloride)] ; [7558-79-4 (Sodium Phosphate Dibasic)] ; [7778-77-0 (Potassium Phosphate Monobasic)] ; [7447-40-7 (Potassium Chloride)]
Recommended Storage: RT

CellPURE™ Phosphate Buffered Saline Cell Culture-Tested
10X Solution

packaging		Mfr. No
4 ℓ	PolyPac*	**BP2940-4**

CAS: [Water: 7732-18-5; Sodium chloride: 7647-14-5; Sodium phosphate dibasic: 7558-79-4; Dihydrogen potassium phosphate: 7778-77-0; Potassium chloride: 7447-40-7]
PBS

Bioburden	<=16.0 CFU/mℓ
Cell culture salt test	To pass test
DNase	Not detected
Endotoxin	<=1.0 EU/mℓ
Heavy metals (as Pb)	<=5 ppm
Nickase	Not detected
pH at 25°C of a 1:10 dilution	Inclusive between 7.2-7.6
Protease	Not detected
RNase	Not detected

Applications: CellPURE Phosphate Buffered Saline provides an optimal formulation for cell biology experiments in which the osmolarity of cells must be maintained. PBS can also be used in biochemistry studies for maintaining proteins in a certain pH range. Nuclease- and protease-free.
Description: When diluted to a 1X concentration using water, this product yields 0.01M phosphate buffer and 0.154M NaCl, pH 7.4 at 25°C.
Recommended storage: RT

Periodic Acid
White to Pale-yellow Crystals or White Powder

packaging		Mfr. No
25 g	PolyBottle	**BP581-25**
100 g	PolyBottle	**BP581-100**

H_5IO_6
CAS: 10450-60-9
MW: 227.94
EINECS: 233-937-0

H272, H314
P301+P330+P331, P280, P305+P351+P338, P310, P210

Assay	>=99%
Heavy Metals (Pb)	<=0.005%
Insoluble matter	<=0.1%
Iron	<=0.003%
Other Halogens (as Cl)	<=0.05%
Residue after ignition	<=0.05%
Sulfate (SO_4)	<=0.05%

Applications: Periodic Acid is used to decompose organic compounds.
Recommended Storage: RT
UN 3085; DOT Class 5.1:Oxidizer

Phenol
Crystallized

packaging		Mfr. No
100 g	AmberGlass/PoisonPack	**BP226-100**
500 g	AmberGlass/PoisonPack	**BP226-500**

C_6H_6O
CAS: 108-95-2
MW: 94.11
EINECS: 203-632-7
H311, H331, H341, H314, H373, H301

P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P301+P310, P260

Assay	>=99.0%
Heavy Metals (Pb)	<=0.01%
Melting Point	40°-41°C
Saturation of Phenol with Tris	To pass test
Water	<=0.5%

Applications: Phenol is used in nucleic acid purification procedures.
Recommended Storage: 4°C
UN 1671; DOT Class 6.1:Poison

PIPES, Sesquisodium Salt — Molecular Biology
Fine White Crystals

packaging		Mfr. No
100 g	PolyBottle	**BP304-100**
500 g	PolyBottle	**BP304-500**

$C_{16}H_{33}N_4Na_3O_{12}S_4$
CAS: 100037-69-2
MW: 335.34

Assay	>=95%
DNase	Not detected
PKa (at 25°C)	6.76 ±0.2
RNase	Not detected

Applications: This biological buffer has a usable pH range of 6.1 to 7.5.
Recommended Storage: RT
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Potassium Phosphate Dibasic
Fine White Crystalline Powder

packaging		Mfr. No
500 g	PolyBottle	**BP363-500**
1 kg	PolyBottle	**BP363-1**

HK_2O_4P
CAS: 7758-11-4
MW: 174.18

Assay	>=98.0% Minimum
Chloride (Cl)	<=0.003%
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.010%
Iron	<=0.001%
Loss on Drying (at 105°C)	<=1.0%
Nitrogen Compounds (as N)	<=0.001%
pH of 5% Solution (at 25°C)	8.5-9.6
Sodium	<=0.05%
Sulfate (SO_4)	<=0.005%

Applications: This potassium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Potassium Phosphate Monobasic
White Crystals

packaging		Mfr. No
500 g	AmberGlass	**BP362-500**
1 kg	AmberGlass	**BP362-1**

H_2KO_4P
CAS: 7778-77-0
MW: 136.09

Assay	>=99.0%
Chloride (Cl)	<=0.001%
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.01%
Iron	<=0.002%
Loss on Drying (at 105°C)	<=0.20%
pH of 5% Solution (at 25°C)	4.1-4.5
Sodium	<=0.005%
Sulfate (SO_4)	<=0.003%

Applications: This potassium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Sodium Azide
White Granular Powder

packaging		Mfr. No
500 g	AmberGlass/PoisonPack	**BP922I-500**

N_3Na
CAS: 26628-22-8
MW: 65.01
EINECS: 247-852-1

H300, H410, EUH032
P301+P310, P280, P302+P350, P273

Assay	>=99%

Applications: Sodium Azide is used as a preservative in biological solutions.
Recommended Storage: RT
UN 1687; DOT Class 6.1:Poison

Sodium Bicarbonate
Fine White Powder

packaging		Mfr. No
500 g	PolyBottle	**BP328-500**
1 kg	PolyBottle	**BP328-1**

$CHNaO_3$
CAS: 144-55-8
MW: 84.01
EINECS: 205-633-8

Ammonium (NH_4)	<=5ppm
Assay	99.7-100.3%
Calcium (Ca)	<=0.02%
Chloride (Cl)	<=0.003%
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.015%
Iron	<=0.001%
Magnesium (Mg)	<=0.005%
Phosphate (PO_4)	<=0.001%
Potassium	<=0.005%
Sulfur compounds (as SO_4)	<=0.003%

