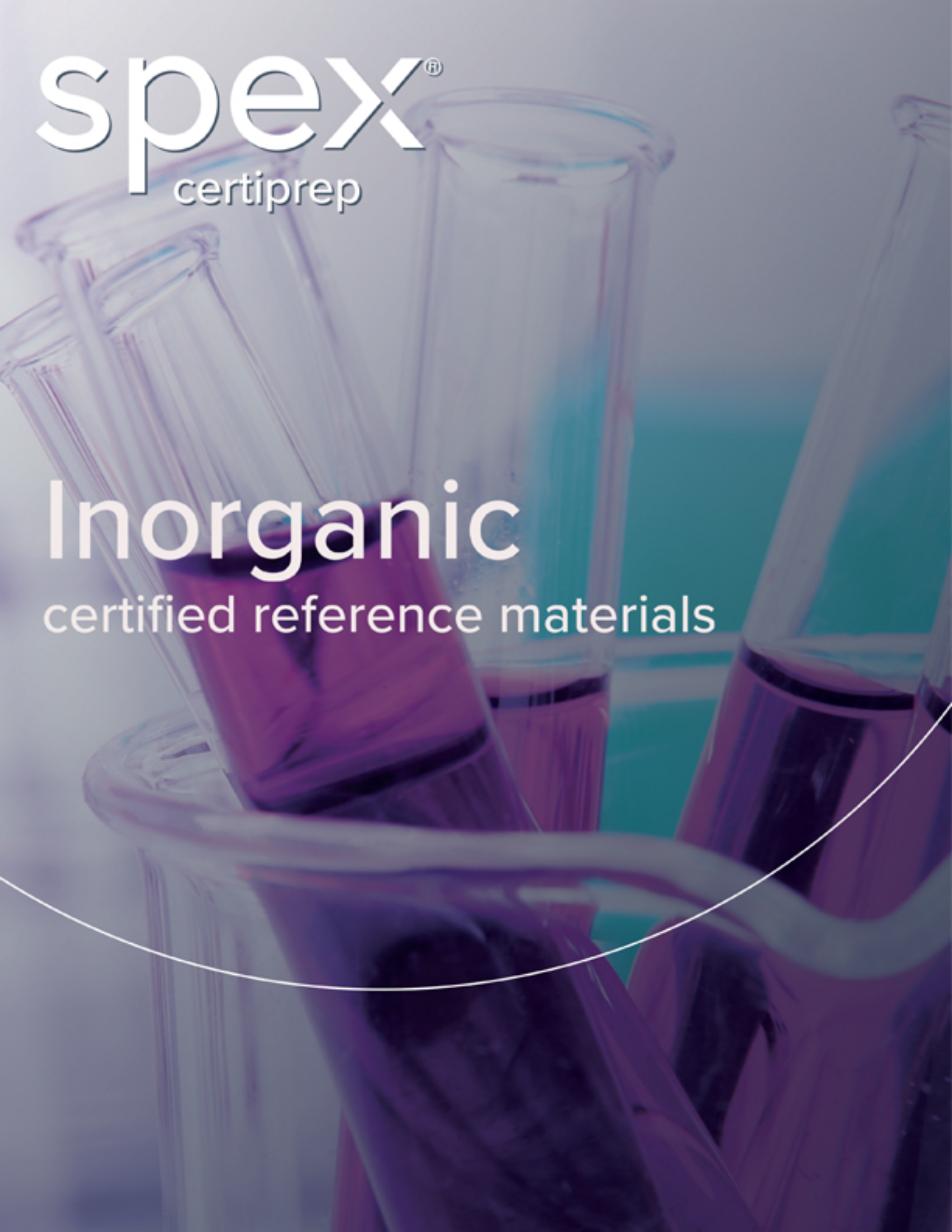
spex®
certiprep

Inorganic

certified reference materials



Welcome

Spex CertiPrep has been servicing the scientific community since 1954. We have grown into the industry's most passionate and reliable manufacturer of Certified Reference Materials (CRMs) and Calibration Standards for Analytical Spectroscopy and Chromatography.

We are pleased to share with you the latest and greatest Spex CertiPrep Certified Reference Materials catalog. This flip-book style catalog includes our Inorganic Certified Reference Materials on one side and Organic Certified Reference Materials on the other.

Our primary focus is to provide Inorganic and Organic CRMs of the highest quality and superior customer support. The Inorganic Standards are manufactured for AA, ICP, ICP-MS, IC, XRF, and other analytical instrumentation. The Organic Standards are manufactured for GC, GC/MS, HPLC, LC/MS, and other analytical instrumentation.

Spex CertiPrep Group is accredited by A2LA to ISO/IEC 17025:2017 and ISO 17034:2016 and by DQS to ISO 9001:2015. Our accreditation is the most comprehensive in the industry and encompasses all of our manufactured products.

Our Inorganic product line expands as technology improves. Ninety-nine percent of stock orders ship within 24-48 hours and custom standards are manufactured and shipped within 5 business days.

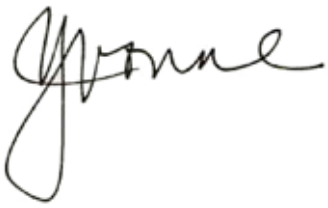
We are proud to offer many new and diverse Inorganic products in this catalog, including:

- Speciation Standards
- Carbon Black
- 1 ppm ICP-MS Single Element Standards
- USP <232>, <233> & <2232> Elemental Impurities
- Certified pH Buffers
- Multi-Element Standards for the latest EPA Methods
- European Methods

Our heritage is our passion for science and dedication to the analytical community.

We appreciate your business and look forward to working with you in the years to come.

Sincerely,



Yvonne Cangelosi
President

4772A

OUR MISSION

Since 1954, we have been manufacturing Inorganic Certified Reference Materials (CRMs). SPEXInorganics® continues to lead the market with the highest quality products and an offering that spreads out into many market segments worldwide. We consistently strive to design and manufacture new products to meet or exceed the requirements set by the newest instrumentation and regulatory concerns. Our team of highly trained chemists work to provide 100% customer satisfaction.

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Phone: +1.732.549.7144 • 1.800.LAB.SPEX (1.800.522.7739)

Fax: +1.732.603.9647

E-mail: spexsales@antylia.com

Online Orders and Live Chat: www.spex.com

Ask A Chemist: AskAChemist@antylia.com

Mailing Address: Spex CertiPrep • 203 Norcross Avenue • Metuchen, NJ 08840

TERMS & CONDITIONS

GENERAL CONDITIONS

Payment terms are Net 30 days to rated organizations or payment can be made by credit card. Orders are shipped FCA Metuchen, New Jersey, and are shipped in accordance with IATA or DOT regulations. All freight charges are prepaid and added to the invoice unless otherwise specified on your order.

RETURN AND/OR EXCHANGE

Contact our Sales Department for a Return Authorization Number and instructions before shipping. Unauthorized returns will be refused. Transportation is the responsibility of the customer; all materials must be packed, marked, labeled, and shipped in accordance with regulations governing transportation of hazardous materials, if applicable. Credit for returned merchandise will be issued only if goods are unopened, resalable and received within 30 days of the original invoice date. Returned items are subject to a 25% restocking fee.

LIMITED LIABILITY

Purchaser's sole and exclusive remedy for damages and seller's sole and exclusive liability for damages for any cause whatsoever, including alleged negligence, is limited to the refund of the purchase price of the product or replacement of the product at seller's election. In no event shall seller be liable for direct, indirect, incidental, or consequential damages, including lost profits.

EXPORT ORDERS

Spex CertiPrep maintains authorized distributors in many countries around the world. Please visit the following web page at **spex.com/distributor** for a complete list of international distributors.

PRECAUTIONS

Spex CertiPrep products are not for any cosmetic, drug or household applications. Our acceptance of a purchase order is with the assumption that products will be used only by qualified individuals who are trained in appropriate procedures. Customers must ensure safe storage, handling and application of all products ordered from this catalog. We assume requisitioner's to be competent, safety-conscious professionals.

Spex CertiPrep offers Custom Certified Reference Materials because we realize that no two laboratories face exactly the same samples, or precisely the same requirements. In the real world, trace element determinations are performed in the presence of one or several major constituents, varying inter-element effects, matrix effects...the list goes on and on. These issues become increasingly important as you strive for greater reproducibility and push your technique to the limit and thereby require standards made specifically for your application.

With Spex CertiPrep's Custom Certified Reference Materials (CRMs) program, you can remove some of these variables. Select custom standards in connection with all product lines, from Single-Element and Multi-Element aqueous blends to Organometallic Oil Standards. Our sales specialists will be happy to discuss your applications/instrumentation, combination of elements, concentrations, and your preferred matrices. We will then design the most compatible, stable mixture using our comprehensive supply of starting materials and certified solutions. Simply tell us what standards you need and let our highly skilled chemists determine the optimum combinations for you.

BENEFITS:

- Customized for your application
- Certified by ICP, ICP-MS, LC-ICP-MS, or IC analysis
- High quality starting materials tested for impurities prior to use
- Over 60 years of experience in manufacturing custom CRMs
- Manufactured and shipped within 5 business days
- Dedicated technical support to answer your CRM and lab questions

CUSTOMS AVAILABLE FOR:

- Assurance® Grade Standards for AA and ICP
- Claritas PPT® Grade Standards for ICP-MS
- Speciation Standards for LC-ICP-MS
- Ion Chromatography/Ion Selective Electrode Standards
- Organometallic Oil Standards
- Fusion Flux
- Consumer Safety Compliance Standards

OUR GUARANTEE

We will guarantee your custom standards for one year from the date of shipment and supply your standard with a comprehensive Certificate of Analysis. For Claritas PPT® custom standards, we will include an impurity analysis on your Certificate of Analysis.

To get started, contact our technical sales team at 732.549.7144 or visit: **spex.com/CustomProduct/InorganicProduct** with the following information:

- Your specific application/instrumentation
- The concentration(s) at which you require each component
- The elements or complexes you desire
- The matrix which you prefer (e.g., water, dilute acid, oil, etc.)

Certified Reference Materials of the Highest Quality - How Can We Prove It?

To ensure the validity of results from today's high-performance instrumentation, Spex CertiPrep has developed an extensive line of the highest quality certified reference materials. How can we prove it? The International Organization for Standardization (ISO) has established a set of guidelines designed to define common business practices, increase responsibility and ensure clarity and full disclosure in the industry. As shown below, there are three ISO quality management systems that are most relevant for reference material manufacturers - ISO 9001, ISO/IEC 17025 and ISO 17034.

Each level has its own set of internationally recognized criteria against which companies are formally measured. Each level is more difficult to achieve and fewer companies are able to meet the required criteria. Spex CertiPrep is proud to be accredited for all three. By taking the extra step of choosing to demonstrate our competence and comply with these standards, we are continuously proving that our tests and calibration results are technically competent and our products truly are of the highest quality.

Levels of Accreditation - About Each Standard and What it Means to You

Level 1: ISO 9001:2015 - Customer Satisfaction (all types of organizations)
Certified by UL-DQS as an ISO 9001:2015 facility for our Quality Management System

Open to all types of organizations • Written procedures • Documented complaints

Level 2: ISO/IEC 17025:2017 - Technically Sound Products (testing and/or calibration labs)
Accredited by A2LA as an ISO/IEC 17025:2017 Certified Chemical Testing Laboratory

Specifically for organizations carrying out testing and/or calibration • Competent at quality related tests • Consistent manufacturing

Level 3: ISO 17034:2016 - Traceable & Accurate Reference Materials (reference material producers)
Accredited by A2LA as an ISO 17034:2016 Certified Inorganic and Organic Reference Material Producer

Specifically for reference material producers • Validate methods to prove accuracy • Report uncertainty and sources of error

Did You Know?

Did you know that our purchased starting materials are double tested to assure what is put in our products is of the highest quality?

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Every accredited manufacturer of Certified Reference Materials supplies a Certificate of Analysis (COA) with their products. ISO Guide 31 and ISO 17034 outline the information required for a Certificate of Analysis. In order to comply with the ISO standards, an accredited CRM manufacturer must supply more than a dozen informational and analytical values such as certifying bodies, material descriptions, intended use, instructions for use, homogeneity, stability, certified values and their uncertainties, and traceability. Not all certificates are alike. Spex CertiPrep has been supplying some of the most comprehensive Certificates of Analysis in the CRM industry for years. Our certificates are easy to read and have all of the information an analyst would need to use our standards. We have highlighted what you should look for in a Certificate of Analysis and why our certificate is one of the best.

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ACCREDITED Reference Materials Producer Cert. #2495.01 | ILAC-MRA | ACCREDITED Chemical Testing Cert. #2495.02

Catalog Number: CLMS-2N
Description: Multi-element Solution 2
Matrix: 5% HNO3

Lot No. CL5-199MKBY

The **CLARITAS PPT®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in US EPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single-element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	10 µg/mL	9.89 µg/mL	± 0.05 µg/mL	3151*	K	10 µg/mL	9.89 µg/mL	± 0.05 µg/mL	3141a*
Al	10 µg/mL	9.89 µg/mL	± 0.05 µg/mL	3101a*	Li	10 µg/mL	9.99 µg/mL	± 0.05 µg/mL	3129a*
As	10 µg/mL	9.92 µg/mL	± 0.05 µg/mL	3103a*	Mg	10 µg/mL	9.98 µg/mL	± 0.05 µg/mL	3131a*
Ba	10 µg/mL	9.98 µg/mL	± 0.05 µg/mL	3104a*	Mn	10 µg/mL	9.99 µg/mL	± 0.05 µg/mL	3132*
Be	10 µg/mL	10.0 µg/mL	± 0.05 µg/mL	3105a*	Na	10 µg/mL	9.91 µg/mL	± 0.05 µg/mL	3152a*
Bi	10 µg/mL	9.97 µg/mL	± 0.05 µg/mL	3106*	Ni	10 µg/mL	9.95 µg/mL	± 0.05 µg/mL	3136*
Ca	10 µg/mL	9.94 µg/mL	± 0.05 µg/mL	3109a*	Pb	10 µg/mL	9.91 µg/mL	± 0.05 µg/mL	3128*
Cd	10 µg/mL	9.95 µg/mL	± 0.05 µg/mL	3108*	Rb	10 µg/mL	9.93 µg/mL	± 0.05 µg/mL	3145a*
Co	10 µg/mL	9.95 µg/mL	± 0.05 µg/mL	3113*	Se	10 µg/mL	9.98 µg/mL	± 0.05 µg/mL	3149*
Cr	10 µg/mL	9.93 µg/mL	± 0.05 µg/mL	3112a*	Sr	10 µg/mL	9.97 µg/mL	± 0.05 µg/mL	3153a*
Cs	10 µg/mL	10.0 µg/mL	± 0.05 µg/mL	3111a*	Tl	10 µg/mL	9.88 µg/mL	± 0.05 µg/mL	3158*
Cu	10 µg/mL	10.0 µg/mL	± 0.05 µg/mL	3114*	U	10 µg/mL	10.0 µg/mL	± 0.05 µg/mL	3164*
Fe	10 µg/mL	10.3 µg/mL	± 0.05 µg/mL	3126a*	V	10 µg/mL	9.99 µg/mL	± 0.05 µg/mL	3165*
Ga	10 µg/mL	10.0 µg/mL	± 0.05 µg/mL	3119a*	Zn	10 µg/mL	10.0 µg/mL	± 0.05 µg/mL	3168a*
In	10 µg/mL	9.87 µg/mL	± 0.05 µg/mL	3124a*					

* - Indicates NIST SRM † - Indicates Spex CertiPrep CRM (when NIST SRM is not available)
Spex CertiPrep Reference Multi: Lot # CL3-151MKB, CL4-108MKB

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/mL	Element	µg/mL	Element	µg/mL	Element	µg/mL	Element	µg/mL	Element	µg/mL
Au	< 0.04	Ge	< 0.7	Mo	0.2	Re	< 0.01	Sm	0.9	Ti	< 6
B	< 2	Hf	< 0.08	Nb	< 0.06	Rh	0.7	Sn	< 0.9	Tm	0.05
Ce	0.1	Hg	< 0.2	Nd	< 0.01	Ru	< 1	Ta	< 0.1	W	< 0.3
Dy	< 0.01	Ho	< 0.01	P	< 200	Sb	< 0.04	Tb	< 2	Y	6
Er	< 0.01	Ir	0.08	Pd	< 5	Sc	< 0.4	Te	< 1	Yb	< 0.01
Eu	< 0.01	La	0.07	Pr	< 0.01	Si	< 200	Th	0.01	Zr	< 0.1
Gd	< 0.02	Lu	< 0.02	Pt	< 0.01						

Balances are calibrated regularly with weight sets traceable to NIST #s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ± 0.5% of the certified value. This includes uncertainty components due to preparation, measurement, homogeneity, short-term, and long-term stability. No measured concentration of any individual component exceeds ± 2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient labotatory conditions.

Date of Certification: _____

Certifying Officer: _____
Katherine Cullinan, QC Manager

Spex CertiPrep is accredited by A2LA for Inorganic and Organic Certified Reference Materials as complying with the requirements of ISO/IEC 17025 and ISO 17034 with the most comprehensive scope in the industry.

68 elements are scanned with ***found values*** for Claritas PPT® and Assurance® Standards.

Each elemental impurity listed with ***actual value*** - not limited to elements above detection limits.

Trace impurities of the ***final solution*** - not of the starting material.

Stability and accuracy of the ***final solution*** - not the starting materials.

Traceable to NIST.

Signed by Spex CertiPrep's Inorganic QC Manager.

Stamped with month and year of certification.

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To request product catalogs, please contact us or visit our website at **www.spex.com**.

spex sampleprep

Sample preparation is an important part of the quality control process. Spex SamplePrep's expertise and products can help analysts achieve accurate and consistent results by assuring reliable, reproducible samples.

Our sample preparation equipment products include cryogenic mills, cell lysers, pellet presses, ball mills, and automated fusion fluxers. We also provide XRF liquid cells, XRF window films and a selection of sample binders and grinding aids to simplify the sample preparation process. These products are used throughout the world in industrial, academic, research, and government laboratories. The uses cover many different fields of spectroscopy (XRF, ICP, ICP-MS, AA, IR) and their applications range from genetic research, forensics, geology, medicine, materials research, and agriculture.

We provide a Handbook of Sample Preparation and Handling that is known as a primary source of helpful advice for the preparation of samples. The topics covered in this handbook include grinding, pelletizing, fusion fluxing, and controlling contamination. Visit **www.spex.com** to learn more about our products, download the handbook or watch product demonstration videos.

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section 1

Assurance® Single-Element Standards for AA & ICP

Single-Element Standards for AA & ICP

- Made with acid and ASTM Type I Water
- Inorganic compounds and metals at 99.99& to 99.9999% purity (where commercially available)
- Directly traceable to NIST (where applicable)
- Certified by DQS to ISO 9001:2015
- Accredited by A2LA to ISO/IEC 17025:2017 and ISO 17034:2016

AA & ICP

Assurance® Grade CRMs are designed for AA and ICP and are available in single and multi-element formulations. 70 elements are available as single-element standards and are available at 1,000 µg/mL and/or 10,000 µg/mL. They are packaged in 30 mL, 125 mL, 250 mL, and 500 mL bottles to minimize contamination. Custom standards can be manufactured upon request.

Assurance® Grade CRMs	
Designed For Use With	AA | ICP
Analytical Range For Use	ppm, ppb
Single-Element Standards	√
10 µg/mL	√ (Hg only)
1,000 µg/mL	√
10,000 µg/mL	√
Multi-Element Standards	√
Custom Standards	√
Certifications	
ISO 9001:2015	√
ISO/IEC 17025:2017	√
ISO 17034:2016	√
Quality	
Traceable to NIST SRM (where applicable)	√
Acid Grade	High Purity Grade
# Trace Impurities Measured on Certificate of Analysis	68
Trace Impurities Measured to	µg/mL
Volume	
30 mL	√
125 mL	√
250 mL	√
500 mL	√

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Al
Aluminum

General Properties	
Atomic Number	13
Atomic Mass	26.982
Density	2.7 g/cm^3
Melting Point	660 °C
Boiling Point	2467 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLAL2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLAL2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLAL2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLAL2-2X
1,000 µg/mL	500 mL	2% HCl	PLAL1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLAL2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLAL2-3X
10,000 µg/mL	500 mL	5% HCl	PLAL1-3X

Sb
Antimony

General Properties	
Atomic Number	51
Atomic Mass	121.760
Density	6.697 g/cm^3
Melting Point	630 °C
Boiling Point	1587 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O/0.6% Tartaric Acid/tr. HNO_3	PLSB7-2M
1,000 µg/mL	125 mL	H_2O/0.6% Tartaric Acid/tr. HNO_3	PLSB7-2Y
1,000 µg/mL	250 mL	H_2O/0.6% Tartaric Acid/tr. HNO_3	PLSB7-2T
1,000 µg/mL	500 mL	H_2O/0.6% Tartaric Acid/tr. HNO_3	PLSB7-2X
1,000 µg/mL	500 mL	20% HCl	PLSB5-2X
10,000 µg/mL	125 mL	H_2O/0.6% Tartaric Acid/1% HNO_3	PLSB7-3Y
10,000 µg/mL	500 mL	H_2O/0.6% Tartaric Acid/1% HNO_3	PLSB7-3X

As
Arsenic

General Properties	
Atomic Number	33
Atomic Mass	74.922
Density	5.727 g/cm^3
Melting Point	817 °C
Boiling Point	614 °C*

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLAS2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLAS2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLAS2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLAS2-2X
1,000 µg/mL	500 mL	2% HCl	PLAS1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLAS2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLAS2-3X

** Sublimation Point.*

Ba
Barium

General Properties	
Atomic Number	56
Atomic Mass	137.327
Density	3.51 g/cm^3
Melting Point	727 °C
Boiling Point	1897 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLBA2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLBA2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLBA2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLBA2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLBA2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLBA2-3X

Be
Beryllium

General Properties	
Atomic Number	4
Atomic Mass	9.012
Density	1.848 g/cm^3
Melting Point	1287 °C
Boiling Point	2471 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLBE2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLBE2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLBE2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLBE2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLBE2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLBE2-3X

Bi
Bismuth

General Properties	
Atomic Number	83
Atomic Mass	208.980
Density	9.78 g/cm^3
Melting Point	271 °C
Boiling Point	1564 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	10% HNO_3	PLBI4-2M
1,000 µg/mL	125 mL	10% HNO_3	PLBI4-2Y
1,000 µg/mL	500 mL	10% HNO_3	PLBI4-2X

B
Boron

General Properties	
Atomic Number	5
Atomic Mass	10.811
Density	2.46 g/cm^3
Melting Point	2075 °C
Boiling Point	4000 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O	PLB9-2M
1,000 µg/mL	125 mL	H_2O	PLB9-2Y
1,000 µg/mL	250 mL	H_2O	PLB9-2T
1,000 µg/mL	500 mL	H_2O	PLB9-2X
10,000 µg/mL	125 mL	H_2O	PLB9-3Y
10,000 µg/mL	500 mL	H_2O	PLB9-3X

Cd
Cadmium

General Properties	
Atomic Number	48
Atomic Mass	112.411
Density	8.65 g/cm^3
Melting Point	321 °C
Boiling Point	767 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLCD2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLCD2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLCD2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLCD2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLCD2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLCD2-3X

Ca
Calcium

General Properties	
Atomic Number	20
Atomic Mass	40.078
Density	1.55 g/cm^3
Melting Point	842 °C
Boiling Point	1484 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLCA2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLCA2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLCA2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLCA2-2X
1,000 µg/mL	500 mL	2% HCl	PLCA1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLCA2-3Y
10,000 µg/mL	250 mL	5% HNO_3	PLCA2-3T
10,000 µg/mL	500 mL	5% HNO_3	PLCA2-3X
10,000 µg/mL	500 mL	5% HCl	PLCA1-3X

C
Carbon

General Properties	
Atomic Number	6
Atomic Mass	12.011
Density	2.26 g/cm^3
Melting Point	3550 °C*
Boiling Point	3825 °C*

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O	PLC9-2M
1,000 µg/mL	125 mL	H_2O	PLC9-2Y
1,000 µg/mL	500 mL	H_2O	PLC9-2X

** Numbers provided are for graphite. Carbon sublimates at -78.5°C.*

Ce
Cerium

General Properties	
Atomic Number	58
Atomic Mass	140.116
Density	6.689 g/cm^3
Melting Point	798 °C
Boiling Point	3424 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLCE2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLCE2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLCE2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLCE2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLCE2-3X

Cs
Cesium

General Properties	
Atomic Number	55
Atomic Mass	132.905
Density	1.879 g/cm^3
Melting Point	28 °C
Boiling Point	671 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLCS2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLCS2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLCS2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLCS2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLCS2-3X

Cr
Chromium

General Properties	
Atomic Number	24
Atomic Mass	51.996
Density	7.14 g/cm^3
Melting Point	1907 °C
Boiling Point	2671 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLCR2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLCR2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLCR2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLCR2-2X
1,000 µg/mL	500 mL	2% HCl	PLCR1-2X
1,000 µg/mL	500 mL	H_2O	PLCR9-2X
10,000 µg/mL	125 mL	5% HNO_3	PLCR2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLCR2-3X
10,000 µg/mL	500 mL	H_2O	PLCR9-3X

Co
Cobalt

General Properties	
Atomic Number	27
Atomic Mass	58.933
Density	8.9 g/cm^3
Melting Point	1495 °C
Boiling Point	2927 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLCO2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLCO2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLCO2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLCO2-2X
1,000 µg/mL	500 mL	2% HCl	PLCO1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLCO2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLCO2-3X

Cu
Copper

General Properties	
Atomic Number	29
Atomic Mass	63.546
Density	8.92 g/cm^3
Melting Point	1084 °C
Boiling Point	2562 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLCU2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLCU2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLCU2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLCU2-2X
1,000 µg/mL	500 mL	2% HCl	PLCU1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLCU2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLCU2-3X
10,000 µg/mL	500 mL	5% HCl	PLCU1-3X

Dy
Dysprosium

General Properties	
Atomic Number	66
Atomic Mass	162.5
Density	8.551 g/cm^3
Melting Point	1412 °C
Boiling Point	2567 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLDY2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLDY2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLDY2-2X

Er
Erbium

General Properties	
Atomic Number	68
Atomic Mass	167.259
Density	9.066 g/cm^3
Melting Point	1529 °C
Boiling Point	2868 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLER2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLER2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLER2-2X

Eu
Europium

General Properties	
Atomic Number	63
Atomic Mass	151.964
Density	5.244 g/cm^3
Melting Point	822 °C
Boiling Point	1529 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLEU2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLEU2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLEU2-2X

Gd
Gadolinium

General Properties	
Atomic Number	64
Atomic Mass	157.25
Density	7.9 g/cm^3
Melting Point	1312 °C
Boiling Point	3266 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLGD2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLGD2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLGD2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLGD2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLGD2-3X

Ga
Gallium

General Properties	
Atomic Number	31
Atomic Mass	69.723
Density	5.904 g/cm^3
Melting Point	30 °C
Boiling Point	2204 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLGA2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLGA2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLGA2-2X

Ge
Germanium

General Properties	
Atomic Number	32
Atomic Mass	72.63
Density	5.323 g/cm^3
Melting Point	938 °C
Boiling Point	2833 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O/0.16% F^-	PLGE9-2M
1,000 µg/mL	125 mL	H_2O/0.16% F^-	PLGE9-2Y
1,000 µg/mL	500 mL	H_2O/0.16% F^-	PLGE9-2X

Au
Gold

General Properties	
Atomic Number	79
Atomic Mass	196.967
Density	19.3 g/cm^3
Melting Point	1064 °C
Boiling Point	2970 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	10% HCl	PLAU3-2M
1,000 µg/mL	125 mL	10% HCl	PLAU3-2Y
1,000 µg/mL	500 mL	10% HCl	PLAU3-2X

Hf
Hafnium

General Properties	
Atomic Number	72
Atomic Mass	178.49
Density	13.31 g/cm^3
Melting Point	2233 °C
Boiling Point	4603 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HCl	PLHF1-2M
1,000 µg/mL	125 mL	2% HCl	PLHF1-2Y
1,000 µg/mL	500 mL	2% HCl	PLHF1-2X

Ho
Holmium

General Properties	
Atomic Number	67
Atomic Mass	164.930
Density	8.795 g/cm^3
Melting Point	1461 °C
Boiling Point	2720 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLHO2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLHO2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLHO2-2X

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In
Indium

General Properties	
Atomic Number	49
Atomic Mass	114.818
Density	7.31 g/cm^3
Melting Point	157 °C
Boiling Point	2072 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLIN2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLIN2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLIN2-2X

Fe
Iron

General Properties	
Atomic Number	26
Atomic Mass	55.845
Density	7.874 g/cm^3
Melting Point	1538 °C
Boiling Point	2861 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLFE2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLFE2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLFE2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLFE2-2X
1,000 µg/mL	500 mL	2% HCl	PLFE1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLFE2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLFE2-3X
10,000 µg/mL	500 mL	5%HCl	PLFE1-3X

Ir
Iridium

General Properties	
Atomic Number	77
Atomic Mass	192.217
Density	22.56 g/cm^3
Melting Point	2446 °C
Boiling Point	4428 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	10% HCl	PLIR3-2M
1,000 µg/mL	125 mL	10% HCl	PLIR3-2Y
1,000 µg/mL	500 mL	10% HCl	PLIR3-2X

La
Lanthanum

General Properties	
Atomic Number	57
Atomic Mass	138.905
Density	6.146 g/cm^3
Melting Point	920 °C
Boiling Point	3464 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLLA2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLLA2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLLA2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLLA2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLLA2-3X

Pb
Lead

General Properties	
Atomic Number	82
Atomic Mass	207.2
Density	11.34 g/cm^3
Melting Point	327 °C
Boiling Point	1749 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLPB2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLPB2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLPB2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLPB2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLPB2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLPB2-3X

Li
Lithium

General Properties	
Atomic Number	3
Atomic Mass	6.941
Density	0.535 g/cm^3
Melting Point	181 °C
Boiling Point	1342 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLLI2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLLI2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLLI2-2X
1,000 µg/mL	500 mL	2% HCl	PLLI1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLLI2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLLI2-3X
10,000 µg/mL	500 mL	5% HCl	PLLI1-3X

Lu
Lutetium

General Properties	
Atomic Number	71
Atomic Mass	174.967
Density	9.841 g/cm^3
Melting Point	1663 °C
Boiling Point	3402 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLLU2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLLU2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLLU2-2X

Mg
Magnesium

General Properties	
Atomic Number	12
Atomic Mass	24.305
Density	1.738 g/cm^3
Melting Point	650 °C
Boiling Point	1090 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLMG2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLMG2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLMG2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLMG2-2X
1,000 µg/mL	500 mL	2% HCl	PLMG1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLMG2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLMG2-3X
10,000 µg/mL	500 mL	5% HCl	PLMG1-3X

Mn
Manganese

General Properties	
Atomic Number	25
Atomic Mass	54.938
Density	7.47 g/cm^3
Melting Point	1247 °C
Boiling Point	2061 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLMN2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLMN2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLMN2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLMN2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLMN2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLMN2-3X

Hg
Mercury

General Properties	
Atomic Number	80
Atomic Mass	200.59
Density	13.534 g/cm^3
Melting Point	-39 °C
Boiling Point	356 °C

Concentration	Volume	Matrix	Part #
10 µg/mL	125 mL	5% HNO_3	PLHG2-1AY
10 µg/mL	500 mL	5% HNO_3	PLHG2-1AX
100 µg/mL	125 mL	5% HNO_3	PLHG2-1Y
100 µg/mL	500 mL	5% HNO_3	PLHG2-1X
1,000 µg/mL	30 mL	10% HNO_3	PLHG4-2M
1,000 µg/mL	125 mL	10% HNO_3	PLHG4-2Y
1,000 µg/mL	250 mL	10% HNO_3	PLHG4-2T
1,000 µg/mL	500 mL	10% HNO_3	PLHG4-2X
10,000 µg/mL	125 mL	10% HNO_3	PLHG4-3Y
10,000 µg/mL	500 mL	10% HNO_3	PLHG4-3X

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Mo
Molybdenum

General Properties	
Atomic Number	42
Atomic Mass	95.96
Density	10.28 g/cm^3
Melting Point	2623 °C
Boiling Point	4639 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O	PLMO9-2M
1,000 µg/mL	125 mL	H_2O	PLMO9-2Y
1,000 µg/mL	250 mL	H_2O	PLMO9-2T
1,000 µg/mL	500 mL	H_2O	PLMO9-2X
10,000 µg/mL	125 mL	H_2O	PLMO9-3Y
10,000 µg/mL	500 mL	H_2O	PLMO9-3X

Nd
Neodymium

General Properties	
Atomic Number	60
Atomic Mass	144.242
Density	7.01 g/cm^3
Melting Point	1024 °C
Boiling Point	3074 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLND2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLND2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLND2-2X

Ni
Nickel

General Properties	
Atomic Number	28
Atomic Mass	58.693
Density	8.908 g/cm^3
Melting Point	1455 °C
Boiling Point	2913 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLNI2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLNI2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLNI2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLNI2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLNI2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLNI2-3X

Nb
Niobium

General Properties	
Atomic Number	41
Atomic Mass	92.906
Density	8.57 g/cm^3
Melting Point	2477 °C
Boiling Point	4744 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O/0.4% HF	PLNB9-2M
1,000 µg/mL	125 mL	H_2O/0.4% HF	PLNB9-2Y
1,000 µg/mL	500 mL	H_2O/0.4% HF	PLNB9-2X
10,000 µg/mL	125 mL	H_2O/0.4% HF	PLNB9-3Y
10,000 µg/mL	500 mL	H_2O/0.4% HF	PLNB9-3X

Pd
Palladium

General Properties	
Atomic Number	46
Atomic Mass	106.42
Density	12.023 g/cm^3
Melting Point	1555 °C
Boiling Point	2963 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	10% HCl	PLPD3-2M
1,000 µg/mL	125 mL	10% HCl	PLPD3-2Y
1,000 µg/mL	500 mL	10% HCl	PLPD3-2X

P
Phosphorus

General Properties	
Atomic Number	15
Atomic Mass	30.974
Density	1.823 g/cm^3
Melting Point	44 °C
Boiling Point	277 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O	PLP9-2M
1,000 µg/mL	125 mL	H_2O	PLP9-2Y
1,000 µg/mL	250 mL	H_2O	PLP9-2T
1,000 µg/mL	500 mL	H_2O	PLP9-2X
10,000 µg/mL	125 mL	H_2O	PLP9-3Y
10,000 µg/mL	500 mL	H_2O	PLP9-3X

Pt
Platinum

General Properties	
Atomic Number	78
Atomic Mass	195.064
Density	21.09 g/cm^3
Melting Point	1768 °C
Boiling Point	3825 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	10% HCl	PLPT3-2M
1,000 µg/mL	125 mL	10% HCl	PLPT3-2Y
1,000 µg/mL	500 mL	10% HCl	PLPT3-2X

K
Potassium

General Properties	
Atomic Number	19
Atomic Mass	39.098
Density	0.856 g/cm^3
Melting Point	63 °C
Boiling Point	759 °C

Concentration	Volume	Matrix	Part #1,000
1,000 µg/mL	30 mL	2% HNO_3	PLK2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLK2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLK2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLK2-2X
1,000 µg/mL	500 mL	2% HCl	PLK1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLK2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLK2-3X
10,000 µg/mL	500 mL	5% HCl	PLK1-3X

Pr
Praseodymium

General Properties	
Atomic Number	59
Atomic Mass	140.908
Density	6.64 g/cm^3
Melting Point	935 °C
Boiling Point	3520 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLPR2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLPR2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLPR2-2X

Re
Rhenium

General Properties	
Atomic Number	75
Atomic Mass	186.207
Density	21.02 g/cm^3
Melting Point	3186 °C
Boiling Point	5596 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O	PLRE9-2M
1,000 µg/mL	125 mL	H_2O	PLRE9-2Y
1,000 µg/mL	500 mL	H_2O	PLRE9-2X

Rh
Rhodium

General Properties	
Atomic Number	45
Atomic Mass	102.905
Density	12.45 g/cm^3
Melting Point	1964 °C
Boiling Point	3695 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	10% HCl	PLRH3-2M
1,000 µg/mL	125 mL	10% HCl	PLRH3-2Y
1,000 µg/mL	500 mL	10% HCl	PLRH3-2X

Rb
Rubidium

General Properties	
Atomic Number	37
Atomic Mass	85.467
Density	1.532 g/cm^3
Melting Point	39 °C
Boiling Point	688 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLRB2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLRB2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLRB2-2X

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Ru
Ruthenium

General Properties	
Atomic Number	44
Atomic Mass	101.07
Density	12.37 g/cm^3
Melting Point	2334 °C
Boiling Point	4150 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	10% HCl	PLRU3-2M
1,000 µg/mL	125 mL	10% HCl	PLRU3-2Y
1,000 µg/mL	500 mL	10% HCl	PLRU3-2X

Sc
Scandium

General Properties	
Atomic Number	21
Atomic Mass	44.956
Density	2.985 g/cm^3
Melting Point	1541 °C
Boiling Point	2836 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLSC2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLSC2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLSC2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLSC2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLSC2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLSC2-3X

Si
Silicon

General Properties	
Atomic Number	14
Atomic Mass	28.085
Density	2.33 g/cm^3
Melting Point	1414 °C
Boiling Point	3265 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O/0.4% F^-	PLSI9-2M
1,000 µg/mL	125 mL	H_2O/0.4% F^-	PLSI9-2Y
1,000 µg/mL	250 mL	H_2O/0.4% F^-	PLSI9-2T
1,000 µg/mL	500 mL	H_2O/0.4% F^-	PLSI9-2X
1,000 µg/mL	500 mL	H_2O	PLSI9A-2X
10,000 µg/mL	125 mL	H_2O/4% F^-	PLSI9-3Y
10,000 µg/mL	500 mL	H_2O/4% F^-	PLSI9-3X
10,000 µg/mL	500 mL	H_2O	PLSI9A-3X

Sm
Samarium

General Properties	
Atomic Number	62
Atomic Mass	150.36
Density	7.353 g/cm^3
Melting Point	1072 °C
Boiling Point	1790 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLSM2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLSM2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLSM2-2X

Se
Selenium

General Properties	
Atomic Number	34
Atomic Mass	78.96
Density	4.819 g/cm^3
Melting Point	221 °C
Boiling Point	685 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLSE2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLSE2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLSE2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLSE2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLSE2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLSE2-3X

Ag
Silver

General Properties	
Atomic Number	47
Atomic Mass	107.868
Density	10.49 g/cm^3
Melting Point	962 °C
Boiling Point	2162 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLAG2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLAG2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLAG2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLAG2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLAG2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLAG2-3X

Na
Sodium

General Properties	
Atomic Number	11
Atomic Mass	22.989
Density	0.968 g/cm^3
Melting Point	98 °C
Boiling Point	883 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLNA2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLNA2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLNA2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLNA2-2X
1,000 µg/mL	500 mL	2% HCl	PLNA1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLNA2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLNA2-3X
10,000 µg/mL	500 mL	5% HCl	PLNA1-3X

Sr
Strontium

General Properties	
Atomic Number	38
Atomic Mass	87.62
Density	2.63 g/cm^3
Melting Point	777 °C
Boiling Point	1382 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLSR2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLSR2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLSR2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLSR2-2X
1,000 µg/mL	500 mL	2% HCl	PLSR1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLSR2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLSR2-3X

S
Sulfur

General Properties	
Atomic Number	16
Atomic Mass	32.065
Density	1.96 g/cm^3
Melting Point	115 °C
Boiling Point	445 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O	PLS9-2M
1,000 µg/mL	125 mL	H_2O	PLS9-2Y
1,000 µg/mL	250 mL	H_2O	PLS9-2T
1,000 µg/mL	500 mL	H_2O	PLS9-2X
10,000 µg/mL	125 mL	H_2O	PLS9-3Y
10,000 µg/mL	500 mL	H_2O	PLS9-3X

Ta
Tantalum

General Properties	
Atomic Number	73
Atomic Mass	180.947
Density	16.65 g/cm^3
Melting Point	3017 °C
Boiling Point	5458 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O/0.8% HF	PLTA9-2M
1,000 µg/mL	125 mL	H_2O/0.8% HF	PLTA9-2Y
1,000 µg/mL	500 mL	H_2O/0.8% HF	PLTA9-2X
10,000 µg/mL	125 mL	H_2O/0.8% HF	PLTA9-3Y
10,000 µg/mL	500 mL	H_2O/0.8% HF	PLTA9-3X

Te
Tellurium

General Properties	
Atomic Number	52
Atomic Mass	127.6
Density	6.24 g/cm^3
Melting Point	449 °C
Boiling Point	988 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	10% HNO_3	PLTE4-2M
1,000 µg/mL	125 mL	10% HNO_3	PLTE4-2Y
1,000 µg/mL	500 mL	10% HNO_3	PLTE4-2X

Tb
Terbium

General Properties	
Atomic Number	65
Atomic Mass	158.925
Density	8.219 g/cm^3
Melting Point	1356 °C
Boiling Point	3230 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLTB2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLTB2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLTB2-2X

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Tl
Thallium

General Properties	
Atomic Number	81
Atomic Mass	204.383
Density	11.85 g/cm^3
Melting Point	304 °C
Boiling Point	1473 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLTL2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLTL2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLTL2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLTL2-2X

Th
Thorium (Depleted)

General Properties	
Atomic Number	90
Atomic Mass	232.038
Density	11.724 g/cm^3
Melting Point	1842 °C
Boiling Point	4788 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLTH2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLTH2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLTH2-2X

Tm
Thulium

General Properties	
Atomic Number	69
Atomic Mass	168.934
Density	9.321 g/cm^3
Melting Point	1545 °C
Boiling Point	1950 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLTM2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLTM2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLTM2-2X

Sn
Tin

General Properties	
Atomic Number	50
Atomic Mass	118.71
Density	7.31 g/cm^3
Melting Point	232 °C
Boiling Point	2602 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	20% HCl	PLSN5-2M
1,000 µg/mL	125 mL	20% HCl	PLSN5-2Y
1,000 µg/mL	250 mL	20% HCl	PLSN5-2T
1,000 µg/mL	500 mL	20% HCl	PLSN5-2X
1,000 µg/mL	500 mL	1% HNO_3/1% HF	PLSN2-2X
10,000 µg/mL	125 mL	20% HCl	PLSN5-3Y
10,000 µg/mL	500 mL	20% HCl	PLSN5-3X
10,000 µg/mL	500 mL	2% HNO_3/2% HF	PLSN2-3X

Ti
Titanium

General Properties	
Atomic Number	22
Atomic Mass	47.857
Density	4.507 g/cm^3
Melting Point	1668 °C
Boiling Point	3287 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O/0.24% F^-	PLTI9-2M
1,000 µg/mL	125 mL	H_2O/0.24% F^-	PLTI9-2Y
1,000 µg/mL	250 mL	H_2O/0.24% F^-	PLTI9-2T
1,000 µg/mL	500 mL	H_2O/0.24% F^-	PLTI9-2X
1,000 µg/mL	500 mL	20% HCl	PLTI5-2X
10,000 µg/mL	125 mL	H_2O/2.4% F^-	PLTI9-3Y
10,000 µg/mL	500 mL	H_2O/2.4% F^-	PLTI9-3X
10,000 µg/mL	500 mL	40% HCl	PLTI5-3X

W
Tungsten

General Properties	
Atomic Number	74
Atomic Mass	183.84
Density	19.25 g/cm^3
Melting Point	3422 °C
Boiling Point	5555 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O	PLW9-2M
1,000 µg/mL	125 mL	H_2O	PLW9-2Y
1,000 µg/mL	500 mL	H_2O	PLW9-2X
1,000 µg/mL	500 mL	1% HNO_3/2% HF	PLW2-2X
10,000 µg/mL	125 mL	H_2O	PLW9-3Y
10,000 µg/mL	500 mL	H_2O	PLW9-3X
10,000 µg/mL	500 mL	2% HNO_3/5% HF	PLW2-3X

U
Uranium (Depleted)

General Properties	
Atomic Number	92
Atomic Mass	238.027
Density	19.05 g/cm^3
Melting Point	1132 °C
Boiling Point	4131 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLU2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLU2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLU2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLU2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLU2-3X

V
Vanadium

General Properties	
Atomic Number	23
Atomic Mass	50.941
Density	6.11 g/cm^3
Melting Point	1910 °C
Boiling Point	3407 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLV2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLV2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLV2-2X
1,000 µg/mL	500 mL	2%HCl	PLV1-2X
10,000 µg/mL	125 mL	15% HNO_3	PLV4-3Y
10,000 µg/mL	500 mL	15% HNO_3	PLV4-3X
10,000 µg/mL	500 mL	15% HCl	PLV3-3X

Yb
Ytterbium

General Properties	
Atomic Number	70
Atomic Mass	173.054
Density	6.57 g/cm^3
Melting Point	824 °C
Boiling Point	1196 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLYB2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLYB2-2Y
1,000 µg/mL	500 mL	2% HNO_3	PLYB2-2X

Y
Yttrium

General Properties	
Atomic Number	39
Atomic Mass	88.906
Density	4.472 g/cm^3
Melting Point	1526 °C
Boiling Point	3336 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLY2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLY2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLY2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLY2-2X
10,000 µg/mL	125 mL	5% HNO_3	PLY2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLY2-3X

Zn
Zinc

General Properties	
Atomic Number	30
Atomic Mass	65.38
Density	7.14 g/cm^3
Melting Point	419 °C
Boiling Point	907 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLZN2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLZN2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLZN2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLZN2-2X
1,000 µg/mL	500 mL	2% HCl	PLZN1-2X
10,000 µg/mL	125 mL	5% HNO_3	PLZN2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLZN2-3X
10,000 µg/mL	500 mL	5% HCl	PLZN1-3X

Zr
Zirconium

General Properties	
Atomic Number	40
Atomic Mass	91.224
Density	6.511 g/cm^3
Melting Point	1855 °C
Boiling Point	4409 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	PLZR2-2M
1,000 µg/mL	125 mL	2% HNO_3	PLZR2-2Y
1,000 µg/mL	250 mL	2% HNO_3	PLZR2-2T
1,000 µg/mL	500 mL	2% HNO_3	PLZR2-2X
1,000 µg/mL	500 mL	10% HCl	PLZR3-2X
10,000 µg/mL	125 mL	5% HNO_3	PLZR2-3Y
10,000 µg/mL	500 mL	5% HNO_3	PLZR2-3X
10,000 µg/mL	500 mL	10% HCl	PLZR3-3X

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Calibration and Matrix Blanks

May be used to dilute your multi-element standards or can be run directly as a blank to establish your base line. Do not use any acid or water as a diluent if you are not certain of its purity.