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Sodium Carbonate
White Crystalline Powder

packaging		Mfr. No
1 kg	PolyBottle	BP357-1

CNa_2O_3
CAS: 497-19-8
MW: 105.99
EINECS: 207-838-8

H319
P280, P305+P351+P338

Assay	>=99.5%
Calcium (Ca)	<=0.03%
Chloride (Cl)	<=0.001%
Heavy Metals (Pb)	0.0005%
Insoluble matter	<=0.01%
Iron	0.0005%
Loss on Heating (at 285°C)	<=1.0%
Magnesium (Mg)	<=0.005%
Phosphate (PO_4)	<=0.001%
Potassium	0.005%
Silica	<=0.005%
Sulfur Compounds (as SO_4)	<=0.003%

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Sodium Chloride

packaging		Mfr. No
1 kg	PolyBottle	BP358-1
2.5 kg	PolyBottle	BP358-212
10 kg	PolyPail	BP358-10

ClNa
CAS: 7647-14-5
MW: 58.44

EINECS: 231-598-3

Calcium (Ca)	<=0.005%
Heavy Metals (Pb)	0.0005%
Iodide	<=0.002%
Iron	<=0.0002%
Magnesium (Mg)	<=0.005%
Phosphate (PO_4)	0.0005%
Sulfate (SO_4)	<=0.004%

Applications: Sodium Chloride is a main component of many electrophoresis and molecular biology buffers and media.
Recommended Storage: RT

Sodium Citrate Dihydrate
Small, Colorless Granules

packaging		Mfr. No
500 g	PolyBottle	BP327-500
1 kg	PolyBottle	BP327-1

$C_6H_5Na_3O_7.2H_2O$
CAS: 6132-04-3
MW: 294.09

Ammonia	<=0.003%
Assay	99.0-101.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.003%
Free Acid (as Citric Acid)	<=0.15%
Free Alkali	None
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iron	<=0.001%
pH of 5% Solution (at 25°C)	7.0-9.0
Sulfate (SO_4)	<=0.005%

Applications: Sodium Citrate is used primarily in the preparation of SSC buffer used in Southern transfers.
Recommended Storage: RT

Sodium Hydroxide
White Pellets

packaging		Mfr. No
500 g	PolyBottle	BP359-500
2.5 kg	PolyBottle	BP359-212

HNaO
CAS: 1310-73-2
MW: 40
EINECS: 215-185-5

H314
P280, P301+P330+P331,
P305+P351+P338, P302+P352

Assay	>=97%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.005%
Copper	0.001%
Heavy Metals (as Ag)	0.002%
Iron	<=0.001%
Magnesium (Mg)	0.002%
Mercury	<=0.1ppm
Nickel	<=0.001%
Nitrogen Compounds (as N)	<=0.001%
Phosphate (PO_4)	0.001%
Potassium	<=0.02%
Sodium carbonate	<=1.0%
Sulfate (SO_4)	<=0.003%

Applications: Sodium Hydroxide is used to adjust the pH of buffers for molecular biology and cell culture applications.
Recommended Storage: RT
UN 1823; DOT Class 8:Corrosive

Sodium Iodide
White Crystals
Molecular Biology

packaging		Mfr. No
100 g	AmberGlass	BP323-100

INa
CAS: 7681-82-5
MW: 149.89

EINECS: 231-679-3

Assay	>=99%
Chloride and Bromide (as Cl)	<=0.01%
Copper	<=3ppm
DNase	Not detected
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iodate	<=0.003%
Iron	<=3ppm
Phosphate (PO_4)	<=0.001%
RNase	Not detected
Sulfate (SO_4)	<=0.005%

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
Recommended Storage: RT

Sodium Nitrate
Colorless Crystals

packaging		Mfr. No
500 g	PolyBottle	BP360-500

$NNaO_3$
CAS: 7631-99-4
MW: 84.99
EINECS: 231-554-3
H272, H315, H335, H302, H319

P261, P301+P312,
P302+P352, P280,
P305+P351+P338, P210

Assay	>=99%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.001%
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iodate	<=5ppm
Iron	<=3ppm
Magnesium (Mg)	<=0.002%
Nitrite	<=0.001%
pH of 5% Solution (at 25°C)	5.5-8.3
Phosphate (PO_4)	5ppm
Sulfate (SO_4)	<=0.003%

Applications: This sodium salt is used in buffers for molecular biology and cell culture applications.
UN 1498; DOT Class 5.1:Oxidizer

Sodium Phosphate Dibasic Anhydrous
White Granules or Powder

packaging		Mfr. No
500 g	PolyBottle	BP332-500
1 kg	PolyBottle	BP332-1

HNa_2O_4P
CAS: 7558-79-4
MW: 141.96

EINECS: 231-448-7

Assay	>=99.0%
Chloride (Cl)	<=0.002%
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.010%
Iron	<=0.001%
Loss on Drying (at 105°C)	<=0.20%
pH of 5% Solution (at 25°C)	8.7-9.3
Sulfate (SO_4)	<=0.005%

Applications: This buffer component is commonly used in tissue culture and molecular biology applications.
Recommended Storage: RT

Sodium Phosphate Dibasic Heptahydrate
Colorless-to-white Crystals

packaging		Mfr. No
500 g	AmberGlass	BP331-500
1 kg	AmberGlass	BP331-1

$HNa_2O_4P.7H_2O$
CAS: 7782-85-6
MW: 268.07

Assay	98.0-102.0%
Chloride (Cl)	<=0.001%
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.005%
Iron	<=0.001%
pH of 5% Solution (at 25°C)	8.7-9.3
Sulfate (SO_4)	<=0.005%

Applications: This buffer component is commonly used in tissue culture and molecular biology applications.
Recommended Storage: RT

Sodium Phosphate Monobasic Anhydrous
Colorless-to-white Crystals

packaging		Mfr. No
500 g	AmberGlass	BP329-500
1 kg	AmberGlass	BP329-1

H_2NaPO_4
CAS: 7558-80-7
MW: 119.98

EINECS: 231-449-2

Assay	>=99%
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.03%
Moisture	0.5%
pH of 1M Solution (at 25°C)	4.0-6.0

Applications: Sodium Phosphate is commonly used in tissue culture and molecular biology applications.
Recommended Storage: RT