Matrix Blanks for AA & ICP			
Element	**Volume**	**Matrix**	**Part #**
Nitric Acid Blank	500 mL	5% HNO_3	PLBLK-HNO3
Hydrochloric Acid Blank	500 mL	5% HCl	PLBLK-HCL
DI Water Blank	500 mL	H_2O	PLBLK-H2O
DI Water Blank	1 L	H_2O	PLBLK-H2O-1L
DI Water Blank	2 L	H_2O	PLBLK-H2O-2L
DI Water Blank	4 L	H_2O	PLBLK-H2O-4L

ICP Standards Kit

Assurance® Grade, Set of 38 Single-Element Standards.

Assurance® Grade Standards Kit for AA & ICP				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Na, Ni, Pb, Sc, Se, Sr, Tl, V, Y, Zn, Zr	1,000 µg/mL each	125 mL each	2% HNO_3	ICP-KIT-1
Bi, Hg			10% HNO_3	
Sn			20% HCl	
B, Mo, P, S, W			H_2O	
Sb			H_2O/0.6% Tartaric Acid/tr. HNO_3	
Ti			H_2O/0.24% F^-	
Nb, Si			H_2O/0.4% F^-	

Units of Measurement

Units of Measurement

Common Unit Prefixes								
Prefix	*kilo*	*centi*	*milli*	*micro*	*nano*	*pico*	*femto*	*atto*
Symbol	k	c	m	µ	n	p	f	a
Factor	10^{3}	10^{-2}	10^{-3}	10^{-6}	10^{-9}	10^{-12}	10^{-15}	10^{-18}
Equivalence	thousand	hundredth	thousandth	millionth	billionth	trillionth	quadrillionth	quintillionth

Weight to Weight Concentrations					
Name	*Symbol*	*Equivalence*			
*Parts per thousand **	ppt*	g/kg	mg/g	µg/mg	ng/µg
Parts per million	ppm	mg/kg	µg/g	ng/mg	pg/µg
Parts per billion	ppb	µg/kg	ng/g	pg/mg	fg/µg
*Parts per trillion ***	ppt**	ng/kg	pg/g	fg/mg	ag/µg

Weight to Volume Concentrations					
Name	*Symbol*	*Equivalence*			
*Parts per thousand **	ppt*	g/L	mg/mL	µg/µL	ng/nL
Parts per million	ppm	mg/L	µg/mL	ng/µL	pg/nL
Parts per billion	ppb	µg/L	ng/mL	pg/µL	fg/nL
*Parts per trillion ***	ppt**	ng/L	pg/mL	fg/µL	ag/nL

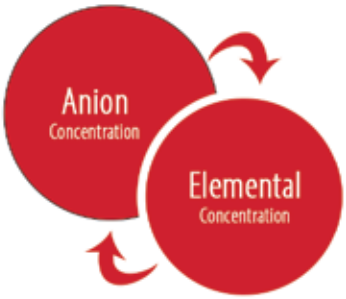
Concentration Conversions					
Unit	*Symbol*	*ppt**	*ppm*	*ppb*	*ppt***
*1 part per thousand **	ppt*	-	1×10^{3}	1×10^{6}	1×10^{9}
1 part per million	ppm	1×10^{-3}	-	1×10^{3}	1×10^{6}
1 part per billion	ppb	1×10^{-6}	1×10^{-3}	-	1×10^{3}
*1 part per trillion ***	ppt**	1×10^{-9}	1×10^{-6}	1×10^{-3}	-

** ppt = parts per thousand*
*** ppt = parts per trillion*

Temperature Scale			
Scale	*Symbol*	*Convert To*	*Formula*
Celsius	°C	Fahrenheit	°F = °C x 1.8 + 32
Celsius	°C	Kelvin	°K = °C + 273
Fahrenheit	°F	Celsius	°C = (°F - 32) / 1.8
Fahrenheit	°F	Kelvin	°K = (°F - 32) / 1.8 + 273
Kelvin	°K	Celsius	°C = °K - 273
Kelvin	°K	Fahrenheit	°F = 1.8 (°K - 273) + 32

Anion to Elemental Concentration

Helpful Hint: When calculating gravimetric factors for Ion Chromatography standards, remember that:



Anion Concentration		Elemental Concentration
1,000 µg/mL Nitrate	=	226 µg/mL Nitrogen
1,000 µg/mL Nitrite	=	305 µg/mL Nitrogen
1,000 µg/mL Phosphate	=	326 µg/mL Phosphorus
1,000 µg/mL Sulfate	=	334 µg/mL Sulfur
1,000 µg/mL Nitrogen as Nitrate	=	1,000 µg/mL Nitrogen
1,000 µg/mL Nitrogen as Nitrite	=	1,000 µg/mL Nitrogen
1,000 µg/mL Phosphorus as Phosphate	=	1,000 µg/mL Phosphorus
1,000 µg/mL Sulfur as Sulfate	=	1,000 µg/mL Sulfur

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section 2

Speciation Standards

Speciation Standards

Speciation analysis has become common in many fields, including environmental, food and pharmaceutical testing labs. To analyze species within a sample requires Certified Reference Materials (CRMs) for sample verification and method validation. Many speciation standards are available in today's market, however, most of them are not certified or analyzed with a state-of-the-art ICP, ICP-MS or LC-ICP-MS. Spex CertiPrep offers a wide variety of speciation standards, certified to the strictest ISO 17034 guidelines, and tested on our own LC-ICP-MS.

Assurance® Grade Single Speciation Standards				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Arsenic +3	1,000 µg/mL	30 mL	2% HCl	SPEC-AS3M
Arsenic +3	1,000 µg/mL	125 mL	2% HCl	SPEC-AS3
Arsenic +5	1,000 µg/mL	30 mL	H_2O	SPEC-AS5M
Arsenic +5	1,000 µg/mL	125 mL	H_2O	SPEC-AS5
Chromium +3	1,000 µg/mL	30 mL	2% HNO_3	SPEC-CR3M
Chromium +3	1,000 µg/mL	125 mL	2% HNO_3	SPEC-CR3
Chromium +6	1,000 µg/mL	30 mL	H_2O	SPEC-CR6M
Chromium +6	1,000 µg/mL	125 mL	H_2O	SPEC-CR6
Selenium +4	1,000 µg/mL	30 mL	2% HNO_3	SPEC-SE4M
Selenium +4	1,000 µg/mL	125 mL	2% HNO_3	SPEC-SE4
Selenium +6	1,000 µg/mL	30 mL	H_2O	SPEC-SE6M
Selenium +6	1,000 µg/mL	125 mL	H_2O	SPEC-SE6

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Example of LC-ICP-MS Certificate

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ACCREDITED Reference Materials Producer Cert. #2495.01

ilac-MRA

ACCREDITED Chemical Testing Cert. #2495.02

Catalog Number: SPEC-AS3
Description: Arsenic +3 Speciation Standard
Matrix: 2% HCl

Lot No. CL5-199MKBY

The Certified Reference Material, CRM, is intended primarily for use as a quality control standard for inorganic spectroscopic instrumentation such as LC-ICP-MS. It can be employed in validating analytical methods for the determination of relevant species.

Certified Value [As (total)]: 20.2 ± 0.4 µg/mL

Certified Value is Traceable to: 3103a*

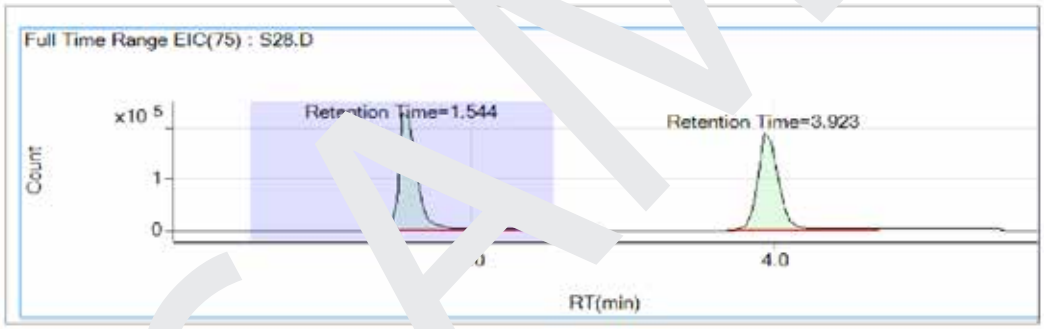
* - Indicates NIST SRM † - Indicates Spex CertiPrep CRM (when NIST SRM is not available)

The CRM is prepared gravimetrically using high purity Arsenic (III) Oxide (As2O3), Lot #08831RAS and Arsenic (V) Oxide (As2Os), Lot #10111D. The certified value for overall Arsenic is obtained by ICP measurement. The value is As (III) and As (V) in this speciation standard is obtained by LC-ICP-MS.

Refer to side 2 for details of measurement quantities.

Uncertified Properties: Density: 0.998 g/mL @ 20 °C

Instrumental Analysis by LC-ICP-MS Spectrometer: [AS (III)]: 10.3 ± 0.5 µg/mL
[As (V)]: 10.4 ± 0.5 µg/mL



Retention Time
[AS (III)]: 1.804 min
[As (V)]: 3.439 min

Note: The above chromatogram was obtained by analyzing a diluted standard at a concentration of 25 µg/L of each species. An injection volume of 25 µL was used. The final result of each species was determined against a calibration curve of each individual species using peak area.

From Your Bench to Our Bench

Bench Talk!

Have a question? Ask a Chemist!

Do you have a technical CRM question for our experienced chemists? We have a dedicated technical support team to answer your CRM and lab questions.

Simply e-mail us at **AskAChemist@antylia.com** and we will be happy to help you. To view previously asked questions, visit **spex.com/knowledge-base/ask-a-chemist**.

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section 3

Claritas PPT® Single-Element Standards for ICP-MS

Single-Element Standards for ICP-MS

- Made with acid and ASTM Type I Water
- Inorganic compounds and metals at 99.99& to 99.9999% purity (where commercially available)
- Directly traceable to NIST (where applicable)
- Certified by DQS to ISO 9001:2015
- Accredited by A2LA to ISO/IEC 17025:2017 and ISO 17034:2016

ICP-MS

Claritas PPT® Grade CRMs are designed for ICP and ICP-MS analysis. They are available in single and multi-element solutions. The standards are at 1 µg/mL, 10 µg/mL, 100 µg/mL, or 1,000 µg/mL and packaged in 30 mL and 125 mL bottles to minimize contamination. They are made using ultra high purity acids, the highest grade starting materials and high purity water in order to minimize contaminants. Custom standards can be manufactured upon request.

Claritas PPT® Grade CRMs	
Designed For Use With	ICP | ICP-MS
Analytical Range For Use	ppb, ppt
Single-Element Standards	√
1 µg/mL	√
10 µg/mL	√
100 µg/mL	√
1,000 µg/mL	√
Multi-Element Standards	√
Custom Standards	√
Certifications	
ISO 9001:2015	√
ISO/IEC 17025:2017	√
ISO 17034:2016	√
Quality	
Traceable to NIST SRM (where applicable)	√
Acid Grade	Ultra High Purity Grade
# Trace Impurities Measured on Certificate of Analysis	68
Trace Impurities Measured to	µg/L
Volume	
30 mL	√
125 mL	√

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Al
Aluminum

General Properties	
Atomic Number	13
Atomic Mass	26.982
Density	2.7 g/cm^3
Melting Point	660 °C
Boiling Point	2467 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLAL2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLAL2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLAL2-2Y

As
Arsenic

General Properties	
Atomic Number	33
Atomic Mass	74.922
Density	5.727 g/cm^3
Melting Point	817 °C
Boiling Point	614 °C*

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLAS2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLAS2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLAS2-2Y

** Sublimation Point.*

Be
Beryllium

General Properties	
Atomic Number	4
Atomic Mass	9.012
Density	1.848 g/cm^3
Melting Point	1287 °C
Boiling Point	2471 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLBE2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLBE2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLBE2-2Y

Sb
Antimony

General Properties	
Atomic Number	51
Atomic Mass	121.760
Density	6.697 g/cm^3
Melting Point	630 °C
Boiling Point	1587 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	H_2O/0.6% Tartaric Acid/tr. HNO_3	CLSB7-2M
1,000 µg/mL	125 mL	H_2O/0.6% Tartaric Acid/tr. HNO_3	CLSB7-2Y

Ba
Barium

General Properties	
Atomic Number	56
Atomic Mass	137.327
Density	3.51 g/cm^3
Melting Point	727 °C
Boiling Point	1897 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLBA2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLBA2-2Y

Bi
Bismuth

General Properties	
Atomic Number	83
Atomic Mass	208.980
Density	9.78 g/cm^3
Melting Point	271 °C
Boiling Point	1564 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLBI2-1BY
10 µg/mL	30 mL	2% HNO_3	CLBI2-1AM
10 µg/mL	125 mL	2% HNO_3	CLBI2-1AY

B
Boron

General Properties	
Atomic Number	5
Atomic Mass	10.811
Density	2.46 g/cm^3
Melting Point	2075 °C
Boiling Point	4000 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	H_2O	CLB9-1BY

Cd
Cadmium

General Properties	
Atomic Number	48
Atomic Mass	112.411
Density	8.65 g/cm^3
Melting Point	321 °C
Boiling Point	767 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLCD2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLCD2-2Y

Ca
Calcium

General Properties	
Atomic Number	20
Atomic Mass	40.078
Density	1.55 g/cm^3
Melting Point	842 °C
Boiling Point	1484 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLCA2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLCA2-2Y

Cr
Chromium

General Properties	
Atomic Number	24
Atomic Mass	51.996
Density	7.14 g/cm^3
Melting Point	1907 °C
Boiling Point	2671 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLCR2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLCR2-2Y

Co
Cobalt

General Properties	
Atomic Number	27
Atomic Mass	58.933
Density	8.9 g/cm^3
Melting Point	1495 °C
Boiling Point	2927 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLCO2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLCO2-2Y

Cu
Copper

General Properties	
Atomic Number	29
Atomic Mass	63.546
Density	8.92 g/cm^3
Melting Point	1084 °C
Boiling Point	2562 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLCU2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLCU2-2Y

Gd
Gadolinium

General Properties	
Atomic Number	64
Atomic Mass	157.25
Density	7.9 g/cm^3
Melting Point	1312 °C
Boiling Point	3266 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLGD2-1BY

Ga
Gallium

General Properties	
Atomic Number	31
Atomic Mass	69.723
Density	5.904 g/cm^3
Melting Point	30 °C
Boiling Point	2204 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLGA2-1BY

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Ge
Germanium

General Properties	
Atomic Number	32
Atomic Mass	72.63
Density	5.323 g/cm^3
Melting Point	938 °C
Boiling Point	2833 °C

Concentration	Volume	Matrix	Part #
10 µg/mL	30 mL	H_2O/tr. F^-	CLGE9-1AM
10 µg/mL	125 mL	H_2O/tr. F^-	CLGE9-1AY

Au
Gold

General Properties	
Atomic Number	79
Atomic Mass	196.967
Density	19.3 g/cm^3
Melting Point	1064 °C
Boiling Point	2970 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	1% HNO_3/3% HCl	CLAU6-1BY
100 µg/mL	30 mL	2% HCl	CLAU1-1M
100 µg/mL	125 mL	2% HCl	CLAU1-1Y

In
Indium

General Properties	
Atomic Number	49
Atomic Mass	114.818
Density	7.31 g/cm^3
Melting Point	157 °C
Boiling Point	2072 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLIN2-1BY
10 µg/mL	30 mL	2% HNO_3	CLIN2-1AM
10 µg/mL	125 mL	2% HNO_3	CLIN2-1AY

Ir
Iridium

General Properties	
Atomic Number	77
Atomic Mass	192.217
Density	22.56 g/cm^3
Melting Point	2446 °C
Boiling Point	4428 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HCl	CLIR1-1BY

Fe
Iron

General Properties	
Atomic Number	26
Atomic Mass	55.845
Density	7.874 g/cm^3
Melting Point	1538 °C
Boiling Point	2861 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLFE2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLFE2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLFE2-2Y

Pb
Lead

General Properties	
Atomic Number	82
Atomic Mass	207.2
Density	11.34 g/cm^3
Melting Point	327 °C
Boiling Point	1749 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLPB2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLPB2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLPB2-2Y

Li
Lithium

General Properties	
Atomic Number	3
Atomic Mass	6.941
Density	0.535 g/cm^3
Melting Point	181 °C
Boiling Point	1342 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLLI2-1BY

Lu
Lutetium

General Properties	
Atomic Number	71
Atomic Mass	174.967
Density	9.841 g/cm^3
Melting Point	1663 °C
Boiling Point	3402 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLLU2-1BY

Mg
Magnesium

General Properties	
Atomic Number	12
Atomic Mass	24.305
Density	1.738 g/cm^3
Melting Point	650 °C
Boiling Point	1090 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLMG2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLMG2-2Y

Mn
Manganese

General Properties	
Atomic Number	25
Atomic Mass	54.938
Density	7.47 g/cm^3
Melting Point	1247 °C
Boiling Point	2061 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLMN2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLMN2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLMN2-2Y

Hg
Mercury

General Properties	
Atomic Number	80
Atomic Mass	200.59
Density	13.534 g/cm^3
Melting Point	-39 °C
Boiling Point	356 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	0.7% HNO_3/0.4% HCl	CLHG6-1BY
10 µg/mL	30 mL	5% HNO_3	CLHG2-1AM
10 µg/mL	125 mL	5% HNO_3	CLHG2-1AY
1,000 µg/mL	30 mL	10% HNO_3	CLHG4-2M
1,000 µg/mL	125 mL	10% HNO_3	CLHG4-2Y

Mo
Molybdenum

General Properties	
Atomic Number	42
Atomic Mass	95.96
Density	10.28 g/cm^3
Melting Point	2623 °C
Boiling Point	4639 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	H_2O	CLMO9-1BY
1,000 µg/mL	30 mL	H_2O	CLMO9-2M
1,000 µg/mL	125 mL	H_2O	CLMO9-2Y

Nd
Neodymium

General Properties	
Atomic Number	60
Atomic Mass	144.242
Density	7.01 g/cm^3
Melting Point	1024 °C
Boiling Point	3074 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLND2-1BY

Ni
Nickel

General Properties	
Atomic Number	28
Atomic Mass	58.693
Density	8.908 g/cm^3
Melting Point	1455 °C
Boiling Point	2913 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLNI2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLNI2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLNI2-2Y

P
Phosphorus

General Properties	
Atomic Number	15
Atomic Mass	30.974
Density	1.823 g/cm^3
Melting Point	44 °C
Boiling Point	277 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	H_2O	CLP9-1BY

Pt
Platinum

General Properties	
Atomic Number	78
Atomic Mass	195.064
Density	21.09 g/cm^3
Melting Point	1768 °C
Boiling Point	3825 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HCl	CLPT1-1BY

K
Potassium

General Properties	
Atomic Number	19
Atomic Mass	39.098
Density	0.856 g/cm^3
Melting Point	63 °C
Boiling Point	759 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLK2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLK2-2Y

Rh
Rhodium

General Properties	
Atomic Number	45
Atomic Mass	102.905
Density	12.45 g/cm^3
Melting Point	1964 °C
Boiling Point	3695 °C

Concentration	Volume	Matrix	Part #
10 µg/mL	30 mL	2% HCl	CLRH1-1AM
10 µg/mL	125 mL	2% HCl	CLRH1-1AY

Sc
Scandium

General Properties	
Atomic Number	21
Atomic Mass	44.956
Density	2.985 g/cm^3
Melting Point	1541 °C
Boiling Point	2836 °C

Concentration	Volume	Matrix	Part #
10 µg/mL	30 mL	2% HNO_3	CLSC2-1AM
10 µg/mL	125 mL	2% HNO_3	CLSC2-1AY

Se
Selenium

General Properties	
Atomic Number	34
Atomic Mass	78.96
Density	4.819 g/cm^3
Melting Point	221 °C
Boiling Point	685 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLSE2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLSE2-2Y

Si
Silicon

General Properties	
Atomic Number	14
Atomic Mass	28.085
Density	2.33 g/cm^3
Melting Point	1414 °C
Boiling Point	3265 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	H_2O/tr. F^-	CLSI9-1BY

Ag
Silver

General Properties	
Atomic Number	47
Atomic Mass	107.868
Density	10.49 g/cm^3
Melting Point	962 °C
Boiling Point	2162 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLAG2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLAG2-2Y

Na
Sodium

General Properties	
Atomic Number	11
Atomic Mass	22.989
Density	0.968 g/cm^3
Melting Point	98 °C
Boiling Point	883 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLNA2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLNA2-2Y

Sr
Strontium

General Properties	
Atomic Number	38
Atomic Mass	87.62
Density	2.63 g/cm^3
Melting Point	777 °C
Boiling Point	1382 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLSR2-1BY

Tb Terbium

General Properties	
Atomic Number	65
Atomic Mass	158.925
Density	8.219 g/cm^3
Melting Point	1356 °C
Boiling Point	3230 °C

Concentration	Volume	Matrix	Part #
10 µg/mL	30 mL	2% HNO_3	CLTB2-1AM
10 µg/mL	125 mL	2% HNO_3	CLTB2-1AY

Th Thorium (Depleted)

General Properties	
Atomic Number	90
Atomic Mass	232.038
Density	11.724 g/cm^3
Melting Point	1842 °C
Boiling Point	4788 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLTH2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLTH2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLTH2-2Y

Sn Tin

General Properties	
Atomic Number	50
Atomic Mass	118.71
Density	7.31 g/cm^3
Melting Point	232 °C
Boiling Point	2602 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	1% HNO_3/1% HF	CLSN2-2M
1,000 µg/mL	125 mL	1% HNO_3/1% HF	CLSN2-2Y

W Tungsten

General Properties	
Atomic Number	74
Atomic Mass	183.84
Density	19.25 g/cm^3
Melting Point	3422 °C
Boiling Point	5555 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3/tr. HF	CLW2-1BY

Tl Thallium

General Properties	
Atomic Number	81
Atomic Mass	204.383
Density	11.85 g/cm^3
Melting Point	304 °C
Boiling Point	1473 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLTL2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLTL2-2Y

Tm Thulium

General Properties	
Atomic Number	69
Atomic Mass	168.934
Density	9.321 g/cm^3
Melting Point	1545 °C
Boiling Point	1950 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLTM2-1BY

Ti Titanium

General Properties	
Atomic Number	22
Atomic Mass	47.857
Density	4.507 g/cm^3
Melting Point	1668 °C
Boiling Point	3287 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	H_2O/tr. HF	CLTI9-1BY
1,000 µg/mL	30 mL	H_2O/0.24% F^-	CLTI9-2M
1,000 µg/mL	125 mL	H_2O/0.24% F^-	CLTI9-2Y

U Uranium (Depleted)

General Properties	
Atomic Number	92
Atomic Mass	238.027
Density	19.05 g/cm^3
Melting Point	1132 °C
Boiling Point	4131 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLU2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLU2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLU2-2Y

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V
Vanadium

General Properties	
Atomic Number	23
Atomic Mass	50.941
Density	6.11 g/cm^3
Melting Point	1910 °C
Boiling Point	3407 °C

Concentration	Volume	Matrix	Part #
1,000 µg/mL	30 mL	2% HNO_3	CLV2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLV2-2Y

Y
Yttrium

General Properties	
Atomic Number	39
Atomic Mass	88.906
Density	4.472 g/cm^3
Melting Point	1526 °C
Boiling Point	3336 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLY2-1BY
10 µg/mL	30 mL	2% HNO_3	CLY2-1AM
10 µg/mL	125 mL	2% HNO_3	CLY2-1AY

Zn
Zinc

General Properties	
Atomic Number	30
Atomic Mass	65.38
Density	7.14 g/cm^3
Melting Point	419 °C
Boiling Point	907 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLZN2-1BY
1,000 µg/mL	30 mL	2% HNO_3	CLZN2-2M
1,000 µg/mL	125 mL	2% HNO_3	CLZN2-2Y

Zr
Zirconium

General Properties	
Atomic Number	40
Atomic Mass	91.224
Density	6.511 g/cm^3
Melting Point	1855 °C
Boiling Point	4409 °C

Concentration	Volume	Matrix	Part #
1 µg/mL	125 mL	2% HNO_3	CLZR2-1BY

Matrix Blanks & Isotopes for ICP-MS

Matrix Blanks			
Description	**Volume**	**Matrix**	**Part #**
Hydrochloric Acid Blank	125 mL	2% HCl	CLBLK-HCL
Nitric Acid Blank	30 mL	2% HNO_3	CLBLK-HNO3M
Nitric Acid Blank	125 mL	2% HNO_3	CLBLK-HNO3
Nitric Acid Blank	250 mL	2% HNO_3	CLBK-HNO3-250
DI Water Blank	125 mL	H_2O	CLBLK-H2O
DI Water Blank	250 mL	H_2O	CLBK-H2O-250

Isotopes for ICP-MS				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Boron 10	10 µg/mL	125 mL	H_2O	ISOT-B10
Boron 11	10 µg/mL	125 mL	H_2O	ISOT-B11
Copper 65	10 µg/mL	125 mL	2% HNO_3	ISOT-CU65
Lead 206	10 µg/mL	125 mL	2% HNO_3	ISOT-PB206
Lead 207	10 µg/mL	125 mL	2% HNO_3	ISOT-PB207
Lithium 6	100 µg/mL	30 mL	2% HNO_3	ISOT-LI6M
Lithium 6	100 µg/mL	125 mL	2% HNO_3	ISOT-LI6
Strontium 86	10 µg/mL	125 mL	2% HNO_3	ISOT-SR86
Zinc 68	10 µg/mL	125 mL	2% HNO_3	ISOT-ZN68

Did You Know?

"Famed chemist Glenn Seaborg was the only person who could write his address in chemical elements. He would write Sg, Lr, Bk, Cf, Am. That's Seaborgium (Sg), named after Seaborg himself; Lawrencium (Lr), named after the Lawrence Berkeley National Laboratory; Berkelium (Bk), named after the city of Berkeley, the home of UC Berkeley; Californium (Cf), named after the state of California; Americium (Am), named after America."

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Claritas PPT® ICP-MS vs. Assurance® AA & ICP

Single-Element Standards for ICP-MS

- Made with acid and ASTM Type I Water
- Inorganic compounds and metals at 99.99& to 99.9999% purity (where commercially available)
- Directly traceable to NIST (where applicable)
- Certified by DQS to ISO 9001:2015
- Accredited by A2LA to ISO/IEC 17025:2017 and ISO 17034:2016

ICP-MS

Claritas PPT® Grade CRMs are designed for ICP and ICP-MS analysis. They are available in single and multi-element solutions. The standards are at 1 µg/mL, 10 µg/mL, 100 µg/mL, or 1,000 µg/mL and packaged in 30 mL and 125 mL bottles to minimize contamination. They are made using ultra high purity acids, the highest grade starting materials and high purity water in order to minimize contaminants. Custom standards can be manufactured upon request.

AA & ICP

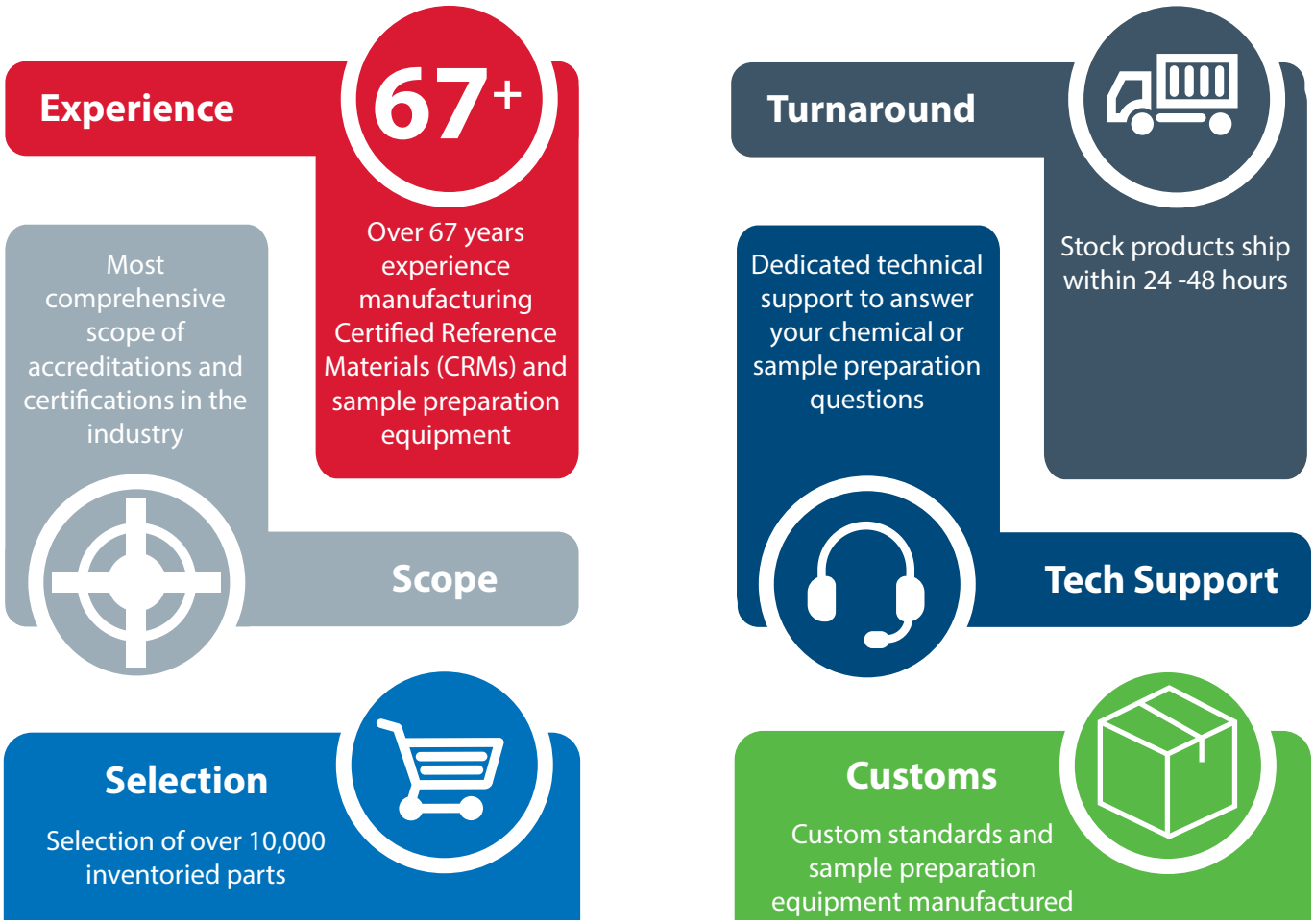
Assurance® Grade CRMs are designed for AA and ICP and are available in single and multi-element formulations. 70 elements are available as single-element standards and are available at 1,000 µg/mL and/or 10,000 µg/mL. They are packaged in 30 mL, 125 mL, 250 mL, and 500 mL bottles to minimize contamination. Custom standards can be manufactured upon request.

	Claritas PPT® Grade CRMs	Assurance® Grade CRMs
Designed For Use With	ICP | ICP-MS	AA | ICP
Analytical Range For Use	ppb, ppt	ppm, ppb
Single-Element Standards	√	√
1 µg/mL	√	
10 µg/mL	√	√
100 µg/mL	√	
1,000 µg/mL	√	√
10,000 µg/mL		√
Multi-Element Standards	√	
Custom Standards	√	√
Certifications		
ISO 9001:2015	√	√
ISO/IEC 17025:2017	√	√
ISO 17034:2016	√	√
Quality		
Traceable to NIST SRM (where applicable)	√	√
Acid Grade	Ultra High Purity Grade	High Purity Grade
# Trace Impurities Measured on Certificate of Analysis	68	68
Trace Impurities Measured to	µg/L	µg/mL
Volume		
30 mL	√	√
125 mL	√	√
250 mL		√
500 mL		√

SPEXperience™

Creating An Awesome Customer Experience

It's not only what we do, it's how we do it. We have been manufacturing Inorganic and Organic Certified Reference Materials and Calibration Standards for the Analytical Spectroscopy and Chromatography communities since 1954. Our passion for science and dedication to the analytical community drives us to go above and beyond for you. We want to provide you with the customer experience you deserve and can rely on. We do this by making sure you are our priority in everything we do.



spex®
certiprep

section 4

Assurance® Multi-Element Standards for AA & ICP

Assurance® Multi-Element Standards for AA & ICP

The section that follows contains multi-element standards with a combination of elements, concentrations and matrices, designed by Spex CertiPrep for convenience of use and stability.

Standards may be diluted in the same matrix as specified; however, caution must be exercised in the choice of the source for your diluents. Diluting the matrix may cause some standards to precipitate. Also, an impure or unknown diluent turns your standard into an unknown. We recommend using only Spex CertiPrep Matrix Blanks when diluting your standards.

- Mixed Multi-Element Calibration Standards
- Calibration and Matrix Blanks
- Instrument Check (Lab Performance) Standards
- Quality Control Standards
- Lab Fortifying Stock (LFS) Solution
- Laboratory Performance Check (LPC) Standards
- Interference Check Standards
- Environmental EPA Set
- Toxicity Characteristic Leachate Procedure (TCLP) Standard
- Drinking Water Pollutant Standards
- Groundwater and Wastewater Pollution Control Check Standards

CALIBRATE WITH CONFIDENCE®

Spex CertiPrep continues to supply the most comprehensive certificate of analysis in the industry. For example, our SPEXertificate shows actual reported values for ICP of the final solution - not reported values of the starting materials or by a calculation. It also reports the trace impurities of the final solution - not of the starting materials.

In addition, each elemental impurity is listed with actual value - not limited to the element above detection limits. We also scan 68 elements with found values for all of our products which are traceable to NIST. Many other companies have followed, but not one gives you the information you get from us!

Did You Know?

Spex CertiPrep is accredited by A2LA for Inorganic and Organic Certified Reference Materials. In addition, to being registered as an ISO 9001:2015 facility, Spex CertiPrep is accredited by A2LA as complying with the requirements of ISO/IEC 17025:2017 and ISO 17034:2016. Our scope of accreditation is the most comprehensive in the industry.

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Assurance® Mixed Multi-Element Standards for AA & ICP

The following Calibration Standards are provided for routine instrument calibration. The concentrations and matrices have been selected for convenience of use and stability.

For use in US EPA Method 200.7 (Revision 4.4) and SW-846, Method 6010 (Third Edition).

Mixed Calibration Standard 1A

Elements	Concentration	Matrix
Ag	5 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
Ba	10 µg/mL	
B, Cd, Cu, Mn	20 µg/mL	
Sb, Se	50 µg/mL	
As, Ca	100 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD1A-100	500 mL	MIXSTD1A-500

Mixed Calibration Standard 1C

Elements	Concentration	Matrix
Ag	5 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
B, Ba	10 µg/mL	
Cd, Cu, Mn	20 µg/mL	
Sb, Se	50 µg/mL	
As, Ca	100 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD1C-100	500 mL	MIXSTD1C-500

Mixed Calibration Standard 2A

Elements	Concentration	Matrix
Sr	10 µg/mL	5% HNO_3
Li	50 µg/mL	
Mo, Na	100 µg/mL	
K	200 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD2A-100	500 mL	MIXSTD2A-500

Mixed Calibration Standard 3A

Elements	Concentration	Matrix
Ce, Co, V	20 µg/mL	5% HNO_3
P	100 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD3A-100	500 mL	MIXSTD3A-500

Assurance® Mixed Multi-Element Standards for AA & ICP (continued)

Mixed Calibration Standard 4A w/Mercury

MIXSTD4A-100 contains 1 each of MXSTD4A-100N and PLHG2-1AY | MIXSTD4A-500 contains 1 each of MXSTD4A-500N and PLHG2-1AX

Elements	Concentration	Matrix
Sn	40 µg/mL	5% HNO_3/tr. HF
Cr, Zn	50 µg/mL	
Al, Hg*, SiO_2, Ti	100 µg/mL	

Volume	Part #
125 mL	MIXSTD4A-100

Volume	Part #
500 mL	MIXSTD4A-500

** Mercury is supplied as a separate solution (PLGH2-1AY/X) due to incompatibility with other elements.*

Mixed Calibration Standard 4A w/o Mercury

Elements	Concentration	Matrix
Sn	40 µg/mL	5% HNO_3/tr. HF
Cr, Zn	50 µg/mL	
Al, SiO_2, Ti	100 µg/mL	

Volume	Part #
125 mL	MXSTD4A-100N

Volume	Part #
500 mL	MXSTD4A-500N

Mixed Calibration Standard 5A

Elements	Concentration	Matrix
Be	10 µg/mL	5% HNO_3
Ni	20 µg/mL	
Tl	50 µg/mL	
Fe, Mg, Pb	100 µg/mL	

Volume	Part #
125 mL	MIXSTD5A-100

Volume	Part #
500 mL	MIXSTD5A-500

Calibration Standards w/ Mercury*, 125 mL

Set Contains	Part #
MIXSTD1A-100	MIXSTD-SETA
MIXSTD2A-100	
MIXSTD3A-100	
MIXSTD4A-100	
MIXSTD5A-100	
PLHG2-1Y	

** Mercury is supplied as a separate solution (PLGH2-1X/Y) due to incompatibility with other elements.*

Calibration Standards w/o Mercury, 125 mL

Set Contains	Part #
MIXSTD1A-100	MXSTD-SETAN
MIXSTD2A-100	
MIXSTD3A-100	
MXSTD4A-100N	
MIXSTD5A-100	

Mixed Calibration Standards, 125 mL

Set Contains		Part #
MIXSTD1-100	MIXSTD4-100	MIXSTD-SET
MIXSTD2-100	MIXSTD5-100	
MIXSTD3-100		

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Assurance® Mixed Multi-Element Standards for AA & ICP (continued)

Mixed Calibration Standard 1

Elements	Concentration	Matrix
Be	50 µg/mL	2% HNO_3
Mn	100 µg/mL	
Cd, Zn	150 µg/mL	
Se	200 µg/mL	
Pb	500 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD1-100	500 mL	MIXSTD1-500

Mixed Calibration Standard 2

Elements	Concentration	Matrix
Ba, Co, Cu, V	100 µg/mL	5% HNO_3
Fe	10,000 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD2-100	500 mL	MIXSTD2-500

Mixed Calibration Standard 3

Elements	Concentration	Matrix
Mo, Si	100 µg/mL	2% HNO_3/tr. HF
As	500 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD3-100	500 mL	MIXSTD3-500

Mixed Calibration Standard 4

Elements	Concentration	Matrix
Cr, Ni	20 µg/mL	5% HNO_3
Al, Na	200 µg/mL	
K	400 µg/mL	
Ca	1,000 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD4-100	500 mL	MIXSTD4-500

Mixed Calibration Standard 5

Elements	Concentration	Matrix
Ag	50 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
B	100 µg/mL	
Sb, Tl	200 µg/mL	
Mg	1,000 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MIXSTD5-100	500 mL	MIXSTD5-500

Instrument Check (Lab Performance) Standards

Used to calibrate and verify wavelength accuracy and stability in sequential and simultaneous ICP units. Each CAL-MIX is designed to give the user wavelength ranges from 160 nm to 790 nm. Every ICP manufacturer has a specific group of elements at varying concentrations to determine instrument accuracy and reliability. Some have special calibration programs incorporated into their software; others give you information in their manuals. These standards are also useful as training tools for technicians or for methods development. Check your ICP manual or service guide for more information.

Instrument Check Standard 3

Elements	Concentration	Matrix
As, La, Li, Mn, Mo, Na, Ni, Sc	20 µg/mL	5% HCl
K, P, S	100 µg/mL	

Volume	Part #	Volume	Part #
125 mL	CALMIX3-100	500 mL	CALMIX3-500

Instrument Check Standard 4

Elements	Concentration	Matrix
Ba	1 µg/mL	2% HNO_3
Al, As, Cu, Mn, Na, Ni, P, Pb, Sc, Zn	10 µg/mL	
K	50 µg/mL	

Volume	Part #	Volume	Part #
125 mL	CALMIX4-100	500 mL	CALMIX4-500

Instrument Check Standard 7

Elements	Concentration	Matrix
Al, As, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Zn	100 µg/mL	2% HNO_3
Y	600 µg/mL	

Volume	Part #	Volume	Part #
125 mL	CALMIX7-100	500 mL	CALMIX7-500

Instrument Check Standard 8

Elements	Concentration	Matrix
Al, As, Co, Cr, Cu, K, Na, P, Pb	50 µg/mL	2% HNO_3

Volume	Part #	Volume	Part #
125 mL	CALMIX8-100	500 mL	CALMIX8-500

Instrument Check Standard 10

Elements	Concentration	Matrix
Al, Ba, Cd, Cu, Mn, Zn	50 µg/mL	2% HNO_3
K	500 µg/mL	

Volume	Part #	Volume	Part #
125 mL	CALMIX10-100	500 mL	CALMIX10-500

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Quality Control Standards

Quality Control Standards are used to check the standard curve, the procedure for inter-element correction and other spectral interferences. These standards are carried through the entire analytical operation of the method. If the determined concentration is not within ± 5% of 1 µg/mL, the laboratory performance is unacceptable. The source of the problem should be identified and corrected before continuing the analysis.

Quality Control Standard 7

Elements	Concentration	Matrix
Si	50 µg/mL	5% HNO_3/tr. F^-
Ag, Al, B, Ba, Na	100 µg/mL	
K	1,000 µg/mL	

Volume	Part #	Volume	Part #
125 mL	QC-7	500 mL	QC-7-500

Quality Control Standard 7A

Elements	Concentration	Matrix
Ag	50 µg/mL	5% HNO_3/tr. HF
Al, B, Ba, Na	100 µg/mL	
Si	500 µg/mL	
K	1,000 µg/mL	

Volume	Part #	Volume	Part #
125 mL	QC-7A	500 mL	QC-7A-500

Quality Control Standard 21

Elements	Concentration	Matrix
As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn	100 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF

Volume	Part #	Volume	Part #	Volume	Part #
125 mL	QC-21	250 mL	QC-21-250	500 mL	QC-21-500

Quality Control Standard 22

Elements	Concentration	Matrix
Ag	50 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn	100 µg/mL	

Volume	Part #	Volume	Part #	Volume	Part #
125 mL	QC-22	250 mL	QC-22-250	500 mL	QC-22-500

Helpful Hint

Aqua regia, or "royal water", is a mixture of 1 part nitric acid and 3 parts hydrochloric acid used to digest gold and platinum. An aqua regia solution can be prepared by using Spex CertiPrep nitric acid and hydrochloric acid blanks.

Quality Control Standards (continued)

Quality Control Standard 23		
Elements	**Concentration**	**Matrix**
Ag, Al, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Sr, Tl, Zn	1,000 µg/mL	10% HNO_3

Volume	Part #
125 mL	QC-23

Quality Control Standard 24		
Elements	**Concentration**	**Matrix**
Ag, Al, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Tl, Zn	10 µg/mL	10% HNO_3

Volume	Part #
125 mL	QC-24

Set of 2 Quality Control Standards, 125 mL	
Set Contains	**Part #**
QC-21	QC-SETA
QC-7A	

Set of 2 Quality Control Standards, 125 mL	
Set Contains	**Part #**
QC-21	QC-SETB
QC-7	

Laboratory Fortifying Stock (LFS) Solutions

Used for spiking the laboratory fortified blank and the laboratory fortified sample matrix. Two (2 mL) of the LFS solution must be added to a 100 mL aliquot of the laboratory fortified blank. This blank must be carried through the entire sample preparation procedure and analysis scheme. *Note: LFS Solution 1 does not contain Ca, K, Mg, or Na because their concentration will vary from one environmental sample to the other. Please view pages 10-21 for all single-element CRMs.*

LFS Solution 1 w/ Mercury* (LFS-1-100 contains LFS-1-100N and PLHG2-1AY | LFS-1-500 contains LFS-1-500N and PLHG2-1AX)		
Elements	**Concentration**	**Matrix**
Ag	2.5 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
Be	5 µg/mL	
Cd, Co, Hg*, Mo, Sn, V	10 µg/mL	
Al, As, B, Ba, Cr, Cu, Fe, Li, Mn, Ni, Pb, Sb, Se, SiO_2, Sr, Tl, Zn	25 µg/mL	
P	50 µg/mL	

Volume	Part #
125 mL	LFS-1-100

Volume	Part #
500 mL	LFS-1-500

** Mercury is supplied as a separate solution (PLHG2-1AY/AX (10 µg/mL)) due to incompatibility with other elements.*

LFS Solution 1 w/o Mercury		
Elements	**Concentration**	**Matrix**
Ag	2.5 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
Be	5 µg/mL	
Cd, Co, Mo, Sn, V	10 µg/mL	
Al, As, B, Ba, Cr, Cu, Fe, Li, Mn, Ni, Pb, Sb, Se, SiO_2, Sr, Tl, Zn	25 µg/mL	
P	50 µg/mL	

Volume	Part #
125 mL	LFS-1-100N

Volume	Part #
500 mL	LFS-1-500N

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Laboratory Performance Check (LPC) Standards

The Laboratory Performance Check (LPC) Standard is a solution of method analytes used to evaluate the performance of the instrument. The LPC standard is used immediately following calibration, after every tenth sample, and at the end of the sample run. The analyzed value of each analyte in the LPC solution should be within 95% to 105% of its expected value. If the analyte value is outside of the interval, reanalyze the LPC. If the analyte is again outside of the ± 5% limit, the instrument should be recalibrated and all samples following the last acceptable LPC solution should be reanalyzed.

LPC Standard w/ Mercury*

LPC-1-100 contains LPC-1-100N and PLHG2-1Y | LPC-1-500 contains LPC-1-500N and PLHG2-1X

Elements	Concentration	Matrix
Ag	5 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Tl, V, Zn	20 µg/mL	
Hg*, K, P, SiO_2	100 µg/mL	

Volume	Part #	Volume	Part #
125 mL	LPC-1-100	125 mL	LPC-1-500

** Mercury is supplied as a separate solution (PLHG2-1X/Y (10 µg/mL)) due to incompatibility with other elements.*

LPC Standard w/o Mercury*

Elements	Concentration	Matrix
Ag	5 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Tl, V, Zn	20 µg/mL	
K, P, SiO_2	100 µg/mL	

Volume	Part #	Volume	Part #
125 mL	LPC-1-100N	125 mL	LPC-1-500N

Environmental EPA Sets

For use in US EPA Method 6010 and 200.7 (Revision 4.4).