Sodium Phosphate Monobasic Monohydrate
Colorless-to-white Crystals

packaging		Mfr. No
500 g	AmberGlass	BP330-500
1 kg	AmberGlass	BP330-1

$H_2NaO_4P.H_2O$
CAS: 10049-21-5
MW: 137.99

Assay	98.0-102.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=5ppm
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.01%
Iron	<=0.001%
pH of 5% Solution (at 25°C)	4.1-4.5
Potassium	0.01%
Sulfate (SO_4)	<=0.003%

Applications: Sodium Phosphate is commonly used in tissue culture and molecular biology applications.
Recommended Storage: RT

Sodium Tetraborate Decahydrate
White Crystals
Molecular Biology

packaging		Mfr. No
500 g	AmberGlass	BP175-500

$B_4Na_2O_7.10H_2O$
CAS: 1303-96-4
MW: 381.36

H360FD
P201, P308+P313

Assay	99.5-105.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.001%
DNase	Not detected
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.005%
Iron	<=5ppm
pH of 0.01M Solution (at 25°C)	9.15-9.20
Phosphate (PO_4)	<=0.001%
RNase	Not detected
Sulfate (SO_4)	<=0.005%

Applications: Sodium Borate can be used in the preparation of TBE electrophoresis buffer.
Recommended Storage: RT

STET Buffer, 1X Solution
pH 8.0

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2480-100**
1 ℓ	PolyBottle	**BP2480-1**

DNase	Not detected
pH (at 25°C)	7.9-8.1
Protease	Not detected
RNase	Not detected

Applications: STET buffer is used in biomolecular procedures.
Saline/Tris/EDTA/Triton* X-100 Solution 1X solution contains 10mM Tris-HCl, 1mM EDTA, 100mM NaCl, and 5% Triton* X-100 (v/v).
Autoclaved.
[77-86-1 (Tris Base)] ; [60-00-4 (EDTA)] ; [7647-01-0 (HCl)] ; [7647-14-5 (NaCl)] ; [9002-93-1 (Triton* X-100)]
Recommended Storage: RT
Filtered through a 5-micron filter.

Sudan Black

packaging		Mfr. No
10 g	AmberGlass	**BP109-10**

$C_{29}H_{24}N_6$ EINECS: 224-087-1
CAS: 4197-25-5
MW: 456.54

$E^{1\%}_{1cm}$	>=600ℓ g-1cm-1
Lambda Max. in Acetone	600nm ±2nm
Loss on Drying (at 105°C)	<=5%
Solubility	To pass test

Applications: Used to stain chromosomes and lipoproteins, as well as fat in bacteria.
Recommended storage: RT
C.I. 26150

TAPS (Free Acid)
White Powder

packaging		Mfr. No
25 g	PolyBottle	**BP551-25**
100 g	PolyBottle	**BP551-100**
500 g	PolyBottle	**BP551-500**

$C_7H_{17}NO_6S$ EINECS: 249-954-1
CAS: 29915-38-6
MW: 243.27

Assay (purity	>=99%
DNase	Not detected
Heavy Metals (Pb)	<=5ppm
Moisture	1%
Protease	Not detected
RNase	Not detected

Applications: This biological buffer has a usable pH range of 7.7 to 9.1.
Recommended Storage: RT

TES
White Crystals

packaging		Mfr. No
100 g	AmberGlass	**BP309-100**

$C_6H_{15}NO_6S$ H335, H315, H319
CAS: 7365-44-8 P261, P302+P352, P280,
MW: 229.25 P305+P351+P338
EINECS: 230-906-3

Assay	>=98%
Melting Point	219° ±5°C
PKa (at 25°C)	7.4±0.2

Applications: This biological buffer has a usable pH range of 6.8 to 8.2.
Recommended Storage: RT

Trichloroacetic Acid
Flakes or Crystals

packaging		Mfr. No
250 g	AmberGlass	**BP555-250**
500 g	AmberGlass	**BP555-500**
1 kg	PolyBottle	**BP555-1**

$C_2HCl_3O_2$ P301+P330+P331, P280,
CAS: 76-03-9 P305+P351+P338, P310,
MW: 163.39 P261, P273
EINECS: 200-927-2
H314, H335, H410

Assay	>=99.0%
Chloride (Cl)	<=0.002%
Heavy Metals (Pb)	<=0.002%
Iron	<=0.001%
Nitrate	<=0.002%
Phosphate (PO_4)	<=5ppm
Residue after ignition	0.03%
Substances Darkened by Sulfuric Acid	To pass test
Sulfate (SO_4)	<=0.02%

Applications: TCA is used to precipitate proteins and nucleic acids from solution.
Recommended Storage: RT
UN 1839; DOT Class 8:Corrosive

Tricine
White Crystals

packaging		Mfr. No
100 g	PolyBottle	**BP315-100**

$C_6H_{13}NO_5$ H315, H319, H335
CAS: 5704-04-1 P261, P302+P352, P280,
MW: 179.17 P305+P351+P338
EINECS: 227-193-6

Assa	98%
Assay	>=98%
Melting Point	184°±2°C
PKa (at 25°C)	8.10±0.2

Applications: This biological buffer has a usable pH range of 7.4 to 8.8.
Recommended Storage: RT

Tris Base
White Crystals or Crystalline Powder

packaging		Mfr. No
1 kg	PolyBottle	**BP154-1**

$C_4H_{11}NO_3$ H335, H315, H319
CAS: 77-86-1 P280, P305+P351+P338,
MW: 121.14 P261, P302+P352
EINECS: 201-064-4

Absorbance of a 2M Solution at 280nm	<=0.05
Arsenic.	<=5ppm
Assay (corrected for H2O)	>=99.9%
Copper	<=1ppm
DNase	Not detected
Electrophoresis	To pass test
Iron	<=2ppm
Lead	<=1ppm
Magnesium (Mg)	<=10ppm
pH of 0.05M Solution (at 25°C)	10.3-10.5
Protease	Not detected
RNase	Not detected
Water	<=0.5%

Applications: This ultrapure, triple-crystallized buffer component is alcohol-free, so it is compatible with sensitive molecular biology, tissue culture, and electrophoresis methods.
Recommended Storage: RT

Tris Base — Molecular Biology
White Crystals or Crystalline Powder

packaging		Mfr. No
500 g	PolyBottle	**BP152-500**
1 kg	PolyBottle	**BP152-1**
5 kg	PolyPail	**BP152-5**
10 kg	PolyPail	**BP152-10**
25 kg	FiberDrum	**BP152-25**

$C_4H_{11}NO_3$ H335, H315, H319
CAS: 77-86-1 P280, P305+P351+P338,
MW: 121.14 P261, P302+P352
EINECS: 201-064-4

Absorbance of a 1M Solution at 280nm	<=0.05
Arsenic	<=5ppm
Assay (corrected for H2O)	99.8%
Copper	<=1ppm
DNase	Not detected
Electrophoresis	To pass test
Iron	<=2ppm
Lead	1ppm
Magnesium (Mg)	<=10ppm
pH of 0.05M Solution (at 25°C)	10.3-10.5
Protease	Not detected
RNase	Not detected
Water	<=2%

Applications: Tris Base is a buffer component in molecular biology, tissue culture, and electrophoresis procedures.
Recommended Storage: RT

Tris Buffered Saline — Molecular Biology
10X Solution

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2471-100**
500 mℓ	PolyBottle	**BP2471-500**
1 ℓ	PolyBottle	**BP2471-1**

H315, H319
P305+P351+P338, P280, P264,
P302+P352

DNase	Not detected
pH (1X solution) (at 25°C)	7.3-7.5
Protease	Not detected
RNase	Not detected

Applications: Tris Buffered Saline (TBS) is used in biochemical and molecular biology applications.
Filtered and autoclaved.
Components: 10X solution contains 1.37M Sodium Chloride, 0.027M Potassium Chloride, and 0.25M Tris/Tris-HCl.
pH:pH 7.4 [77-86-1 (Tris)] ; [1185-53-1 (Tris Hydrochloride)] ; [7447-40-7 (Potassium Chloride)] ; [7647-14-5 (Sodium Chloride)]
Recommended Storage: RT

Tris Buffered Saline — Molecular Biology
1X Solution, pH 7.4

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2472-100**
1 ℓ	PolyBottle	**BP2472-1**

H315, H319
P305+P351+P338, P280, P264,
P302+P352

DNase	Not detected
pH (at 25°C)	7.3-7.5
Protease	Not detected
RNase	Not detected

Applications: Tris Buffered Saline (TBS) is used in biochemical and molecular biology applications.
1X solution contains 0.137M Sodium Chloride, 0.0027M Potassium Chloride and 0.025M Tris/Tris-HCl.
Filtered and autoclaved.
[77-86-1 (Tris)] ; [1185-53-1 (Tris Hydrochloride)] ; [7447-40-7 (Potassium Chloride)] ; [7647-14-5 (Sodium Chloride)]
Recommended Storage: RT

Tris Hydrochloride — Molecular Biology
Small White Flakes

packaging		Mfr. No
500 g	PolyBottle	**BP153-500**
1 kg	PolyBottle	**BP153-1**

$C_4H_{11}NO_3.HCl$
CAS: 1185-53-1
MW: 157.6
EINECS: 214-684-5

H335, H319, H315
P261, P302+P352, P280, P305+P351+P338

Absorbance of a 1M Solution at 280nm	<=0.05
Arsenic	<=10ppm
Assay	>=99%
Barium	<=1ppm
Calcium (Ca)	<=10ppm
Copper	<=1ppm
DNase	Not detected
Electrophoresis	To pass test
Iron	<=2ppm
Lead	<=5ppm
Magnesium (Mg)	10ppm
Manganese	<=1ppm
Melting Point	52°±2°C
Protease	Not detected
RNase	Not detected

Applications: Tris Hydrochloride is a buffering medium for electrophoresis, molecular biology, and cell culture applications. It may be combined with Tris Base to simplify Tris buffer preparation.
Recommended Storage: RT

Tris-EDTA (TE), 10X Solution — Molecular Biology
pH 7.4

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2477-100**
500 mℓ	PolyBottle	**BP2477-500**
1 ℓ	PolyBottle	**BP2477-1**

CAS: 38641-82-6

DNase	Not detected
pH (1X solution) (at 25°C)	7.3-7.5
Protease	Not detected
RNase	Not detected

Applications: Tris-EDTA (TE) is used for suspending nucleic acid samples.
10X solution contains 100mM Tris and 10mM EDTA.
[60-00-4 (EDTA)] ; [77-86-1 (Tris)]
Recommended Storage: RT
Filtered through a 5-micron filter and autoclaved.

Tris-EDTA (TE), 10X Solution — Molecular Biology
pH 7.6

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2475-100**
500 mℓ	PolyBottle	**BP2475-500**
1 ℓ	PolyBottle	**BP2475-1**

CAS: 38641-82-6

DNase	Not detected
pH (1X solution) (at 25°C)	.5-7.7
Protease	Not detected
RNase	Not detected

Applications: Tris-EDTA (TE) is used for suspending nucleic acid samples.
10X solution contains 100mM Tris and 10mM EDTA.
[60-00-4 (EDTA)] ; [77-86-1 (Tris)]
Recommended Storage: RT
Filtered through a 5-micron filter and autoclaved.

Tris-EDTA — Molecular Biology
1X Solution, pH 7.4

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2476-100**
500 mℓ	mLPolyBottle	**BP2476-500**

CAS: 38641-82-6

DNase	Not detected
pH (1X solution) (at 25°C)	7.4±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-EDTA (TE) is routinely used for suspending nucleic acid samples.
10mM Tris and 1mM EDTA [60-00-4 (EDTA)] ; [77-86-1 (Tris)] ; [7647-01-0 (Hydrogen Chloride)]
Recommended Storage: RT
Filtered through a 5-micron filter.

Tris-EDTA — Molecular Biology
1X Solution, pH 7.6

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2474-100**
500 mℓ	PolyBottle	**BP2474-500**
1 ℓ	PolyBottle	**BP2474-1**

CAS: 38641-82-6

DNase	Not detected
pH (1X solution) (at 25°C)	7.6±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-EDTA (TE) is routinely used for suspending nucleic acid samples.
10mM Tris and 1mM EDTA [60-00-4 (EDTA)] ; [77-86-1 (Tris)] ; [7647-01-0 (Hydrogen Chloride)]
Recommended Storage: RT
Filtered through a 5-micron filter.