Environmental EPA Set w/ Mercury*, 125 mL**

Set Contains	Part #
MIXSTD1-100	EPA-SET
MIXSTD2-100	
MIXSTD3-100	
MIXSTD4-100	
MIXSTD5-100	
INTER18-100	
INTER5-100	
PLHG2-1Y	
PLSB7-2Y	
PLBLK-HCL**	
PLBLK-HNO3**	

Environmental EPA Set w/o Mercury, 125 mL**

Set Contains	Part #
MIXSTD1-100	EPA-SETN
MIXSTD2-100	
MIXSTD3-100	
MIXSTD4-100	
MIXSTD5-100	
INTER18-100N	
INTER5-100	
PLSB7-2Y	
PLBLK-HCL**	
PLBLK-HNO3**	

** Mercury is supplied as a separate solution (PLHG2-1X/1Y) due to incompatibility with other elements.*

*** PLBLK-HCL and PLBLK-HNO3 are at 500 mL.*

Interference Check Standards

The Interference Check Standards are used to set or confirm that the correct background correction intervals have been set for sequential ICP spectrometers and that the proper inter-element correction factors are set for simultaneous ICP spectrometers.

For use in US EPA Method 200.7 (Revision 4.4) and SW-846, Method 6010 (Third Edition).

Interference Check Standard 1

Elements	Concentration	Matrix
Sb	1,000 µg/mL	H_2O/tr. HNO_3/0.6% Tartaric Acid

Volume	Part #	Volume	Part #
125 mL	PLSB7-2Y	500 mL	PLSB7-2X

Interference Check Standard 5

Elements	Concentration	Matrix
Na	1,000 µg/mL	5% HNO_3
Al	1,200 µg/mL	
Mg	3,000 µg/mL	
Fe	5,000 µg/mL	
Ca	6,000 µg/mL	

Volume	Part #	Volume	Part #
125 mL	INTER5-100	500 mL	INTER5-500

Interference Check Standard 18 w/ Mercury*

INTER18-100 contains 1 each of INTER18-100N and PLHG2-1Y | INTER18-500 contains 1 each of INTER18-500N and PLHG2-1X

Elements	Concentration	Matrix
Be, Hg*	100 µg/mL	5% HNO_3
Mn	200 µg/mL	
Ag, Ba, Cd, Co, Cr, Cu, Ni, V, Zn	300 µg/mL	
Se	500 µg/mL	
As, Pb, Tl	1,000 µg/mL	
K	20,000 µg/mL	

Volume	Part #	Volume	Part #
125 mL	INTER18-100	500 mL	INTER18-500

** Mercury is supplied as a separate solution (PLHG2-1X/1Y) due to incompatibility with other elements.*

Interference Check Standards w/ Mercury, 125 mL

Set Contains	Part #
PLSB7-2Y	INTER-SET
PLHG2-1Y	
INTER5-100	
INTER18-100	

Interference Check Standards w/o Mercury, 125 mL

Set Contains	Part #
PLSB7-2Y	INTER-SETN
INTER5-100	
INTER18-100N	

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Interference Check Standards (continued)

Interference Check Standard 18 w/o Mercury		
Elements	**Concentration**	**Matrix**
Be	100 µg/mL	5% HNO_3
Mn	200 µg/mL	
Ag, Ba, Cd, Co, Cr, Cu, Ni, V, Zn	300 µg/mL	
Se	500 µg/mL	
As, Pb, Tl	1,000 µg/mL	
K	20,000 µg/mL	

Volume	Part #	Volume	Part #
125 mL	INTER18-100N	500 mL	INTER18-500N

Toxicity Characteristic Leachate Performance (TCLP) Standards

Designed to determine the mobility of the Inorganic contaminants present in liquid, solid and multi-phase wastes. To simplify, TCLP is designed to determine the hazardous contaminants that are actually entering into the environment. In addition to the Spex CertiPrep TCLP Standards, designed with all of the elements in one solution, the Toxicity Characteristic rule separates the elements according to specific instrumentation: ICP, GFAA, and Cold Vapor AA.

For use in accordance with the Toxicity Characteristic Rule Regulatory Levels issued in the Federal Register 55, 11846 March 1990; Method 1311.

TCLP Standard w/ Mercury* TCLP-100 contains 1 each of TCLP-100N and PLHG2-1Y | TCLP-500 contains one each of TCLP-500N and PLHG2-1X		
Elements	**Concentration**	**Matrix**
Cd, Se	5 µg/mL	2% HNO_3
Ag, As, Cr, Pb	25 µg/mL	
Hg*	100 µg/mL	
Ba	500 µg/mL	

Volume	Part #	Volume	Part #
125 mL	TCLP-100	500 mL	TCLP-500

** Mercury is supplied as a separate solution (PLHG2-1X/Y) due to incompatibility with other elements.*

TCLP Standard w/o Mercury		
Elements	**Concentration**	**Matrix**
Cd, Se	5 µg/mL	2% HNO_3
Ag, As, Cr, Pb	25 µg/mL	
Ba	500 µg/mL	

Volume	Part #	Volume	Part #
125 mL	TCLP-100N	500 mL	TCLP-500N

Drinking Water Pollutant Standards

These standards are for use with procedures for compliance monitoring of drinking water and for analysis of ground and surface water where determination of the drinking water contamination levels are required.

Refer to US National Primary Drinking Water Regulations 40 CFR, Part 141.

Primary Drinking Water Metals w/ Mercury*

EP-8 contains 1 each of EP-8N and PLHG2-1AY | EP-8-500 contains 1 each of EP-8-500N and PLHG2-1AX

Elements	Concentration	Matrix
Cd, Se	5 µg/mL	2% HNO_3
Ag, As, Cr, Hg*, Pb	10 µg/mL	
Ba	100 µg/mL	

Volume	Part #
125 mL	EP-8

Volume	Part #
500 mL	EP-8-500

** Mercury is supplied as a separate solution (PLHG2-1AX/Y) due to incompatibility with other elements.*

Primary Drinking Water Metals w/o Mercury

Elements	Concentration	Matrix
Cd, Se	5 µg/mL	2% HNO_3
Ag, As, Cr, Pb	10 µg/mL	
Ba	100 µg/mL	

Volume	Part #
125 mL	EP-8N

Volume	Part #
500 mL	EP-8-500N

Secondary Drinking Water Metals

Elements	Concentration	Matrix
Mn	5 µg/mL	2% HNO_3
Fe	30 µg/mL	
Cu	100 µg/mL	
Zn	500 µg/mL	

Volume	Part #
125 mL	EP-4

Volume	Part #
500 mL	EP-4-500

Drinking Water Standards w/ Mercury*, 125 mL

Set Contains	Part #
EP-8	DW-SET
EP-4	
PLHG2-1AY	

** Mercury is supplied as a separate solution (PLHG2-1AX/Y) due to incompatibility with other elements.*

Drinking Water Standards w/o Mercury, 125 mL

Set Contains	Part #
EP-8N	DW-SETN
EP-4	

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Groundwater and Wastewater Pollution Control Check Standards

May be used either as standards or as a means to check the individual analysts accuracy and precision.

Refer to US EPA Methods Manual 600/4-79-020 "Methods for Chemical Analysis of Water and Wastes" Trace Metals 21I, 21II and 21III Methods.

Trace Metals w/ Mercury*

WP-15 contains 1 each of WP-15N and PLHG2-1AY | WP-15-500 contains 1 each of WP-15-500N and PLHG2-1AX

Elements	Concentration	Matrix
Hg*	10 µg/mL	5% HNO_3
Cd, Se	25 µg/mL	
As, Be, Co, Cr, Cu, Fe, Mn, Ni, Pb, Zn	100 µg/mL	
V	250 µg/mL	
Al	500 µg/mL	

Volume	Part #	Volume	Part #
125 mL	WP-15	500 mL	WP-15-500

** Mercury is supplied as a separate solution (PLHG2-1AY/AX) due to incompatibility with other elements.*

Trace Metals w/o Mercury

Elements	Concentration	Matrix
Cd, Se	25 µg/mL	5% HNO_3
As, Be, Co, Cr, Cu, Fe, Mn, Ni, Pb, Zn	100 µg/mL	
V	250 µg/mL	
Al	500 µg/mL	

Volume	Part #	Volume	Part #
125 mL	WP-15N	500 mL	WP-15-500N

Trace Metals II

Elements	Concentration	Matrix
Ag	10 µg/mL	2% HNO_3
Sb, Tl	25 µg/mL	

Volume	Part #	Volume	Part #
125 mL	WP-3	500 mL	WP-3-500

Trace Metals III

Elements	Concentration	Matrix
K, Mg	100 µg/mL	2% HNO_3
Ba, Ca, Mo, Na	500 µg/mL	

Volume	Part #	Volume	Part #
125 mL	MN-6	500 mL	MN-6-500

Groundwater and Wastewater Pollution Control Check Standards (continued)

Alternate Metals

Elements	Concentration	Matrix
Be, Sb, Tl	5 µg/mL	2% HNO_3
Co, Cu, Mn, Ni, Zn	10 µg/mL	
Al, Fe, V	20 µg/mL	

Volume	Part #
125 mL	WP-11

Volume	Part #
500 mL	WP-11-500

Alternate Metals III

Elements	Concentration	Matrix
K, Mg	100 µg/mL	2% HNO_3
Ca, Na	500 µg/mL	

Volume	Part #
125 mL	MN-4

Volume	Part #
500 mL	MN-4-500

Trace Metals w/ Mercury*, 125 mL

Set Contains	Part #
WP-15	TM-SET
WP-3	
MN-6	
PLHG2-1AY	

** Mercury is supplied as a separate solution (PLHG2-1AX/Y) due to incompatibility with other elements.*

Trace Metals w/o Mercury, 125 mL

Set Contains	Part #
WP-15N	TM-SETN
WP-3	
MN-6	

Alternate Metals, 125 mL

Set Contains	Part #
WP-11	AM-SET
MN-4	

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section 5

Claritas PPT® Multi-Element Standards for ICP-MS

Multi-Element Standards for ICP-MS

Claritas PPT® Multi-Element Standards for ICP-MS

Spex CertiPrep Claritas PPT® standards are a class of Inorganic Certified Reference Standards designed specifically for today's new generation of trace ICP and ICP-MS instrumentation. Based on extensive development, our chemists have formulated this line of high-purity standards for user convenience and stability.

Our Claritas PPT® selection of standards includes a complete series of multi-element solutions, many designed for use with US EPA Methods. These solutions are made with the highest purity materials available and are tested on our state-of-the-art ICP-MS. Spex CertiPrep Certified Reference Materials (CRMs) are manufactured under a quality system complying with the requirements of ISO 9001, ISO/IEC 17025 and ISO 17034.

CALIBRATE WITH CONFIDENCE®

Since 1954, our commitment to quality has made Spex CertiPrep the leading manufacturing of Inorganic Certified Reference Materials.

Every Claritas PPT® standard is supplied with a comprehensive SPEXertificate® which reports actual measured values in the final solution of both the major analytes and up to 68 trace element impurities at ppt levels. As always, each certificate includes NIST documentation and information regarding the methods used. Spex CertiPrep will guarantee the stability and accuracy of each Claritas PPT® standard to ± 0.5%, averaged certified analyte concentrations, for one full year from date of shipment.

When One in a Million Isn't Good Enough...Claritas PPT® Certified by ICP-MS

The great precision, sensitivity and rapid analysis of multi-element mixtures by ICP and ICP-MS instrumentation have mandated their widespread use in environmental, agricultural, semiconductor, metallurgical, and biological laboratories. Advancements in ICP spectroscopy over recent years have extended limits of detection into the low ppb (parts per billion) range. The ICP-MS technique has provided even greater sensitivity, extending detection limits routinely into the low ppt (parts per trillion) range. No longer is one in a million good enough!

Did You Know?

Spex CertiPrep offers a variety of customer loyalty programs. Our SPoints Program allows you to earn valuable credits every time you order. For more information, visit **spex.com/PurchasingOptions/SPointsRewards**.

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Tuning Solutions

For ICP-MS instrumentation tuning and mass calibration prior to analysis.

ICP-MS Tuning Solution 1

A dilution of 100-fold to 1,000-fold, depending on the sensitivity of the instrument, is suggested. Dilute with equal parts of Claritas PPT® Nitric Acid Blank and Water Blank to yield a 1% nitric acid matrix.

ICP-MS Tuning Solution 1				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Ba, Be, Ce, Co, In, Li, Mg, Pb, Rh, Tl, U, Y	10 µg/mL	125 mL	5% HCl/2% HNO_3	CL-TUNE-1

ICP-MS Tuning Solution 2

A dilution of 1,000-fold is suggested. Dilute with Claritas PPT® Nitric Acid Blank and Water Blank to yield a 1% nitric acid matrix.

ICP-MS Tuning Solution 2				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Ba, Be, Ce, Co, In, Mg, Pb, Rh, U	10 µg/mL	125 mL	2% HNO_3	CL-TUNE-2

ICP-MS Tuning Solution 3

A dilution of 1,000-fold is suggested. Dilute with Claritas PPT® Nitric Acid Blank and Water Blank to yield a 0.5% nitric acid matrix.

ICP-MS Tuning Solution 3				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Be, Ce, Co, Fe, In, Mg, Pb, Th, U	1 µg/mL	125 mL	2% HNO_3	CL-TUNE-3
Ba	10 µg/mL			

ICP-MS Tuning Solution 4

A dilution of 100-fold to 1,000-fold is suggested. Dilute with Claritas PPT® Nitric Acid Blank to match your sample matrix.

ICP-MS Tuning Solution 4				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Co, In, Li, Tl	10 µg/mL	125 mL	2% HNO_3	CL-TUNE-4

Calibration and Matrix Blanks

The calibration, reagent, and rinse blanks are prepared by diluting the appropriate acid with water and any necessary internal standards to produce the required acid concentration, generally 1% HNO_3. May be used for dilution or to establish baselines.

Calibration and Matrix Blanks			
Description	**Volume**	**Matrix**	**Part #**
Nitric Acid Blank	125 mL	2% HNO_3	CLBLK-HNO3
	250 mL	2% HNO_3	CLBK-HNO3-250
Hydrochloric Acid Blank	125 mL	2% HCl	CLBLK-HCL
DI Water Blank	125 mL	H_2O	CLBLK-H2O
	250 mL	H_2O	CLBK-H2O-250

Instrument Calibration

Dilute to the concentration appropriate for the instrument with equal parts of Claritas PPT® Nitric Acid Blank and Water Blank. For preparation every two weeks, or as needed.

ICP-MS Instrument Calibration Standard 1

Elements	Concentration	Volume	Matrix	Part #
Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Th, Tl, U, V, Zn	20 µg/mL	125 mL	5% HNO_3/tr. Tartaric Acid	CL-CAL-1

ICP-MS Instrument Calibration Standard 1A

Elements	Concentration	Volume	Matrix	Part #
Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Th, Tl, U, V, Zn	10 µg/mL	125 mL	5% HNO_3/tr. Tartaric Acid	CL-CAL-1A
Se	50 µg/mL			

ICP-MS Instrument Calibration Standard 2

Elements	Concentration	Volume	Matrix	Part #
Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	100 µg/mL	125 mL	5% HNO_3/tr. Tartaric Acid/tr. HF	CL-CAL-2

ICP-MS Instrument Calibration Standard 2A

Elements	Concentration	Volume	Matrix	Part #
Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Tl, V, Zn	10 µg/mL	125 mL	5% HNO_3/tr. Tartaric Acid	CL-CAL-2A
Se	50 µg/mL			

ICP-MS Instrument Calibration Standard 3

Elements	Concentration	Volume	Matrix	Part #
Ca, Fe, K, Mg, Na	1,000 µg/mL	125 mL	5% HNO_3	CL-CAL-3

ICP-MS Initial Calibration Verification Standard 1

Elements	Concentration	Volume	Matrix	Part #
Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Th, Tl, U, V, Zn	10 µg/mL	125 mL	5% HNO_3/tr. Tartaric Acid	CL-ICV-1
Ca, Fe, K, Mg, Na, Sr	1,000 µg/mL			

ICP-MS Initial Calibration Verification Standard 2

Elements	Concentration	Volume	Matrix	Part #
Sn, Ti	10 µg/mL	125 mL	2% HNO_3/tr. HF	CL-ICV-2

ICP-MS Initial Calibration Verification Standard 3

Elements	Concentration	Volume	Matrix	Part #
Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Tl, V, Zn	10 µg/mL	125 mL	5% HNO_3/tr. Tartaric Acid	CL-ICV-3
Se	50 µg/mL			
Ca, Fe, K, Mg, Na	100 µg/mL			

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Instrument Calibration (continued)

ICP-MS Quality Control Standard 21				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn	100 µg/mL for each component	125 mL	5% HNO_3/tr. Tartaric Acid/tr. H	CL-QC-21

ICP-MS Quality Control Standard 21A				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Ni, Sb, Tl, V, Zn	10 µg/mL	125 mL	5% HNO_3/tr. Tartaric Acid	CL-QC-21A
Se	50 µg/mL			

Internal Standards

May be used to monitor and correct for changes that occur from differences between standards and samples. Since environmental samples often contain significant amounts of lithium, isotopically enriched 95% ^{6}Li can be analyzed as an internal standard, avoiding the signal from the ^{7}Li peak.

ICP-MS Internal Standard 1				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Bi, Ho, In, ^{6}Li, Sc, Tb, Y	10 µg/mL	125 mL	2% HNO_3	CLISS-1

ICP-MS Internal Standard 2				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Bi, Ho, In, ^{6}Li, Rh, Sc, Tb, Y	10 µg/mL	125 mL	2% HNO_3	CLISS-2

Single Element Internal Standards				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Bi	10 µg/mL	125 mL	2% HNO_3	CLBI2-1AY
Ge	10 µg/mL	125 mL	H_2O/tr. F^-	CLGE9-1AY
In	10 µg/mL	125 mL	2% HNO_3	CLIN2-1AY
Rh	10 µg/mL	125 mL	2% HCl	CLRH1-1AY
Sc	10 µg/mL	125 mL	2% HNO_3	CLSC2-1AY
Tb	10 µg/mL	125 mL	2% HNO_3	CLTB2-1AY
Y	10 µg/mL	125 mL	2% HNO_3	CLY2-1AY

ICP-MS Alternate Internal Standard 1		
Elements	**Concentration**	**Matrix**
Bi, Ge, In, ^{6}Li, Sc, Tb, Y	10 µg/mL	5% HNO_3

Volume	**Part #**	**Volume**	**Part #**
125 mL	CL-ISM1-100	500 mL	CL-ISM1-500

ICP-MS Alternate Internal Standard 2		
Elements	**Concentration**	**Matrix**
Bi, Ge, In, ^{6}Li, Lu, Rh, Sc, Tb	100 µg/mL	2% HNO_3

Volume	**Part #**
125 mL	CL-ISM2-100

Instrument Check Standards

For testing the calibration curves as Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) solutions. The standards may be mixed and diluted as required.

ICP-MS Instrument Check Standard 1, 125 mL

Elements	Concentration	Matrix	Part #
Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn	10 µg/mL	2% HNO_3/tr. Tartaric Acid/ tr. HF	CL-ICS-1

ICP-MS Instrument Check Standard 4, 125 mL

Elements	Concentration	Matrix	Part #
Mo, Th, U	10 µg/mL	2% HNO_3	CL-ICS-4

ICP-MS Mercury Single Element Standard, 125 mL

Elements	Concentration	Matrix	Part #
Hg	10 µg/mL	5% HNO_3	CLHG2-1AY

ICP-MS Instrument Check Standard 3, 125 mL

Elements	Concentration	Matrix	Part #
Ca, Fe, K, Mg, Na	200 µg/mL	2% HNO_3	CL-ICS-3

ICP-MS Instrument Check Standard 5, 125 mL

Elements	Concentration	Matrix	Part #
Mo, Sn, Sr, Ti	10 µg/mL	2% HNO_3/tr. HF	CL-ICS-5

ICP-MS Instrument Check Standards Set, 125 mL

Set Contains	Part #
CL-ICS-1	CL-ICS-SET
CL-ICS-3	
CL-ICS-4	
CL-ICS-5	
CLHG2-1AY	

Multi-Element Solution Standards

Designed to contain virtually every element in the mass spectrum for concentration verification checks.

ICP-MS Multi-Element Solution 1, 125 mL

Elements	Concentration	Matrix	Part #
Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, Y, Yb	10 µg/mL	5% HNO_3	CLMS-1

ICP-MS Multi-Element Solution 2 w/ Mercury*, 125 mL

Elements	Concentration	Matrix	Part #
Ag, Al, As, Ba, Be, Bi, Cd, Co, Cr, Cs, Cu, Fe, Ga, Hg*, In, K, Li, Mg, Mn, Na, Ni, Pb,m Rb, Se, Sr, Tl, U, V, Zn	10 µg/mL	5% HNO_3	CLMS-2

** Mercury is supplied as a separate solution (CLHG2-1AY) due to incompatibility with other elements.*

ICP-MS Multi-Element Solution 2 w/o Mercury, 125 mL

Kit contains 1 each of CLMS-2N and CLHG2-1AY

Elements	Concentration	Matrix	Part #
Ag, Al, As, Ba, Be, Bi, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb,m Rb, Se, Sr, Tl, U, V, Zn	10 µg/mL	5% HNO_3	CLMS-2N

ICP-MS Multi-Element Solution 2A w/ Mercury*, 125 mL

Kit contains 1 each of CLMS-2AN and CLHG2-1AY

Elements	Concentration	Matrix	Part #
Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Hg*, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn	10 µg/mL	5% HNO_3	CLMS-2A

** Mercury is supplied as a separate solution (CLHG2-1AY) due to incompatibility with other elements.*

ICP-MS Multi-Element Solution 2A w/o Mercury, 125 mL

Elements	Concentration	Matrix	Part #
Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn	10 µg/mL	5% HNO_3	CLMS-2AN

ICP-MS Multi-Element Solution 3, 125 mL

Elements	Concentration	Matrix	Part #
Au, Hf, Ir, Pd, Pt, Rh, Ru, Sb, Sn, Te	10 µg/mL	10% HCl/1% HNO_3	CLMS-3

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Multi-Element Solution Standards

Designed to contain virtually every element in the mass spectrum for concentration verification checks.

ICP-MS Multi-Element Solution 4, 125 mL

Elements	Concentration	Matrix	Part #
B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr	10 µg/mL	H_2O/tr. HF/tr. HNO_3	CLMS-4

ICP-MS Multi-Element Solution 5, 125 mL

Elements	Concentration	Matrix	Part #
Be, Bi, Ce, Co, In, Mg, Ni, Pb, U	10 µg/mL	2% HNO_3	CLMS-5

ICP-MS Multi-Element Solution Standards Set with Mercury*, 125 mL

Set Contains	Part #
CLMS-1	CLMS-SET
CLMS-2	
CLMS-3	
CLMS-4	
CLBLK-HNO3	
CLBLK-HCL	
CLBLK-H2O	
CLHG2-1AY	

ICP-MS Multi-Element Solution Standards Set without Mercury, 125 mL

Set Contains	Part #
CLMS-1	CLMS-SETN
CLMS-2N	
CLMS-3	
CLMS-4	
CLBLK-HNO3	
CLBLK-HCL	
CLBLK-H2O	

** Mercury is supplied as a separate solution (CLHG2-1AY) due to incompatibility with other elements.*

Memory Test Solutions

To identify or confirm the maximum concentration of an analyte that does not cause a memory effect greater than the contract required detection limit (CRDL). The test solutions are not analyzed directly; equal volumes of the two are mixed and then introduced into the instrument for a normal sample exposure time. A blank is then run to confirm that all analyte memory effects are below the CRDL.