Tris-EDTA — Molecular Biology
1X Solution, pH 8.0

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2473-100**
500 mℓ	PolyBottle	**BP2473-500**
1 ℓ	PolyBottle	**BP2473-1**

CAS: 38641-82-6

DNase	Not detected
pH (1X solution) (at 25°C)	8.0±0.1
Protease	Not detected
RNase	Not detected

Applications: Tris-EDTA (TE) is routinely used for suspending nucleic acid samples.
10mM Tris and 1mM EDTA [60-00-4 (EDTA)] ; [77-86-1 (Tris)] ; [7647-01-0 (Hydrogen Chloride)]
Recommended Storage: RT
Filtered through a 5-micron filter.

Water — Molecular Biology
Sterile-Filtered

packaging		Mfr. No
100 mℓ	Poly Bottle	**BP2819-100**
1 ℓ	Poly Bottle	**BP2819-1**
4 ℓ	PolyPac*	**BP2819-4**
10 ℓ	PolyPac*	**BP2819-10**
20 ℓ	PolyPac*	**BP2819-20**

H_2O EINECS: 231-791-2
CAS: 7732-18-5
MW: 18.02

Cadmium (Cd)	<=10 ppb
Calcium (Ca)	<=10 ppb
Chromium (Cr)	<=10 ppb
Cobalt (Co)	<=10 ppb
Copper (Cu)	<=10 ppb
DNase	Not detected
Iron (Fe)	<=10 ppb
Lead (Pb)	<=10 ppb
Magnesium (Mg)	<=10 ppb
Manganese (Mn)	<=10 ppb
pH at 25°C	Inclusive between 5.4-7.0
Protease	Not detected
RNase	Not detected
Solubility in water	<2uS/cm
Vanadium (V)	<=10 ppb

Applications: Ideal for many fundamental procedures such as PCR, electrophoresis, DNA sequencing, and buffers for enzymatic analyses.
Description: 0.3µm filtered to ensure high purity
Recommended storage: RT

Water, Sterile — Biotech Grade

packaging		Mfr. No
20 ℓ	PolyPac*	**BP2485-20**
4 ℓ	PolyPac*	**BP2485-4**

H_2O EINECS: 231-791-2
CAS: 7732-18-5
MW: 18.02

Heavy Metals (Pb)	<=0.01ppm
pH (at 25°C)	5.4-7.0
Specific Conductance (at 25°C)	<=2°-10-6 ohm-1 cm-1
Substances Reducing Permanganate	To pass test

Applications: Biotech-grade water can be used for several biological test procedures.

Water, Sterile — DNA Grade
For DNA Work

packaging		Mfr. No
1 ℓ	PolyBottle	**BP2470-1**

H_2O EINECS: 231-791-2
CAS: 7732-18-5
MW: 18.02

DNase	Not detected
Protease	Not detected

Applications: DNA-grade Water is DNase- and Protease-free and is suitable for all DNA work.
Filtered through a 0.2-micron filter and autoclaved.

Water — Microbial Cell Culture-Grade
Sterile-Filtered

packaging		Mfr. No
100 mℓ	Poly Bottle	**BP2820-100**
500 mℓ	Poly Bottle	**BP2820-500**
1 ℓ	Poly Bottle	**BP2820-1**

H_2O EINECS: 231-791-2
CAS: 7732-18-5
MW: 18.02

Arsenic (As)	<=10 ppb
Cadmium (Cd)	<=10 ppb
Calcium (Ca)	<=20 ppb
Chromium (Cr)	<=10 ppb
Cobalt (Co)	<=10 ppb
Copper (Cu)	<=10 ppb
Endotoxin	<0.025 EU/mℓ
Iron (Fe)	<=10 ppb
Lead (Pb)	<=10 ppb
Magnesium (Mg)	<=10 ppb
Manganese (Mn)	<=10 ppb
Oxidizable substances	To pass test
pH at 25°C	Inclusive between 5.4-7.0
Silver (Ag)	<=10 ppb
Sodium (Na)	<=20 ppb
Solubility in water	<2uS/cm
Tin (Sn)	<=10 ppb
Vanadium (V)	<=10 ppb

Applications: For the preparation of microbiological growth media (functionally tested for promoting microbial growth).
Description: 0.3µm filtered and autoclaved
Recommended storage: RT

Water, Sterile
Nuclease Free

packaging		Mfr. No
50 mℓ	PolyBottle	**BP2484-50**
100 mℓ	PolyBottle	**BP2484-100**

H_2O EINECS: 231-791-2
CAS: 7732-18-5
MW: 18.02

DNase	Not detected
Protease	Not detected
RNase	Not detected

Applications: Diethylpyrocarbonate (DEPC)-treated Water is guaranteed nuclease-free (tested for both DNase and RNase) and is suitable for all RNA work.
Filtered through a 0.2-micron filter.

Water, Sterile — Molecular Biology
For RNA Work, DEPC-treated and Nuclease-free

packaging		Mfr. No
1 ℓ	PolyBottle	**BP561-1**

H_2O EINECS: 231-791-2
CAS: 7732-18-5
MW: 18.02

DNase	Not detected
Protease	Not detected
RNase	.Not detected
Specific Conductance (at 25°C)	.<=18°-10-6ohm-1cm-1

Applications: Diethylpyrocarbonate (DEPC)-treated Water is guaranteed nuclease-free (tested for both DNase and RNase) and is suitable for all RNA work.
DEPC-treated and autoclaved.
Filtered through a 0.2-micron filter.

Hazard Class and category

Asp. Tox. 1	Aspiration hazard; Category 1
Acute Tox. 1	Acute toxicity (oral); Category 1
Acute Tox. 2	Acute toxicity (oral); Category 2
Acute Tox. 3	Acute toxicity (oral); Category 3
Acute Tox. 4	Acute toxicity (oral); Category 4
Acute Tox. 1	Acute toxicity (dermal); Category 1
Acute Tox. 2	Acute toxicity (dermal); Category 2
Acute Tox. 3	Acute toxicity (dermal); Category 3
Acute Tox. 4	Acute toxicity (dermal); Category 4
Acute Tox. 1	Acute toxicity (inhalation); Category 1
Acute Tox. 2	Acute toxicity (inhalation); Category 2
Acute Tox. 3	Acute toxicity (inhalation); Category 3
Acute Tox. 4	Acute toxicity (inhalation); Category 4
Skin Corr. 1A	Skin corrosion/irritation; Category 1A
Skin Corr. 1B	Skin corrosion/irritation; Category 1B
Skin Corr. 1C	Skin corrosion/irritation; Category 1C
Skin Irrit. 2	Skin corrosion/irritation; Category 2
Eye Dam. 1	Serious eye damage/eye irritation; Category 1
Eye Irrit. 2	Serious eye damage/eye irritation; Category 2
Resp. Sens. 1	Respiratory sensitisation; Category 1
Skin Sens. 1	Skin sensitisation; Category 1
Muta. 1A	Germ cell mutagenicity; Category 1A
Muta. 1B	Germ cell mutagenicity; Category 1B
Muta. 2	Germ cell mutagenicity; Category 2
Carc. 1A	Carinogenicity; Category 1A
Carc. 1B	Carcinogenicity; Category 1B
Carc. 2	Carcinogenicity; Category 2
Repr. 1A	Reproductive toxicity; Category 1A
Repr. 1B	Reproductive toxicity; Category 1B
Repr. 2	Reproductive toxicity; Category 2
STOT SE 1	Specific target organ toxicity - single exposure; Category 1
STOT SE 2	Specific target organ toxicity - single exposure; Category 2
STOT SE 3	Specific target organ toxicity - single exposure; Category 3
STOT RE 1	Specific target organ toxicity - repeated exposure; Category 1
STOT RE 2	Specific target organ toxicity - repeated exposure; Category 2
Aquatic Acute 1	Hazardous to the aquatic environment - acute hazard; Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - chronic hazard; Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - chronic hazard; Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - chronic hazard; Category 3
Aquatic Chronic 4	Hazardous to the aquatic environment - chronic hazard; Category 4
Ozone	Hazardous to the ozone layer; Category 1
Flam. Liq. 1	Flammable liquid; Category 1
Flam. Liq. 2	Flammable liquid; Category 2
Flam. Liq. 3	Flammable liquid; Category 3
Flam. Sol. 1	Flammable solid; Category 1
Flam. Sol. 2	Flammable solid; Category 2
Org. Perox. C	Organic peroxide; Type C
Org. Perox. D	Organic peroxide; Type D
Ox. Liq. 1	Oxidising liquid; Category 1
Ox. Liq. 2	Oxidising liquid; Category 2
Ox. Liq. 3	Oxidising liquid; Category 3
Ox. Sol. 1	Oxidising solid; Category 1
Ox. Sol. 2	Oxidising solid; Category 2
Ox. Sol. 3	Oxidising solid; Category 3
Pyr. Sol. 1	Pyrophoric solid; Category 1
Self-heat. 1	Self-heating substance/mixture; Category 1
Self-react. C	Self-reactive substance; Type C
Met. Corr. 1	Substance/mixture corrosive to metal; Category 1
Water-react. 1	Substance/mixture which, in contact with water, emits flammable gases; Category 1
Water-react. 2	Substance/mixture which, in contact with water, emits flammable gases; Category 2
Water-react. 3	Substance/mixture which, in contact with water, emits flammable gases; Category 3

Hazard and precautionary statements

EUH Phrases	
EUH001	Explosive when dry
EUH006	Explosive with or without contact with air
EUH014	Reacts violently with water
EUH018	In use, may form flammable/explosive vapor-air mixture
EUH019	May form explosive peroxides
EUH029	Contact with water liberates toxic gas
EUH031	Contact with acids liberates toxic gas
EUH032	Contact with acids liberates very toxic gas
EUH044	Risk of explosion if heated under confinement
EUH059	Hazardous to the ozone layer
EUH066	Repeated exposure may cause skin dryness or cracking
EUH070	Toxic by eye contact
EUH071	Corrosive to the respiratory tract
EUH201	Contains lead. Should not be used on surfaces liable to be chewed or sucked by children
EUH201A	Warning! Contains lead
EUH202	Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children
EUH203	Contains chromium (VI). May produce an allergic reaction
EUH204	Contains isocyanates. May produce an allergic reaction
EUH205	Contains epoxy constituents. May produce an allergic reaction
EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine)
EUH207	Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer. Comply with the safety instructions
EUH208	May produce an allergic reaction
EUH209	Can become highly flammable in use
EUH210	Safety data sheet available on request
EUH401	To avoid risks to human health and the environment, comply with the instructions for use

H Phrases	
H200	Unstable explosive
H201	Explosive; mass explosion hazard
H202	Explosive; severe projection hazard
H203	Explosive; fire, blast or projection hazard
H204	Fire or projection hazard
H205	May mass explode in fire
H220	Extremely flammable gas
H221	Flammable gas
H222	Extremely flammable aerosol
H223	Flammable aerosol
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H227	Combustible liquid
H228	Flammable solid
H240	Heating may cause an explosion
H241	Heating may cause a fire or explosion
H242	Heating may cause a fire
H250	Catches fire spontaneously if exposed to air
H251	Self-heating: may catch fire
H252	Self-heating in large quantities; may catch fire
H260	In contact with water releases flammable gases which may ignite spontaneously
H261	In contact with water releases flammable gases
H270	May cause or intensify fire; oxidizer
H271	May cause fire or explosion; strong oxidizer
H272	May intensify fire; oxidizer
H280	Contains gas under pressure; may explode if heated
H281	Contains refrigerated gas; may cause cryogenic burns or injury
H290	May be corrosive to metals
H300	Fatal if swallowed
H301	Toxic if swallowed
H302	Harmful if swallowed
H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways
H305	May be harmful if swallowed and enters airways
H310	Fatal in contact with skin
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H313	May be harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H316	Causes mild skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H320	Causes eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled
H332	Harmful if inhaled
H333	May be harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H341	Suspected of causing genetic defects
H350	May cause cancer
H350i	May cause cancer by inhalation
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H360D	May damage the unborn child
H360Df	May damage the unborn child. Suspected of damaging fertility
H360F	May damage fertility
H360Fd	May damage fertility. Suspected of damaging the unborn child
H361	Suspected of damaging fertility or the unborn child
H361d	Suspected of damaging the unborn child
H361f	Suspected of damaging fertility
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child
H362	May cause harm to breast-fed children
H370	Causes damage to organs
H371	May cause damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
H420	Harms public health and the environment by destroying ozone in the upper atmosphere