ICP-MS Memory Test 1, 125 mL

Elements	Concentration	Matrix	Part #
Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Se, Tl, V, Zn	20 µg/mL	5% HNO_3	CL-MEM-1
Al, Ca, Fe, K, Mg, Na	1,000 µg/mL		

ICP-MS Memory Test 2, 125 mL

Elements	Concentration	Matrix	Part #
Mo, Sb, Ti	20 µg/mL	H_2O/tr. HF	CL-MEM-2
P, S	1,000 µg/mL		
C	2,000 µg/mL		
Cl	7,200 µg/mL		

Memory Test Solutions Set, 125 mL

Contents	Part #
CL-MEM-1	CL-MEM-SET
CL-MEM-2	

Gold Blank Standard

May be run between samples to reduce the memory effect rising from mercury. It is recommended that a solution of gold is five times the concentration of the mercury in the prior sample run.

Gold Blank Standard, 125 mL

Element	Concentration	Matrix	Part #
Au	100 µg/mL	2% HCl	CLAU1-1Y

Spike Sample Analysis

Designed for addition to a matrix blank prior to digestion for both water and soil. An aliquot of the respective Spike Standard should be added to produce the proper concentration levels in the digestate.

ICP-MS Spike Sample Standard 1 (Water), 125 mL			
Elements	**Concentration**	**Matrix**	**Part #**
Ag, Be, Cd, Se, Tl	25 µg/mL	5% HNO_3/tr. Tartaric Acid/ tr. HF	CL-SPIKE-1
As, Pb	50 µg/mL		
Co, Cr, Cu, Mn, Ni, Sb, V	100 µg/mL		
Ba, Zn	250 µg/mL		
Fe	500 µg/mL		

ICP-MS Spike Sample Standard 2 (Soil), 125 mL			
Elements	**Concentration**	**Matrix**	**Part #**
Ag, Be, Se, Tl	25 µg/mL	5% HNO_3/tr. Tartaric Acid/ tr. HF	CL-SPIKE-2
As, Cd	50 µg/mL		
Co, Pb, Sb	100 µg/mL		
Ni	125 µg/mL		
V	150 µg/mL		
Ba, Cr, Cu, Zn	250 µg/mL		

Isotope Standards

Spex CertiPrep Claritas PPT® Isotope Standards can be used for isotope dilution analysis and internal standards. The internal standard element must have similar characteristics to the tested/measured element(s) and not be present in the sample. Using isotope modification standards, the chemist can use less internal standard and have a higher intensity reading while avoiding interferences.

Every Claritas PPT® standard is supplied with a comprehensive SPEXertificate® which reports actual measured values in the final solution of both the major analytes and up to 68 trace elemental impurities at ppt levels.

Spex CertiPrep will guarantee the stability and accuracy of each Claritas PPT® standard to ± 0.5%, averaged labeled analyte concentrations, for one full year from date of shipment.

Additionally, the SPEXertificate® for the isotope standard will consist of:

- The isotope ratio measured by ICP-MS
- The concentration of each isotope calculated by ICP-MS and measured by ICP

Isotope Standards				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Boron 10	10 µg/mL	125 mL	H_2O	ISOT-B10
Boron 11	10 µg/mL	125 mL	H_2O	ISOT-B11
Copper 65	10 µg/mL	125 mL	2% HNO_3	ISOT-CU65
Lithium 6	10 µg/mL	125 mL	2% HNO_3	ISOT-LI6
Lead 206	10 µg/mL	125 mL	2% HNO_3	ISOT-PB206
Lead 207	10 µg/mL	125 mL	2% HNO_3	ISOT-PB207
Strontium 86	10 µg/mL	125 mL	2% HNO_3	ISOT-SR86
Zinc 68	10 µg/mL	125 mL	2% HNO_3	ISOT-ZN68

Helpful Hint

Don't forget your Gold Blank Standard, CLAU1-1Y
(see page 62), to reduce the memory effect of mercury!

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section 6

Multi-Element CLP Standards for ICP & ICP-MS

CLP Standards for ICP & ICP-MS

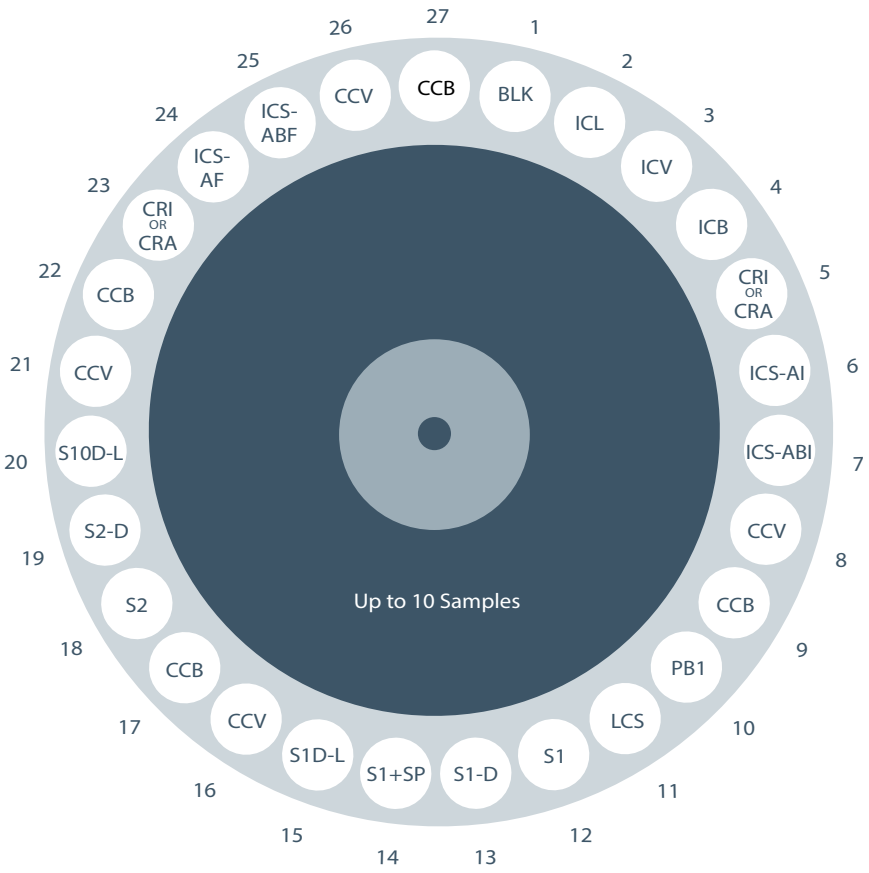
Our Contract Laboratory Program (CLP) standards allow you to Calibrate with Confidence®. The following standards are to be used in conjunction with the Statement of Work for Inorganic Analysis; Multi-Media/Multi-Concentration Document Number ILM 05.3/ISM 01.2.

The final ICP check, performed in our own laboratories, is your stamp of assurance. We calibrate our instruments with traceable reference materials and show you the actual found value of the solution you receive, not just an ideal, calculated number as so many other standards manufacturers do. The section that follows contains multi-element standards referenced to their application. The combination of elements, concentrations, and matrices listed have been designed by Spex CertiPrep for convenience of use and stability.

The US EPA SOW ILM 05.3/ISM 01.2 gives specific procedures for the methods of analysis, target elements, and concentration levels. Standards are specified not only by the elements present and their relative concentrations, but also the order and frequency of running standards, blanks and samples. Details of these specifications may be found in the US EPA SOW ILM 05.3/ISM 01.2 in the following sections:

- Exhibit C, Inorganic Target Analyte List (TAL)
- Exhibit D, Analytical Methods
- Exhibit E, QA/QC Requirements

Typical set-up for standards samples and blanks to be run for CLP analysis.



Standards for the Contract Laboratory Program

Following is a list of samples, standards and blanks in a possible running sequence as suggested by the Contract Laboratory Program protocols as seen on page 65. Also listed are the Spex CertiPrep standards and solutions to be used in preparing the final blanks, standards and spikes. Complete descriptions of each solution are provided on the following pages.

1. **BLK**
   Blank: PLBLKs
2. **ICL**
   Initial Calibration Solution: Mixture of ICALs
3. **ICV**
   Initial Calibration Verification: ICV-1A
4. **ICB**
   Initial Calibration Blank (not digested): PLBLKs
5. **CRI (ICP-AES) or CRA (AA)**
   CRDL-2
6. **ICS-AI**
   Initial Interferents, A: INT-A1
7. **ICS-ABI**
   Initial Interferents and Analytes, AB: INT-A1, INT-B3
8. **CCV**
   Continuing Calibration Verification (50% ICV): ICV-1A
9. **CCB**
   Continuing Calibration Blank: PLBLKs (if results of CCV and CCB are within limits, proceed to next sample, if not, stop run)
10. **PB1**
    Preparation Blank: Digested Water or Soil Blank
11. **LCS**
    Laboratory Control Sample (digested): ICV-1A
12. **S1**
    Sample #1
13. **S1-D**
    Sample #1 Duplicate
14. **S1+SP**
    Sample #1 with SPIKE: SPIKE-1
15. **S1D-L**
    Sample #1 Diluted Five-Fold
16. **CCV**
    Continuing Calibration Verification (50% ICV): ICV-1A
17. **CCB**
    Continuing Calibration Blank: PLBLKs (if results of CCV and CCB are within limits, proceed to next sample, if not, stop run)
18. **S2**
    Sample #2
19. **S2-D**
    Sample #2 Duplicate (up to 10 samples may be run as long as CCV and CCB tests are within accepted limits)
20. **S10D-L**
    Sample #10 Diluted Five-Fold
21. **CCV**
    Continuing Calibration Verification (50% ICV): ICV-1A
22. **CCB**
    Continuing Calibration Blank PLBLKs (if results of CCV and CCB are within limits, proceed to next sample, if not, stop run)
23. **CRI (ICP-AES) or CRA (AA)**
    2 x Contract Required Detection Limits: CRDL-1
24. **ICS-AF**
    Final Interferents, A: INT-A1
25. **ICS-ABF**
    Final Interferents and Analytes, AB: INT-A1, INT-B3
26. **CCV**
    Continuing Calibration Verification (50% ICV): ICV-1A
27. **CCB**
    Continuing Calibration Blank: PLBLKs

Instrument Calibration for CLP Methods

May be used separately or mixed together for preparation of the analytical curve. When mixed, these solutions will yield a standard containing all of the elements in the Target Analyte List (TAL). Instruments must be calibrated daily, every 24 hours, or each time the instrument is set-up. Calibration standards must be prepared fresh for each analysis and discarded after use. A dilution of 100-fold is suggested for ICAL-2, ICAL-3 and ICAL-4A, and a dilution of 10-fold for ICAL-1. Antimony and mercury can be diluted as required.

For ISM 01.2, at least one of your calibration standards must be at the Contract Required Quantification Limit (CRQL). See ISM 01.2 sections for CRQL standards.

Applies to part numbers ICAL-1, ICAL-2, ICAL-3, ICAl-4A, ICAL-4A-500, PLSB7-2Y, and PLHG2-1Y.

Initial Calibration Verification for CLP Methods

The US EPA retains analytical services through the Contract Laboratory Program (CLP). The CLP follows detailed SOPs derived from EPA methods. The CLP methods require calibration of analytical instrumentation within the expected quantitative range (ICAL standards) and additional CLP QA standards (ICV standards) to verify the calibration curve at each of the selected wavelengths that will be used for sample analysis.

Our verification standards, ICV-1A, ICV-2 and ICV-3, contain all of the elements on the TAL list and are independent standards for testing an instruments calibration curve. Spex CertiPrep's ICV standards are designed to be used with their corresponding instrument calibration standards (ICAL). Refer to page 71 for a complete list of ICAL standards.

We recommend dilution of ICV standards to a range within your instruments calibration curve. A dilution of 200-fold is recommended for ICV-2A, PLSB7-2X and ICV-2C. A dilution of 20-fold is recommended for ICV-1A and ICV-3.

Applies to part numbers ICV-1A and ICV-3.

Contract Required Detection Limits, CRDL

CLP ISM 01.2 & ILM 05.3 Standards for ICP

For ILM 05.3, a standard must be run at the Contract Required Detection Limits (CRDL). To verify linearity near the CRQL, this standard is analyzed at the beginning of the analysis run, after the ICV/ICB and before the ICSA and ICSAB. In addition, this standard must be run at a frequency of not less than 20 analytical samples and at the end of the analysis run, followed by the ICSA/ISCAB. The sequence order is CCV, CCB, CRI, ICSA, ICSAB, CCV, and CCB.

For ISM 01.2, at least one of your calibration standards must be at the Contract Required Detection Limit (CRDL). This standard, when diluted, can be used as a calibration standard to fulfill this requirement.

Applies to part numbers CRDL-2 and CRDL-2A.

CLP ISM 01.2 Standards for ICP-MS

For ISM 01.2, at least one of your calibration standards must be at the Contract Required Detection Limit (CRDL). This standard, when diluted, can be used as a calibration standard to fulfill this requirement.

Applies to part numbers CL-CRDL-2.

CLP ILM 05.3 Standards for ICP-MS

A standard must be run at the Contract Required Detection Limits (CRDL). To verify linearity near the CRQL, this standard is analyzed at the beginning of the analysis run after the ICV/ICB and before the ICSA and ICSAB. In addition, this standard must be run at a frequency of not less than 20 analytical samples and at the end of the analysis run, followed by the ICSA/ICSAB. The sequence order is CCV, CCB, CRI, ICSA, ICSAB, CCV, CCB.

Applies to part numbers CL-CRDL-2

Contract Required Detection Limits, CRDL (continued)

CLP ILM 02.0 & 05.2 Standards for ICP and CLP-M/6020/SW-846 Standards for ICP-MS

A standard must be run at two times the Contract Required Detection Limits (CRDL), or at two times the Instrument Detection Limits (IDL), whichever is greater. This standardization is performed at the start and the end of each sample analysis or at least twice in each eight hour shift.

All elements to be analyzed must be run except Al, Ba, Ca, Fe, K, Mg, and Na.

Our CRDL-1 and CL-CRDL-1standards contain all of the required elements on the TAL, in their appropriate concentration ratios. CRDL-1 should be diluted by a factor of 1,000 prior to use in the "two times CRDL" run for ICP-AES analysis. For analysis by atomic absorption, CRDL-1 should be diluted by a factor of 2,000 prior to use in the "one time CRDL" run. CL-CRDL-1 should be diluted by a factor of 1,000 prior to use in the "two times CL-CRDL" run for ICP analysis. For analysis by atomic absorption, CL-CRDL-1 should be diluted by a factor of 2,000 prior to use in the "one time CL-CRDL" run.

Applies to part number CRDL-1 and CL-CRDL-1.

Interference Checks

CLP ISM 01.2 and ILM 05.2 & 05.3 Standards for ICP

For verification of inter-element and background correction factors at the beginning and the end of each analysis run. In addition, a verification must be done after every 20th sample. Two solutions are required for the most common interference check: Solution A, the interferents alone (INT-A1) and Solution AB, a combination of interferents (INT-A1) and analytes (INT-B3). Solution A is prepared by diluting INT-A1 20-fold. Solution AB is prepared by diluting INT-A1 20-fold and INT-B3 100-fold; for example, 5 mL of INT-A1 and 1 mL of INT-B3 into a 100 mL volumetric flask, brought to volume with a matrix blank (see pages 22 & 40). Once prepared, the solutions should be analyzed consecutively, starting with Solution A.

Applies to part numbers INT-A1 and INT-B3.

CLP ILM 02.0 Standards for ICP

For verification of inter-element and background correction factors at the beginning and the end of each analysis run. In addition, a verification must be done after every 20th sample. Two solutions are required for the most common interference check: Solution A, the interferents alone (INT-A1) and Solution AB, a combination of interferents (INT-A1) and analytes (INT-B1). Solution A is prepared by diluting INT-A1 20-fold. Solution AB is prepared by diluting INT-A1 20-fold and INT-B1 100-fold; for example, 5 mL of INT-A1 and 1 mL of INT-B1 into a 100 mL volumetric flask, brought to volume with a matrix blank (see pages 22 & 40). Once prepared, the solutions should be analyzed consecutively, starting with Solution A.

Applies to part numbers INT-A1 and INT-B1.

CLP ISM 01.2 and ILM 05.2 & 05.3 Standards for ICP-MS

For verification of inter-element and background correction factors at the beginning and the end of each analysis run. In addition, a verification must be done after every 20th sample. Two solutions are required for the most common interference check: Solution A, the interferents alone (CL-INT-A2) and Solution AB, a combination of interferents (CL-INT-A2) and analytes (CL-INT-B3 or CL-INT-B4). Solution A is prepared by diluting CL-INT-A2 10-fold. Solution AB is prepared by diluting CL-INT-A2 10-fold and CL-INT-B3 or CL- INT-B4 100-fold; for example, 10 mL of CL-INT-A2 and 1 mL of CL-INT-B3 or CL-INT-B4 into a 100 mL volumetric flask, brought to volume with a matrix blank (see pages 22 & 40). Once prepared, the solutions should be analyzed consecutively, starting with Solution A.

Applies to part numbers CL-INT-A2, CL-INT-B3, CL-INT-B3N, and CL-INT-B4.

Interference Checks (continued)

CLP-M/6020/SW-846 Standards for ICP-MS

For verification of inter-element and background correction factors at the beginning and the end of each analysis run. In addition, a verification must be done after every 20th sample. Two solutions are required for the most common interference check: Solution A, the interferents alone (CL-INT-A1) and Solution AB, a combination of interferents (CL-INT-A1) and analytes (CL-INT-B1). Solution A is prepared by diluting CL-INT-A1 20-fold. Solution AB is prepared by diluting CL-INT-A1 20-fold and CL-INT-B1 100-fold; for example, 5 mL of CL-INT-A1 and 1 mL of CL-INT-B1 into a 100 mL volumetric flask, brought to volume with a matrix blank (see pages 22 & 40). Once prepared, the solutions should be analyzed consecutively, starting with Solution A.

Applies to part numbers CL-INT-A1 and CL-INT-B1.

Alternate Standards

We also provide a solution of alternate interferents and alternate analytes. Alternate interferents A (INT-A2) and alternate analytes B (INT-B2) may be prepared in combination with the INT-A1 and INT-B3 solutions mentioned, or any combination involving the four solutions, depending on the analytes and interferents of interest to you.

We provide ICP-MS interferents and interferent check solutions for SW-845.

Applies to part numbers INT-A2, INT-B2, CL-INT-A3, and CL-INT-B2.

Spike Sample Analysis

In the spike sample analysis, a spike containing the required elements, in their respective amount, is added to the sample prior to addition of any reagents, digestions, distillation, etc. Information is then provided on the effects of the sample matrix and the entire methodology.

CLP ISM 01.2 and ILM 05.2 & 05.3 Standards for ICP

Our spike standard, SPIKE-4, provides all of the analytes required for the IC, ICP-AES and the AA spike.

Applies to part numbers SPIKE-4.

CLP ILM 02.0 Standards for ICP

Our spike standard, SPIKE-1, provides all of the analytes required for the ICP-AES and the AA spike. Add 1 mL of SPIKE-1 to aqueous samples and 2 mL of SPIKE-1 to solid samples prior to digestion.

Applies to part numbers SPIKE-1 and SPIKE1-500.

CLP ILM 05.2 Standards for ICP-MS

Our spike standard, CL-SPIKE-3, provides all of the analytes required for the ICP and AA spike.

Applies to part number CL-SPIKE-3.

CLP ISM 01.2 Standards for ICP-MS

Our spike standard, CL-SPIKE-4, provides all of the analytes required for the ICP-MS and the AA spike. Add 1 mL of CL-SPIKE-4 to aqueous samples and 2 mL of CL-SPIKE-4 to solid samples prior to digestion.

Applies to part number CL-SPIKE-4.

Spike Sample Analysis (continued)

CLP ILM 05.3 Standards for ICP-MS

Our spike standard, CL-SPIKE-4, provides all of the analytes required for the ICP-MS.

Applies to part number CL-SPIKE-4.

CLP-M/6020/SW-846 Standards for ICP-MS

Our spike standards, CL-SPIKE-1 and CL-SPIKE-2, provide all of the analytes required for ICP-MS. Add 1 mL of CL-SPIKE-1 to aqueous samples and 2 mL of CL-SPIKE-2 to solid samples prior to digestion.

Applies to part numbers CL-SPIKE-1 and CL-SPIKE-2.

Instrument Calibration for CLP Methods

See page 67 for details.

Instrument Calibration Standard 1

Elements	Concentration	Matrix	Volume	Part #
Ca, K, Mg, Na	5,000 µg/mL	5% HNO_3	125 mL	ICAL-1

Instrument Calibration Standard 2

Elements	Concentration	Matrix	Volume	Part #
Ag, Cr	100 µg/mL	5% HNO_3	125 mL	ICAL-2
Mn	150 µg/mL			
Zn	200 µg/mL			
Ni	400 µg/mL			

Instrument Calibration Standard 3

Elements	Concentration	Matrix	Volume	Part #
Be	50 µg/mL	5% HNO_3	125 mL	ICAL-3
Cu	250 µg/mL			
Co, V	500 µg/mL			
Fe	1,000 µg/mL			
Al, Ba	2,000 µg/mL			

Instrument Calibration Standard 4A

Elements	Concentration	Matrix
Pb	30 µg/mL	5% HNO_3
Cd, Se	50 µg/mL	
As, Tl	100 µg/mL	

Volume	Part #
125 mL	ICAL-4A

Volume	Part #
500 mL	ICAL-4A-500

The following dilutions are suggested: a dilution of 250-fold for ICAL-1; 100-fold for ICAL-2 and ICAL-3; 20-fold for ICAL-4A. Antimony and mercury can be diluted as required.

Instrument Calibration for CLP Methods (continued)

See page 67 for details.

Single Element Standards				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Hg	100 µg/mL	5% HNO_3	125 mL	PLHG2-1Y
Sb	1,000 µg/mL	H_2O/0.6% Tartaric Acid/tr. HNO_3	125 mL	PLSB7-2Y

Initial Calibration Verification for CLP Methods

See page 67 for details.

Initial Calibration Verification Standard 1A				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Pb	3 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	500 mL	ICV-1A
Be, Cd, Se	5 µg/mL			
Ag, As, Cr, Tl	10 µg/mL			
Mn	15 µg/mL			
Zn	20 µg/mL			
Cu	25 µg/mL			
Ni	40 µg/mL			
Co, V	50 µg/mL			
Sb	60 µg/mL			
Fe	100 µg/mL			
Al, Ba	200 µg/mL			
Ca, K, Mg, Na	5,000 µg/mL			

Initial Calibration Verification Standard 3				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Be	5 µg/mL	5% HNO_3	500 mL	ICV-3
Cr	20 µg/mL			
Ag, Cu	25 µg/mL			
Cd, Co, Mn, Ni, V, Zn	50 µg/mL			
As, Fe, Pb, Se, Tl	100 µg/mL			
Al, Ba	200 µg/mL			
Ca, K, Mg, Na	500 µg/mL			

Helpful Hint

Having trouble finding the Multi-Element Standard you need?
Fill out the Custom Standard Request Form at
spex.com/CustomProduct/InorganicProduct.

Contract Required Detection Limits

CLP ISM 01.2 and ILM 05.3 Standards for ICP

See page 67 for details.

ICP Contract Required Detection Limit Standard 2				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Be, Cd	10 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CRDL-2
As, Cr, Pb, Ag	20 µg/mL			
Mn	30 µg/mL			
Cu, Tl	50 µg/mL			
Se	70 µg/mL			
Ni	80 µg/mL			
Co, V	100 µg/mL			
Sb, Zn	120 µg/mL			
Fe	200 µg/mL			

ICP Contract Required Detection Limit Standard 2A				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Al, Ba	200 µg/mL	10% HNO_3	125 mL	CRDL-2A
Ca, K, Mg, Na	5,000 µg/mL			

CLP ISM 01.2 and ILM 05.3 Standards for ICP-MS

See page 67 for details.

ICP-MS Contract Required Detection Limit Standard 2				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ag, As, Be, Cd, Co, Mn, Ni, Pb, Tl	2 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CL-CRDL-2
Cr, Cu, Sb, Zn	4 µg/mL			
Se, V	10 µg/mL			
Ba	20 µg/mL			
Al	40 µg/mL			
Fe	400 µg/mL			
Ca, K, Mg, Na	1,000 µg/mL			

Helpful Hint

How do I prevent my antimony oxide (Sb_2O_3) solution from becoming a gelatin when I dissolve it in tartaric acid?

While Sb_2O_3 dissolves easily in tartaric acid and water, the solution is clear at first but a gelatin-like substance can form over time. This is a form of mold. Adding a trace amount of nitric acid to the solution can prevent this.

Contract Required Detection Limits (continued)

CLP ILM 02.0 & 05.2 Standards for ICP and CLP-M/6020/SW-846 Standards for ICP-MS

See page 68 for details.

ICP Contract Required Detection Limit Standard 1				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Pb	6 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CRDL-1
Be, Cd, Se	10 µg/mL			
Ag, As, Cr, Tl	20 µg/mL			
Mn	30 µg/mL			
Zn	40 µg/mL			
Cu	50 µg/mL			
Ni	80 µg/mL			
Co, V	100 µg/mL			
Sb	120 µg/mL			

CLP-M/6020/SW-846 Standards for ICP-MS

See page 68 for details.

ICP-MS Contract Required Detection Limit Standard 1				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Pb	0.3 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CL-CRDL-1
Be, Cd, Se	0.5 µg/mL			
Ag, As, Cr, Tl	1 µg/mL			
Mn	1.5 µg/mL			
Zn	2 µg/mL			
Cu	2.5 µg/mL			
Ni	4 µg/mL			
Co, V	5 µg/mL			
Sb	6 µg/mL			
Fe	10 µg/mL			
Al, Ba	20 µg/mL			
Ca, K, Mg, Na	500 µg/mL			

Interference Checks

CLP ISM 01.2 and ILM 05.2 & 05.3 Standards for ICP

See page 68 for details.

ICP Interferents A1				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Fe	2,000 µg/mL	5% HNO_3	500 mL	INT-A1
Al, Ca, Mg	5,000 µg/mL			

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Interference Checks (continued)

CLP ISM 01.2 and ILM 05.2 & 05.3 Standards for ICP

See page 68 for details.

ICP Analytes B3				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Pb, Se	5 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	INT-B3
As, Tl	10 µg/mL			
Ag	20 µg/mL			
Ba, Be, Co, Cr, Cu, Mn, V	50 µg/mL			
Sb	60 µg/mL			
Cd, Ni, Zn	100 µg/mL			

CLP ILM 02.0 Standards for ICP

See page 68 for details.

ICP Interferents A1				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Fe	2,000 µg/mL	5% HNO_3	500 mL	INT-A1
Al, Ca, Mg	5,000 µg/mL			

ICP Analytes B1				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ba, Be, Co, Cr, Cu, Mn, V	50 µg/mL	5% HNO_3	125 mL	INT-B1
Ag, Cd, Ni, Pb, Zn	100 µg/mL			

CLP ISM 01.2 and ILM 05.2 & 05.3 Standards for ICP-MS

See page 68 for details.

ICP-MS Interferents A2				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Mo, Ti	20 µg/mL	5% HNO_3/tr. HF	125 mL	CL-INT-A2
Al, Ca, Fe, K, Mg, Na, P, S	1,000 µg/mL			
C	2,000 µg/mL			
Cl	10,000 µg/mL			

ICP-MS Analytes B3 w/ Mercury* - Kit contains 1 each of CLINT-B3N and CLHG2-1AY				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ag, As, Ba, Be, Cd, Co, Cr, Cu, Hg*, Mn, Ni, Pb, Sb, Se, Tl, V, Zn	2 µg/mL	2% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CL-INT-B3

** Mercury is supplied as a separate solution (CLHG2-1AY) due to incompatibility with other elements.*

ICP-MS Analytes B3 w/o Mercury				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn	2 µg/mL	2% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CL-INT-B3N

Interference Checks (continued)

CLP ISM 01.2 and ILM 05.2 & 05.3 Standards for ICP-MS

See page 68 for details.

ICP-MS Analytes B4				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ag, As, Ba, Be, Cd, Co, Sb, Se, Tl, V	20 µg/mL	5% HNO_3/tr. HF	125 mL	CL-INT-B4
Cu, Pb, Ni	25 µg/mL			
Mn, Zn	30 µg/mL			
Cr	40 µg/mL			

CLP-M/6020/SW-846 Standards for ICP-MS

See page 69 for details.

ICP-MS Interferents A1				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Mo, Ti	20 µg/mL	5% HNO_3/tr. HF	125 mL	CL-INT-A1
Al, K, Mg, P, S	1,000 µg/mL			
C	2,000 µg/mL			
Fe, Na	2,500 µg/mL			
Ca	3,000 µg/mL			
Cl	21,215 µg/mL			

ICP-MS Analytes B1				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ag	5 µg/mL	2% HNO_3	125 mL	CL-INT-B1
As, Cd, Se, Zn	10 µg/mL			
Co, Cr, Cu, Mn, Ni, V	20 µg/mL			

Spike Sample Analysis

CLP ILM 02.0 Standards for ICP

See page 69 for details.

ICP Spike Sample 1		
Elements	**Concentration**	**Matrix**
Ag, Be, Cd	5 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF
Cr	20 µg/mL	
Cu	25 µg/mL	
Co, Mn, Ni, Pb, Sb, V, Zn	50 µg/mL	
Fe	100 µg/mL	
Al, As, Ba, Se, Tl	200 µg/mL	

Volume	Part #	Volume	Part #
125 mL	SPIKE-1	500 mL	SPIKE-1-500

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Spike Sample Analysis (continued)

CLP ILM 05.2 Standards for ICP-MS

See page 69 for details.

ICP-MS Spike Sample 3				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Se	1 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CL-SPIKE-3
Pb	2 µg/mL			
As	4 µg/mL			
Ag, Be, Cd, Tl	5 µg/mL			
Sb	10 µg/mL			
Cr	20 µg/mL			
Cu	25 µg/mL			
Co, Mn, Ni, V, Zn	50 µg/mL			
Al, Ba	200 µg/mL			

CLP ISM 01.2 and ILM 05.2 & 05.3 Standards for ICP

See page 69 for details.

ICP Spike Sample 4				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Pb	2 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	SPIKE-4
As	4 µg/mL			
Ag, Be, Cd, Se, Tl	5 µg/mL			
Sb	10 µg/mL			
Cr	20 µg/mL			
Cu	25 µg/mL			
Co, Mn, Ni, V, Zn	50 µg/mL			
Fe	100 µg/mL			
Al, Ba	200 µg/mL			

CLP-M/6020/SW-846 Standards for ICP-MS

See page 70 for details.

ICP-MS Spike Sample 1 (Water)				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ag, Be, Cd, Se, Tl	25 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CL-SPIKE-1
As, Pb	50 µg/mL			
Co, Cr, Cu, Mn, Ni, Sb, V	100 µg/mL			
Ba, Zn	250 µg/mL			
Fe	500 µg/mL			

ICP-MS Spike Sample 2 (Soil)				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ag, Be, Se, Tl	25 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CL-SPIKE-2
As, Cd	50 µg/mL			
Co, Pb, Sb	100 µg/mL			
Ni	125 µg/mL			
V	150 µg/mL			
Ba, Cr, Cu, Zn	250 µg/mL			

Spike Sample Analysis (continued)

CLP ISM 01.2 and ILM 05.3 Standards for ICP-MS

See pages 69-70 for details.

ICP-MS Spike Sample 4				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Se	1 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	CL-SPIKE-4
Pb	2 µg/mL			
As	4 µg/mL			
Be, Cd, Ag, Tl	5 µg/mL			
Sb	10 µg/mL			
Cr	20 µg/mL			
Cu	25 µg/mL			
Co, Mn, Ni, V, Zn	50 µg/mL			
Fe	100 µg/mL			
Al, Ba	200 µg/mL			

Alternate Standards

Interference Checks

See page 69 for details.

ICP Alternate Interferents A				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Cr, Cu, Mn, Ni, Ti, V	1,000 µg/mL	5% HNO_3/tr. F^-	500 mL	INT-A2

ICP Alternate Interferents B				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ca, Fe, Mg, Si	10 µg/mL	5% HNO_3/tr. Tartaric Acid/tr. HF	125 mL	INT-B2
Al, As, B, Mo, Na, Sb, Se, Tl	100 µg/mL			

ICP-MS Interferents Check Solution B2 (for SW-846)				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Ag, As, Cd, Co, Cr, Cu, Mn, Ni, Zn	10 µg/mL	2% HNO_3	125 mL	CL-INT-B2

ICP-MS Interferents Check Solution A3 (for SW-846)				
Elements	**Concentration**	**Matrix**	**Volume**	**Part #**
Mo, Ti	20 µg/mL	5% HNO_3/tr. HF	125 mL	CL-INT-A3
Al, Mg, P, K, S	1,000 µg/mL			
C	2,000 µg/mL			
Fe, Na	2,500 µg/mL			
Ca	3,000 µg/mL			
Cl	20,000 µg/mL			

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section 7

Heavy Metals & Minerals Testing Kits

Heavy Metals & Minerals Testing Kits

For routinely analyzed Heavy Metals and Minerals

Heavy Metals and Minerals Testing Kits are designed for routinely analyzed heavy metals and minerals. All kits come with six, 30 mL standards which includes a nitric acid blank for easy dilution. Conveniently packaged in a sturdy, heavy-duty carton, these kits are perfect to store on a lab bench or in a cabinet. The 30 mL standards ship non-hazardous, saving money on shipping costs. The smaller volume also allows for less hazardous waste should the standard expire before its contents are used.

Heavy Metals Testing Kit				
Description	**Concentration**	**Volume**	**Matrix**	**Part #**
Arsenic (CLAS2-2M)	1,000 µg/mL	30 mL each	2% HNO_3	SPXHM-KIT
Cadmium (CLCD2-2M)	1,000 µg/mL		2% HNO_3	
Chromium (CLCR2-2M)	1,000 µg/mL		2% HNO_3	
Lead (CLPB2-2M)	1,000 µg/mL		2% HNO_3	
Mercury (CLHG4-2M)	1,000 µg/mL		10% HNO_3	
Nitric Acid Blank (CLBLK-HNO3M)	-		2% HNO_3	

Minerals Testing Kit				
Description	**Concentration**	**Volume**	**Matrix**	**Part #**
Calcium (CLCA2-2M)	1,000 µg/mL	30 mL each	2% HNO_3	SPXMT-KIT
Iron (CLFE2-2M)	1,000 µg/mL		2% HNO_3	
Magnesium (CLMG2-2M)	1,000 µg/mL		2% HNO_3	
Potassium (CLK2-2M)	1,000 µg/mL		2% HNO_3	
Sodium (CLNA2-2M)	1,000 µg/mL		2% HNO_3	
Nitric Acid Blank (CLBLK-HNO3M)	-		2% HNO_3	

Did You Know?

Spex CertiPrep is proud to announce the installation of over 335 Solar Panels on the roof of our Metuchen, NJ headquarters. This system produces 85 kW of electricity, removing our reliance on power from fossil fuels and other sources. We are committed to helping keep our planet green, and this is just our latest green initiative. For more information, visit **spex.com**.

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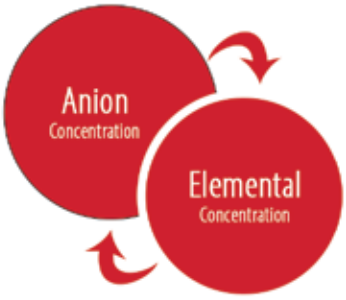
section 8

Ion Chromatography & Ion Selective Electrode Standards

Single and Multi-Element Standards for Ion Chromatography

Ion chromatography (IC) is an analytical process for the separation of ions based on charge affinity. IC can be used for a variety of different kinds of charged analytes from single elements to large proteins. In order to ensure accurate analysis, quality standards which are traceable and stable are necessary. Spex CertiPrep offers the highest quality IC standards available for the analytical laboratory.

Helpful Hint: When calculating gravimetric factors for Ion Chromatography standards, remember that:



Anion Concentration		Elemental Concentration
1,000 µg/mL Nitrate	=	226 µg/mL Nitrogen
1,000 µg/mL Nitrite	=	305 µg/mL Nitrogen
1,000 µg/mL Phosphate	=	326 µg/mL Phosphorus
1,000 µg/mL Sulfate	=	334 µg/mL Sulfur
1,000 µg/mL Nitrogen as Nitrate	=	1,000 µg/mL Nitrogen
1,000 µg/mL Nitrogen as Nitrite	=	1,000 µg/mL Nitrogen
1,000 µg/mL Phosphorus as Phosphate	=	1,000 µg/mL Phosphorus
1,000 µg/mL Sulfur as Sulfate	=	1,000 µg/mL Sulfur

Take a Closer Look

Specifications of four types of ASTM Water

ASTM Type	I	II	III	IV
Total Matter (µg/mL)	< 0.1	0.1	1	2
Specific Resistance (megaohm/cm) (max)	18	1	4	0.2
pH	N/A	N/A	N/A	N/A
Color Retention Time of $KMnO_4$ (min)	60	60	10	10
Total Silica (µg/L) (max)	3	3	500	High
Total Organic Carbon (µg/L) (max)	50	50	200	N/A

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Single-Element Ion Anion Standards				
Anions	**Concentration**	**Volume**	**Matrix**	**Part #**
Acetate ($C_2H_3O_2$)$^-$	1,000 µg/mL	125 mL	H_2O	AS-ACE9-2Y
		500 mL		AS-ACE9-2X
Bromate (BrO_3)$^-$	1,000 µg/mL	125 mL	H_2O	AS-BRO39-2Y
		500 mL		AS-BRO39-2X
Bromide (Br-)	1,000 µg/mL	125 mL	H_2O	AS-BR9-2Y
		500 mL		AS-BR9-2X
Chlorate (ClO_3)$^-$	1,000 µg/mL	125 mL	H_2O	AS-CLO39-2Y
		500 mL		AS-CLO39-2X
Chloride (Cl)$^-$	100 µg/mL	125 mL	H_2O	AS-CL9-1Y
		500 mL		AS-CL9-1X
	1,000 µg/mL	125 mL		AS-CL9-2Y
		500 mL		AS-CL9-2X
Chlorite (ClO_2)$^-$	1,000 µg/mL	125 mL	H_2O	AS-CLO29-2Y
		500 mL		AS-CLO29-2X
Chromate (CrO_4)$^{-2}$	1,000 µg/mL	125 mL	H_2O	AS-CRO49-2Y
		500 mL		AS-CRO49-2X
Fluoride (F)$^-$	100 µg/mL	125 mL	H_2O	AS-F9-1Y
		500 mL		AS-F9-1X
	1,000 µg/mL	125 mL		AS-F9-2Y
		500 mL		AS-F9-2X
Formate (HCO_2)$^-$	1,000 µg/mL	125 mL	H_2O	AS-HCO29-2Y
		500 mL		AS-HCO29-2X
Iodide (I)$^-$	1,000 µg/mL	125 mL	H_2O	AS-I9-2Y
		500 mL		AS-I9-2X
Nitrate (NO_3)$^-$	1,000 µg/mL	125 mL	H_2O	AS-NO39-2Y
		500 mL		AS-NO39-2X
Nitrate-Nitrogen	1,000 µg/mL	125 mL	H_2O	AS-NO3N9-2Y
		500 mL		AS-NO3N9-2X
Nitrite (NO_2)$^-$	1,000 µg/mL	125 mL	H_2O	AS-NO29-2Y
		500 mL		AS-NO29-2X
Nitrite-Nitrogen	1,000 µg/mL	125 mL	H_2O	AS-NO2N9-2Y
		500 mL		AS-NO2N9-2X
Ammonia Nitrogen	1,000 µg/mL	125 mL	H_2O	AS-NH3N9-2Y
Oxalate (C_2O_4)$^{-2}$	1,000 µg/mL	125 mL	H_2O	AS-C2O49-2Y
		500 mL		AS-C2O49-2X
Perchlorate (ClO_4)$^-$	1,000 µg/mL	125 mL	H_2O	AS-CLO49-2Y
Phosphate (PO_4)$^{-3}$	1,000 µg/mL	125 mL	H_2O	AS-PO49-2Y
		500 mL		AS-PO49-2X
Phosphate-Phosphorus	1,000 µg/mL	125 mL	H_2O	AS-PO4P9-2Y
		500 mL		AS-PO4P9-2X
Sulfate (SO_4)$^{-2}$	1,000 µg/mL	125 mL	H_2O	AS-SO49-2Y
		500 mL		AS-SO49-2X
Sulfate-Sulfur	1,000 µg/mL	125 mL	H_2O	AS-SO4S9-2Y
		500 mL		AS-SO4S9-2X

Single-Element Ion Cation Standards				
Cations	**Concentration**	**Volume**	**Matrix**	**Part #**
Ammonium (NH_4^+)	1,000 µg/mL	125 mL	H_2O	CS-NH49-2Y
Calcium (Ca^{2+})	1,000 µg/mL	125 mL	0.2% HNO_3	CS-CA2-2Y
Lithium (Li^+)	1,000 µg/mL	125 mL	0.2% HNO_3	CS-LI2-2Y
Magnesium (Mg^{2+})	1,000 µg/mL	125 mL	0.2% HNO_3	CS-MG2-2Y
Potassium (K^+)	1,000 µg/mL	125 mL	0.2% HNO_3	CS-K2-2Y
Sodium (Na^+)	1,000 µg/mL	125 mL	0.2% HNO_3	CS-NA2-2Y

Single-Element Ion Selective Electrode Standards				
Ion Selective Electrodes	**Concentration**	**Volume**	**Matrix**	**Part #**
Bromide (Br^-)	1,000 µg/mL	125 mL	H_2O	AS-BR9-2Y
	1,000 µg/mL	500 mL		AS-BR9-2X
	0.1 M	125 mL		AS-BR9-5Y
	0.1 M	500 mL		AS-BR9-5X
Chloride (Cl^-)	100 µg/mL	125 mL	H_2O	AS-CL9-1Y
	100 µg/mL	500 mL		AS-CL9-1X
	1,000 µg/mL	125 mL		AS-CL9-2Y
	1,000 µg/mL	500 mL		AS-CL9-2X
	0.1 M	125 mL		AS-CL9-5Y
	0.1 M	500 mL		AS-CL9-5X
Fluoride (F^-)	10 µg/mL	125 mL	H_2O	AS-F9-1AY
	10 µg/mL	500 mL		AS-F9-1AX
	100 µg/mL	125 mL		AS-F9-1Y
	100 µg/mL	500 mL		AS-F9-1X
	1,000 µg/mL	125 mL		AS-F9-2Y
	1,000 µg/mL	500 mL		AS-F9-2X
	0.1 M	125 mL		AS-F9-5Y
	0.1 M	500 mL		AS-F9-5X
Cyanide (CN^-)	1,000 µg/mL	125 mL	2% KOH	RSCN9-2Y
	1,000 µg/mL	500 mL		RSCN9-2X

Ionic Strength Adjustment Buffers				
Buffers	**Concentration**	**Volume**	**Matrix**	**Part #**
5M Sodium Nitrate ($NaNO_3$) Buffer	5 M	500 mL	H_2O	IS-BUF1-500
10M Sodium Hydroxide (NaOH) Buffer	10 M	500 mL	H_2O	IS-BUF2-500
Low Level TISAB II Buffer	-	500 mL	H_2O	IS-BUF3-500

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Multi-Element Ion Anion Standards

IC Instrument Check Standard 1				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
F^-	20 µg/mL	125 mL	H_2O	ICMIX1-100
CL^-	30 µg/mL			
NO_3^-	100 µg/mL			
HPO_4^{-2}, SO_4^{-2}	150 µg/mL			

IC Instrument Check Standard 2				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
F^-	100 µg/mL	125 mL	H_2O	ICMIX2-100
Cl^-	200 µg/mL			
Br-, NO_3-, SO_4^{-2}	400 µg/mL			
HPO_4^{-2}	600 µg/mL			

IC Instrument Check Standard 6				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
F^-	20 µg/mL	125 mL	H_2O	ICMIX6-100
NO_3^- as N, NO_2^- as N	25 µg/mL			
Cl^-	50 µg/mL			
Br^-	100 µg/mL			
HPO_4^{-2}, SO_4^{-2}	150 µg/mL			

Multi-Element Ion Cation Standards

IC Instrument Check Standard 3				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Li^+	50 µg/mL	125 mL	2% HNO_3	ICMIX3-100
K^+, Mg^{+2}, NA^+	200 µg/mL			
NH_4^+	400 µg/mL			
Ca^{+2}	1,000 µg/mL			

IC Instrument Check Standard 4				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Li^+	10 µg/mL	125 mL	0.5% HNO_3	ICMIX4-100
Na^+	50 µg/mL			
K+, NH_4^+	100 µg/mL			

IC Instrument Check Standard 5				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Mg^{2+}	200 µg/mL	125 mL	2% HNO_3	ICMIX5-100
Ca^{2+}	400 µg/mL			
Sr^{2+}	600 µg/mL			
Ba^{2+}	1,600 µg/mL			

Eluents

Eluents are made from high purity salts and filtered ASTM Type I Water. All eluents are at 100-fold concentration and ready for dilution, as needed, with filtered ASTM Type I Water.