P Phrases	
P101	If medical advice is needed, have product container or label at hand
P102	Keep out of reach of children
P103	Read label before use
P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P211	Do not spray on an open flame or other ignition source
P220	Keep/Store away from clothing/ combustible materials
P221	Take any precaution to avoid mixing with combustibles
P222	Do not allow contact with air
P223	Keep away from any possible contact with water, because of violent reaction and possible flash fire
P230	Keep wetted with .?
P231	Handle under inert gas
P231 + P232	Handle under inert gas. Protect from moisture
P232	Protect from moisture
P233	Keep container tightly closed
P234	Keep only in original container
P235	Keep cool
P235 + P410	Keep cool. Protect from sunlight
P240	Ground/Bond container and receiving equipment
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge
P244	Keep reduction valves free from grease and oil
P250	Do not subject to grinding/shock/friction
P251	Pressurized container: Do not pierce or burn, even after use
P260	Do not breathe dust/fume/gas/mist/vapors/spray
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P262	Do not get in eyes, on skin, or on clothing
P263	Avoid contact during pregnancy/ while nursing
P264	Wash face, hands and any exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace
P273	Avoid release to the environment
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
P281	Use personal protective equipment as required
P282	Wear cold insulating gloves/ face shield/ eye protection
P283	Wear fire/ flame resistant/ retardant clothing
P284	Wear respiratory protection
P285	In case of inadequate ventilation wear respiratory protection

Hazard and precautionary statements

P Phrases	
P301	IF SWALLOWED
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P302	IF ON SKIN
P302 + P334	IF ON SKIN: Immerse in cool water/ wrap in wet bandages
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P303	IF ON SKIN (or hair)
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P304	IF INHALED
P304 + P312	IF INHALED: Call a POISON CENTER or doctor/ physician if you feel unwell
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P304 + P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing
P305	IF IN EYES
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P306	IF ON CLOTHING
P306 + P360	IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
P307	IF exposed
P307 + P311	IF exposed: Call a POISON CENTER or doctor/ physician
P308	IF exposed or concerned
P308 + P313	IF exposed or concerned: Get medical advice/ attention
P309	IF exposed or if you feel unwell
P309 + P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician
P310	Immediately call a POISON CENTER or doctor/ physician
P311	Call a POISON CENTER or doctor/ physician
P312	Call a POISON CENTER or doctor/ physician if you feel unwell
P313	Get medical advice/ attention
P314	Get medical advice/ attention if you feel unwell
P315	Get immediate medical advice/ attention
P320	Specific treatment is urgent (see ... on this label)
P321	Specific treatment (see ... on this label)
P322	Specific measures (see ... on this label)
P330	Rinse mouth
P331	Do NOT induce vomiting
P332	If skin irritation occurs
P332 + P313	If skin irritation occurs: Get medical advice/ attention
P333	If skin irritation or rash occurs
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention
P334	Immerse in cool water/ wrap in wet bandages
P335	Brush off loose particles from skin
P335 + P334	Brush off loose particles from skin. Immerse in cool water/ wrap in wet bandages
P336	Thaw frosted parts with lukewarm water. Do no rub affected area
P337	If eye irritation persists
P337 + P313	If eye irritation persists: Get medical advice/ attention
P338	Remove contact lenses, if present and easy to do. Continue rinsing
P340	Remove to fresh air and keep at rest in a position comfortable for breathing
P341	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing
P342	If experiencing respiratory symptoms
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician
P350	Gently wash with plenty of soap and water
P351	Rinse cautiously with water for several minutes
P352	Wash with plenty of soap and water
P353	Rinse skin with water/ shower
P360	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
P361	Remove/Take off immediately all contaminated clothing
P362	Take off contaminated clothing and wash before reuse
P363	Wash contaminated clothing before reuse
P370	In case of fire
P370 + P376	In case of fire: Stop leak if safe to do so
P370 + P378	In case of fire: Use ... for extinction
P370 + P380	In case of fire: Evacuate area
P370 + P380 + P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion
P371	In case of major fire and large quantities
P371 + P380 + P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
P372	Explosion risk in case of fire
P373	DO NOT fight fire when fire reaches explosives
P374	Fight fire with normal precautions from a reasonable distance
P375	Fight fire remotely due to the risk of explosion
P376	Stop leak if safe to do so
P377	Leaking gas fire: do not extinguish, unless leak can be stopped safely
P378	Use ... for extinction
P380	Evacuate area
P381	Eliminate all ignition sources if safe to do so
P390	Absorb spillage to prevent material damage
P391	Collect spillage
P401	Store …
P402	Store in a dry place
P402 + P404	Store in a dry place. Store in a closed container
P403	Store in a well-ventilated place
P403 + P233	Store in a well-ventilated place. Keep container tightly closed
P403 + P235	Store in a well-ventilated place. Keep cool
P404	Store in a closed container
P405	Store locked up
P406	Store in corrosive resistant/ ... container with a resistant inner liner
P407	Maintain air gap between stacks/ pallets
P410	Protect from sunlight
P410 + P403	Protect from sunlight. Store in a well-ventilated place
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F
P411	Store at temperatures not exceeding ... °C/ ... °F
P411 + P235	Store at temperatures not exceeding ... °C/ ... °F. Keep cool
P412	Do not expose to temperatures exceeding 50 °C/ 122 °F
P413	Store bulk masses greater than ... kg/ ... lbs at temperatures not exceeding ... °C/ ... °F
P420	Store away from other materials
P422	Store contents under …
P501	Dispose of contents/container to …
P502	Refer to manufacturer/ supplier for information on recovery/ recycling

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Z/1600/53	376
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Z/1600/70	376
Z/1700/53	377
Z/1850/50	377
Z/1900/53	377

Fisher Chemical

Ask your local account manager or Chemicals Specialist for a copy of our latest literature and technical resources.... or download them from www.acros.com. Register with your local Fisher Chemical distributor to receive new resources as they become available.

Optima LC/MS product range

Fisher Chemical OPTIMA LC/MS solvents have set the standard of excellence for consistent, reproducible performance in the mobile phase of LC/MS. These same high purity solvents are pre-blended with OPTIMA LC/MS modifiers such as Formic acid (FA) or Trifluoroacetic acid (TFA) to provide ready-to-use aqueous and organic mobile phase blends for LC/MS and LC/UV applications. Alternatively, solvents and modifiers can be purchased separately to be blended to your own specification. This brochure gives an overview of the product range and product specifications.

White paper – Optimizing Mobile Phase Solvent Purity for LC/MS

This paper presents comparative chromatographic data from four different instruments for LC/MS solvents offered by seven vendors. Data collected examine mass baseline, signal intensity, contamination by PEG and phthalates (plasticizers), and metal ion content which impacts ease of MS interpretation.

UHPLC product range

Our UHPLC gradient grade solvents have an extraordinarily low solvent filtration of 0.1 µm, ensuring low baseline noise and reducing pump blockages. Perfect for those working at high pressure, where high sensitivity and a fast run rate are key to successful analysis. This brochure gives an overview of the product range and product specifications.

Elemental Analysis - If you are looking for acids, look no further.

Whether you are analyzing environmental samples, etching glass, conducting routine testing or performing the most demanding laboratory procedures, Fisher Chemical can supply virtually any type of acid you need, in the grades, sizes and packaging that meet your requirements. This brochure gives an overview of the complete line of acid grades, detailing product specifications to ensure you can select the correct grade for your most challenging applications.

Specialized Chemical Services

This brochure gives an overview of our capabilities to support your chemistry when there is a need for products that are not listed amongst our catalogue products

- Semi-bulk and bulk requirements
- Tailored solvents and solvent blends or customized solutions
- Testing services or customized packaging and labeling

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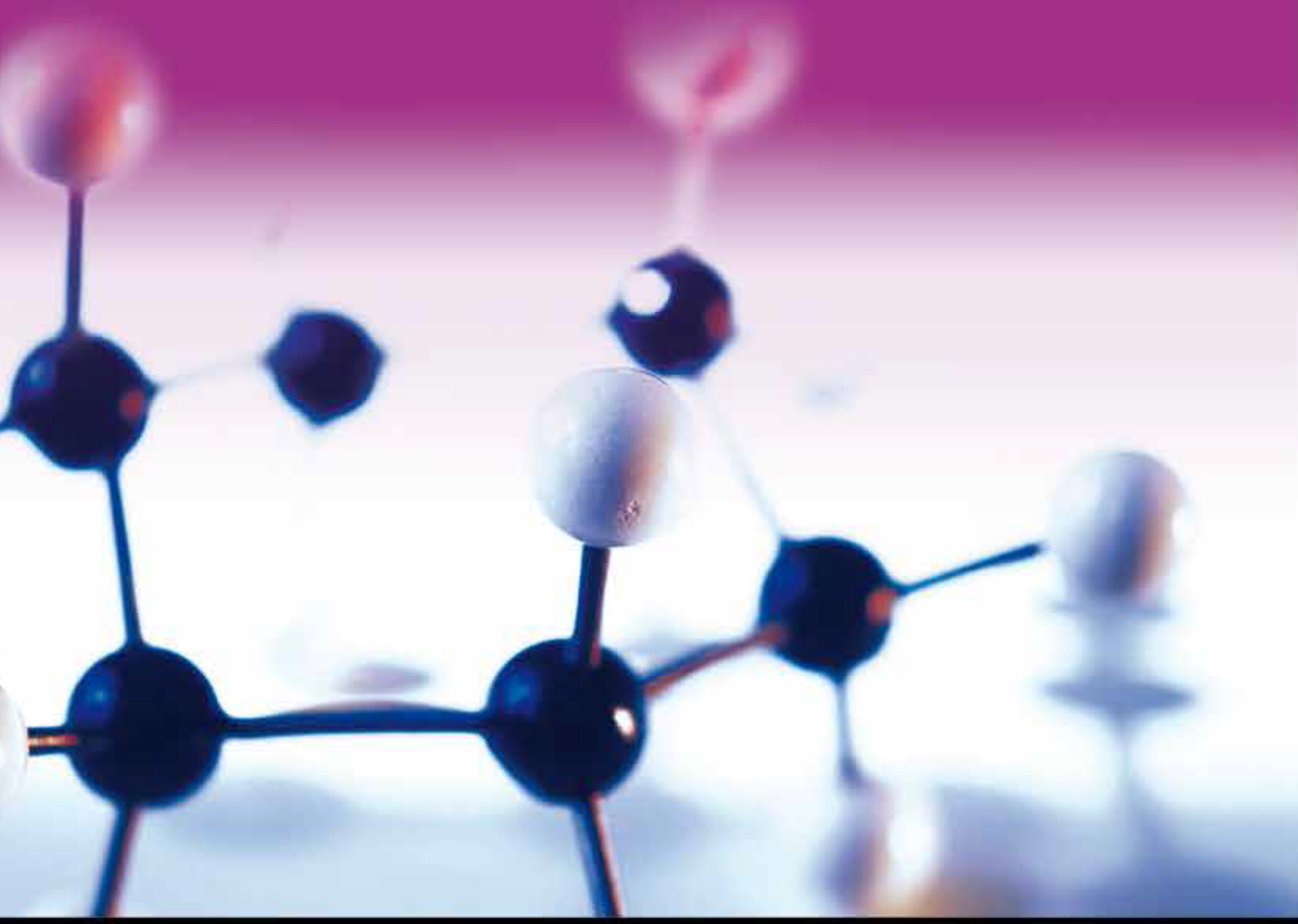

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