Multi-Element Ion Standards - Eluents

Description	Concentration	Volume	Matrix	Part #
0.5 M Sodium Carbonate (Na_2CO_3) Eluent Concentrate	0.5 M	125 mL	H_2O	IC-ELCON1-100
0.5 M Sodium Bicarbonate ($NaHCO_3$) Eluent Concentrate	0.5 M	125 mL	H_2O	IC-ELCON2-100
0.18 M Sodium Carbonate (Na_2CO_3)	0.18 M	125 mL	H_2O	IC-ELCON3-100
0.17 M $NaHCO_3$ Sodium Bicarbonate Concentrate	0.17 M			
ASTM Type I Water, 18 Megaohm	-	500 mL	H_2O	PLBLK-H2O
ASTM Type I Water, 18 Megaohm	-	1 L	H_2O	PLBLK-H2O-1L
ASTM Type I Water, 18 Megaohm	-	2 L	H_2O	PLBLK-H2O-2L
ASTM Type I Water, 18 Megaohm	-	4 L	H_2O	PLBLK-H2O-4L

Set of 3 Solutions for Bromide

Contents	Part #
AS-BR9-5Y	AS-BR9-SET
AS-BR9-2Y	
IS-BUF1-500	

Set of 2 Solutions for Cyanide

Contents	Part #
RSCN9-2Y	RSCN9-SET
IS-BUF2-500	

Set of 5 Solutions for Fluoride

Contents	Part #
AS-F9-5Y	AS-F9-SET
AS-F9-1AY	
AS-F9-1Y	
AS-F9-2Y	
IS-BUF3-500	

Certified Wet Assay

Cyanide Reference Standard in a simple form designed for US EPA Methods 335.2 and 335.3, ASTM Method D2036-19, and Standard Method 4500-CNF, and in a complex form for use with US EPA Method 335.1.

Cyanide Certified Reference Standards

Description	Element	Concentration	Volume	Matrix	Part #
Cyanide, Simple	CN^-	1,000 µg/mL	125 mL	2% KOH	RSCN9-2Y
Cyanide, Simple	CN^-	1,000 µg/mL	500 mL	2% KOH	RSCN9-2X
Cyanide, Complex	CN^-	1,000 µg/mL	500 mL	2% KOH	RSCN9C-2X

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section 9

Carbon Black Reagents for ASTM D1510

Carbon Black Reagents for ASTM D1510

Our sodium thiosulfate solutions are prepared from ACS Grade, micro-crystalline $Na_2S_2O_3$. In order to maximize shelf life, our matrix is prepared using double-deionized, ASTM Type I Water.

Our iodine solutions are prepared from ACS Grade potassium iodide and crystalline elemental iodine. To guarantee a clean and stable product, our matrix is prepared using double-deionized, ASTM Type I Water.

All solutions are prepared gravimetrically using high accuracy analytical balances to ensure precise target concentrations. Each batch is thoroughly homogenized using a high speed industrial mixer to ensure reliable results from the first bottle to the last.

We are titrating our samples on our automated titrator. The automated dosing drive uses 10,000 steps over a 20 mL volume, so its dosing increment *can be* as small as 2 µL. For these applications, we are using a minimum dose of 10 µL for the sodium thiosulfate endpoint and 4 µL for the iodine endpoint. These settings achieve the extremely precise measurements for each titration while also staying within the parameters of the dosing unit.

As stated on our Certificate of Analysis, the sodium thiosulfate is run against a 0.1 N potassium dichromate solution. The exact normality of this solution is calculated by comparing it to NIST potassium dichromate. A set of 6 samples are run that must all be within the nominal value of 0.0394 N ± 0.00008 N.

The certified sodium thiosulfate is then used to titrate iodine. A set of 3 samples are run that must all be within the nominal value of 0.0473 N ± 0.00003 N.

Before releasing either of these reagents for packaging, we run QC checks with a previous lot to ensure accuracy over time.

Carbon Black Reagents

Description	Packaging	Volume	Matrix	Part #
0.0394 N Sodium Thiosulfate	Cubitainer	1 Gallon	H_2O/0.5% Amyl Alcohol	182002
0.0473 N Iodine	Amber Glass Bottle	1 Gallon	H_2O	183134

Want to try a Free Sample?

Contact **spexsales@antylia.com** or 732.549.7144 today to request a free sample for method validation.

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section 10

USP/ICH Standards

USP/ICH Standards

The new guidelines set by the United States Pharmacopeia (USP) and the International Conference on Harmonization (ICH) have pushed the pharmaceutical and nutraceutical industries to provide accurate, quantifiable results for metal analysis in drugs, pharmaceutical substances and raw materials.

USP <232> outlines new limits in pharmaceutical products for arsenic, cadmium, lead, and mercury. The procedures focus on the use of ICP-MS for the analysis of low level impurities. ICP-MS instrumentation, along with accurate ICP-MS standards, allow for increased efficiency and accuracy of the analysis necessary to comply with the new regulations. In addition to the changes enacted by the USP.

Developed in accordance with USP <232> Elemental Impurities, Spex CertiPrep offers these additions to our Consumer Safety Compliance Standards line. These standards can be used as a calibration or check standard to verify Oral Daily Dose PDE, Parenteral Component Limit or Parenteral Daily Dose PDE as well as Inhalation Component Limit or Daily Dose. Our extensive experience in creating quality trace metal standards, coupled with your ICP-MS analysis, will ensure your company will remain compliant with the new and changing regulations.

USP <232> and <233> Elemental Impurities

USP 232 Revision 40, Oral 2A

Elements	Concentration	Volume	Matrix	Part #
Co	50 mg/kg	125 mL	2% HNO_3	USP-ORAL2A
V	100 mg/kg			
Ni	200 mg/kg			

USP 232 Revision 40, Oral 2B Mix 1

Elements	Concentration	Volume	Matrix	Part #
Tl	8 mg/kg	125 mL	2% HNO_3	USP-ORAL2B-1
Ag	150 mg/kg			
Se	150 mg/kg			

USP 232 Revision 40, Oral 2B Mix 2

Elements	Concentration	Volume	Matrix	Part #
Au, Ir, Os, Pd, Pt, Rh, Ru	100 mg/kg for each component	125 mL	15% HCl	USP-ORAL2B-2

USP 232 Revision 40, Oral 3 Mix 1

Elements	Concentration	Volume	Matrix	Part #
Li	550 mg/kg	125 mL	10% HNO_3	USP-ORAL3-1
Ba	1,400 mg/kg			
Cu	3,000 mg/kg			
Cr	11,000 mg/kg			

USP 232 Revision 40, Oral 3 Mix 2

Element	Concentration	Volume	Matrix	Part #
Sb	1,200 mg/kg	125 mL	5% HNO_3/tr. Tartaric Acid/tr. HF	USP-ORAL3-2
Mo	3,000 mg/kg			
Sn	6,000 mg/kg			

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USP <232> and <233> Elemental Impurities (continued)

USP 232 Revision 40, Parenteral 2A				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Co	5 mg/kg	125 mL	2% HNO_3	USP-PARENT2A
V	10 mg/kg			
Ni	20 mg/kg			

USP 232 Revision 40, Parenteral 2B Mix 1				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Tl	8 mg/kg	125 mL	2% HNO_3	USP-PARENT2B-1
Ag	10 mg/kg			
Se	80 mg/kg			

USP 232 Revision 40, Parenteral 2B Mix 2				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Ir	10 mg/kg	125 mL	10% HCl	USP-PARENT2B-2
Os	10 mg/kg			
Pd	10 mg/kg			
Pt	10 mg/kg			
Rh	10 mg/kg			
Ru	10 mg/kg			
Au	100 mg/kg			

USP 232 Revision 40, Parenteral 3				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Sb	90 mg/kg	125 mL	5% HNO_3/tr. Tartaric Acid/tr. HF	USP-PARENT3
Li	250 mg/kg			
Cu	300 mg/kg			
Sn	600 mg/kg			
Ba	700 mg/kg			
Cr	1,100 mg/kg			
Mo	1,500 mg/kg			

USP 232 Revision 40, Inhalation Mix 1				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Hg	1 mg/kg	125 mL	5% HNO_3	USP-INHL1
As, Cd	2 mg/kg			
Pb	5 mg/kg			

USP <232> and <233> Elemental Impurities (continued)

USP 232 Revision 40, Inhalation Mix 2A				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
V	1 mg/kg	125 mL	2% HNO_3	USP-INHL2A
Co	3 mg/kg			
Ni	5 mg/kg			

USP 232 Revision 40, Inhalation 2B, Mix 1				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Ag	7 mg/kg	125 mL	2% HNO_3	USP-INHL2B-1
Tl	8 mg/kg			
Se	130 mg/kg			

USP 232 Revision 40, Inhalation 2B, Mix 2				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Gold	1 mg/kg for each component	125 mL	5% HCl	USP-INHL2B-2
Iridium				
Osmium				
Palladium				
Platinum				
Rhodium				
Ruthenium				

USP 232 Revision 40, Inhalation Mix 3				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Cr	3 mg/kg	125 mL	2% HNO_3/tr. Tartaric Acid/tr. HF	USP-INHL3
Mo	10 mg/kg			
Sb	20 mg/kg			
Li	25 mg/kg			
Cu	30 mg/kg			
Sn	60 mg/kg			
Ba	300 mg/kg			

Oral Elemental Impurities A				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
As	1.5 mg/kg	125 mL	5% HNO_3	USP-TXM2
Pb	5 mg/kg			
Hg	15 mg/kg			
Cd	25 mg/kg			

Oral Elemental Impurities A				
Elements	**Concentration**	**Volume**	**Matrix**	**Part #**
Cd	5 mg/kg	125 mL	5% HNO_3 /1% HCl	USP-TXM2A
Pb	5 mg/kg			
As	15 mg/kg			
Hg	30 mg/kg			

USP <232> and <233> Elemental Impurities (continued)

Oral Elemental Impurities A

Elements	Concentration	Volume	Matrix	Part #
Cd	5 mg/kg	125 mL	5% HNO_3 /1% HCl	USP-TXM2A
Pb	5 mg/kg			
As	15 mg/kg			
Hg	30 mg/kg			

Precious Metal impurities B (with Os)

Elements	Concentration	Volume	Matrix	Part #
Ir, Os, Pd, Pt, Rh, Ru	100 mg/kg for each component	125 mL	15% HCl	USP-TXM3

Precious Metal impurities B (without Os)

Elements	Concentration	Volume	Matrix	Part #
Ir, Pd, Pt, Rh, Ru	100 mg/kg for each component	125 mL	15% HCl	USP-TXM4

Oral/Parenteral Elemental Impurities C

Elements	Concentration	Volume	Matrix	Part #
Mo	100 mg/kg	125 mL	5% HNO_3	USP-TXM5
V	100 mg/kg			
Ni	500 mg/kg			
Cu	1,000 mg/kg			

Oral Elemental Impurities C

Elements	Concentration	Volume	Matrix	Part #
V	100 mg/kg	125 mL	5% HNO_3	USP-TXM5A
Ni	200 mg/kg			
Cu	3,000 mg/kg			
Mo	3,000 mg/kg			
Cr	11,000 mg/kg			

Parenteral Elemental Impurities C

Elements	Concentration	Volume	Matrix	Part #
V	10 mg/kg	125 mL	5% HNO_3	USP-TXM5B
Ni	20 mg/kg			
Cu	300 mg/kg			
Cr	1,100 mg/kg			
Mo	1,500 mg/kg			

Parenteral Elemental Impurities D

Elements	Concentration	Volume	Matrix	Part #
Cd	2 mg/kg	125 mL	5% HNO_3/1% HCl	USP-TXM6A
Hg	3 mg/kg			
Pb	5 mg/kg			
As	15 mg/kg			

ICH/Global Compliance Standards

Oral Elemental Impurities A				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
As	1.5 mg/kg	125 mL	5% HNO_3	ICH-TXM2
Pb	5 mg/kg			
Hg	15 mg/kg			
Cd	25 mg/kg			

Precious Metal Impurities B (with Os)				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Ir, Os, Pd, Pt, Rh, Ru	100 mg/kg	125 mL	15% HCl	ICH-TXM3

Precious Metal Impurities B (without Os)				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Ir, Pd, Pt, Rh, Ru	100 mg/kg	125 mL	15% HCl	ICH-TXM4

Elemental Impurities E				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Co, Mo, V	100 mg/kg	125 mL	5% HNO_3	ICH-TXM7
Cr, Ni	250 mg/kg			
Cu	1,000 mg/kg			
Mn	2,500 mg/kg			

Elemental Impurities F				
Element	**Concentration**	**Volume**	**Matrix**	**Part #**
Fe, Zn	13,000 mg/kg	125 mL	5% HNO_3	ICH-TXM8

Did You Know?

We will guarantee your custom standards for one year from the date of shipment and supply your standard with a Comprehensive Certificate of Analysis. With our aqueous standards, you may choose between our conventional ICP certification, or request Claritas PPT® certifications, which includes an impurities analysis of up to 68 elements to ppt levels measured on ICP-MS.

To get started, contact our technical support team or visit **spex.com/CustomProduct/InorganicProduct** with the following information:

- Your specific application/instrumentation
- The elements or complexes you desire
- The concentration(s) at which you require each component
- The matrix which you prefer (e.g., water, dilute acid, oil, methanol, etc.)

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section 11

pH Buffers & Conductivity Standards

ISO 17034 Certified

Certified pH Buffers

Certified pH Buffers			
Description	**Concentration**	**Matrix**	**Part #**
pH 2.00 Buffer	2 SI Units	H_2O	PH-BUFF2-500
pH 3.00 Buffer	3 SI Units	H_2O	PH-BUFF3-500
pH 4.00 Buffer	4 SI Units	H_2O	PH-BUFF4-500
pH 5.00 Buffer	5 SI Units	H_2O	PH-BUFF5-500
pH 6.00 Buffer	6 SI Units	H_2O	PH-BUFF6-500
pH 7.00 Buffer	7 SI Units	H_2O	PH-BUFF7-500
pH 8.00 Buffer	8 SI Units	H_2O	PH-BUFF8-500
pH 9.00 Buffer	9 SI Units	H_2O	PH-BUFF9-500
pH 10.00 Buffer	10 SI Units	H_2O	PH-BUFF10-500
pH 11.00 Buffer	11 SI Units	H_2O	PH-BUFF11-500
pH 12.00 Buffer	12 SI Units	H_2O	PH-BUFF12-500

Conductivity Standards: TDS as KCL

Conductivity Standards: TDS as KCL					
Description	**Element**	**Concentration**	**Volume**	**Matrix**	**Part #**
100 µmhos/cm @ 25°C	65 µg/mL as KCL	100 µmhos	500 mL	H_2O	TDS-1-500
1,000 µmhos/cm @ 25°C	650 µg/mL as KCL	1,000 µmhos	500 mL	H_2O	TDS-2-500

pH vs. Temp

** This is for general informational purposes only. These are uncertified values and do not pertain to any specific lot of product. **

		TEMPERATURE (°C)									
Part #	**pH Buffer**	**0**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**
PH-BUFF2-500	pH 2	1.97	1.98	1.98	2.02	2.00	2.00	2.00	2.02	2.01	2.02
PH-BUFF3-500	pH 3	2.97	2.98	2.97	3.00	3.00	3.00	3.02	3.03	3.03	3.06
PH-BUFF4-500	pH 4	4.01	3.99	4.00	4.00	4.00	4.00	4.01	4.02	4.03	4.06
PH-BUFF5-500	pH 5	5.05	5.04	5.03	5.00	5.00	5.00	5.01	5.01	5.04	5.07
PH-BUFF6-500	pH 6	6.07	6.05	6.06	6.05	6.00	6.00	5.99	5.98	5.97	5.96
PH-BUFF7-500	pH 7	7.13	7.10	7.07	7.05	7.02	7.00	6.99	6.98	6.97	6.83
PH-BUFF8-500	pH 8	8.15	8.13	8.08	8.01	8.00	8.00	8.00	7.95	7.94	7.93
PH-BUFF9-500	pH 9	9.17	9.13	9.09	9.06	9.02	9.00	8.97	8.93	8.91	8.87
PH-BUFF10-500	pH 10	10.34	10.26	10.19	10.12	10.06	10.00	9.94	9.90	9.85	9.77
PH-BUFF11-500	pH 11	11.80	11.69	11.46	11.31	11.17	11.00	10.88	10.76	10.62	10.37
PH-BUFF12-500	pH 12	12.02	12.03	12.04	12.01	12.00	12.00	12.02	12.02	12.06	12.10

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section 12

Organometallic Single & Multi-Element Oil Standards

Organometallic Single & Multi-Element Oil Standards

The determination of wear metals in engine oils and other lubricants can be applied to machines such as automobiles, aircraft, heavy equipment, trucks, locomotives, military vehicles, etc. The examples are endless.

By tracking metals suspended in the used oil, engineers, designers and mechanics can determine the breakdown of specific engine parts. Specific elements present in used oils have been found to be directly related to specific engine problems. Engine failures, as well as expensive repairs, can be avoided if engine oils are analyzed, providing a periodic trend to predict maintenance or replacement.

Spex CertiPrep presents a comprehensive offering of Organometallic Oil Standards. The benefits and advantages of these standards are many:

- Choice of over 35 single-elements at 1,000 or 5,000 µg/g
- Popular multi-element blends of 23, 21, 12, or 5 elements
- Clear, transparent matrix
- 1 year expiration date
- Convenient sizes: 50 or 100 grams
- Certificate of Analysis with every solution
- Guaranteed stable and accurate
- Manufactured under an internationally accredited ISO 9001 quality system and compliant with ISO/IEC 17025
- Custom standards available

Applications

- Wear metals
- Crude oils
- Additive metals
- Environmental monitoring
- Petrochemical testing
- Pharmaceuticals
- Food processing
- Sulfur in diesel fuel

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Single-Element Organometallic Oil Standards

Each standard is supplied with a Certificate of Analysis and is packaged in a 50 gram bottle.

Single-Element Organometallic Oil Standards				
Elements in Base Oil	**Concentration**	**Weight**	**Matrix**	**Part #**
Aluminum (Al)	1,000 µg/g	50 g	Base Oil 20	ORG-AL8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-AL8-4Z
Antimony (Sb)	1,000 µg/g	50 g	Base Oil 20	ORG-SB8-2Z
Arsenic (As)	1,000 µg/g	50 g	Base Oil 75	ORG-AS8-2Z
Barium (Ba)	1,000 µg/g	50 g	Base Oil 75	ORG-BA8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-BA8-4Z
Beryllium (Be)	1,000 µg/g	50 g	Base Oil 75	ORG-BE8-2Z
Bismuth (Bi)	1,000 µg/g	50 g	Base Oil 75	ORG-BI8-2Z
Boron (B)	1,000 µg/g	50 g	Base Oil 75	ORG-B8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-B8-4Z
Cadmium (Cd)	1,000 µg/g	50 g	Base Oil 75	ORG-CD8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-CD8-4Z
Calcium (Ca)	1,000 µg/g	50 g	Base Oil 75	ORG-CA8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-CA8-4Z
Chromium (Cr)	1,000 µg/g	50 g	Base Oil 75	ORG-CR8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-CR8-4Z
Cobalt (Co)	1,000 µg/g	50 g	Base Oil 75	ORG-CO8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-CO8-4Z
Copper (Cu)	1,000 µg/g	50 g	Base Oil 75	ORG-CU8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-CU8-4Z
Iron (Fe)	1,000 µg/g	50 g	Base Oil 75	ORG-FE8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-FE8-4Z
Lead (Pb)	1,000 µg/g	50 g	Base Oil 75	ORG-PB8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-PB8-4Z
Lithium (Li)	1,000 µg/g	50 g	Base Oil 20	ORG-LI8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-LI8-4Z
Magnesium (Mg)	1,000 µg/g	50 g	Base Oil 75	ORG-MG8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-MG8-4Z
Manganese (Mn)	1,000 µg/g	50 g	Base Oil 75	ORG-MN8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-MN8-4Z
Mercury (Hg)	1,000 µg/g	50 g	Base Oil 75	ORG-HG8-2Z
Molybdenum (Mo)	1,000 µg/g	50 g	Base Oil 75	ORG-MO8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-MO8-4Z
Nickel (Ni)	1,000 µg/g	50 g	Base Oil 75	ORG-NI8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-NI8-4Z
Phosphorus (P)	1,000 µg/g	50 g	Base Oil 75	ORG-P8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-P8-4Z
Potassium (K)	1,000 µg/g	50 g	Base Oil 75	ORG-K8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-K8-4Z
Scandium (Sc)	1,000 µg/g	50 g	Base Oil 75	ORG-SC8-2Z
Selenium (Se)	1,000 µg/g	50 g	Base Oil 75	ORG-SE8-2Z

Single-Element Organometallic Oil Standards (continued)

Single-Element Organometallic Oil Standards (continued)				
Elements in Base Oil	**Concentration**	**Weight**	**Matrix**	**Part #**
Silicon (Si)	1,000 µg/g	50 g	Base Oil 20	ORG-SI8-2Z
Silver (Ag)	1,000 µg/g	50 g	Base Oil 75	ORG-AG8-2Z
Sodium (Na)	1,000 µg/g	50 g	Base Oil 20	ORG-NA8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-NA8-4Z
Sulfur (S)	1,000 µg/g	50 g	Base Oil 75	ORG-S8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-S8-4Z
Thallium (Tl)	1,000 µg/g	50 g	Base Oil 20	ORG-TL8-2Z
Tin (Sn)	1,000 µg/g	50 g	Base Oil 20	ORG-SN8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-SN8-4Z
Titanium (Ti)	1,000 µg/g	50 g	Base Oil 20	ORG-TI8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-TI8-4Z
Vanadium (V)	1,000 µg/g	50 g	Base Oil 75	ORG-V8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-V8-4Z
Yttrium (Y)	1,000 µg/g	50 g	Base Oil 75	ORG-Y8-A-2Z
Zinc (Zn)	1,000 µg/g	50 g	Base Oil 20	ORG-ZN8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-ZN8-4Z
Zirconium (Zr)	1,000 µg/g	50 g	Base Oil 20	ORG-ZR8-2Z
	5,000 µg/g	50 g	Base Oil 75	ORG-ZR8-4Z

Multi-Element Organometallic Oil Standards

Multi-Element Organometallic Oil Standards, 23 Elements				
Elements in Base Oil	**Concentration**	**Weight**	**Matrix**	**Part #**
Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	100 µg/g	50 g	Base Oil 75	S23-100Z
	100 µg/g	100 g		S23-100Y
	300 µg/g	50 g		S23-300Z
	300 µg/g	100 g		S23-300Y
	500 µg/g	50 g		S23-500Z
	500 µg/g	100 g		S23-500Y
	900 µg/g	50 g		S23-900Z
	900 µg/g	100 g		S23-900Y

Multi-Element Organometallic Oil Standards, 21 Elements				
Elements in Base Oil	**Concentration**	**Weight**	**Matrix**	**Part #**
Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	100 µg/g	50 g	Base Oil 75	S21-100Z
	100 µg/g	100 g		S21-100Y
	300 µg/g	50 g		S21-300Z
	300 µg/g	100 g		S21-300Y
	500 µg/g	50 g		S21-500Z
	500 µg/g	100 g		S21-500Y
	900 µg/g	50 g		S21-900Z
	900 µg/g	100 g		S21-900Y

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Multi-Element Organometallic Oil Standards (continued)

Multi-Element Organometallic Oil Standards, 12 Elements				
Elements in Base Oil	**Concentration**	**Weight**	**Matrix**	**Part #**
Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	100 µg/g	50 g	Base Oil 75	S12-100Z
	100 µg/g	100 g		S12-100Y
	500 µg/g	50 g		S12-500Z
	500 µg/g	100 g		S12-500Y
	900 µg/g	50 g		S12-900Z
	900 µg/g	100 g		S12-900Y

Multi-Element Organometallic Oil Standards, 5 Elements				
Elements in Base Oil	**Concentration**	**Weight**	**Matrix**	**Part #**
Ba, Ca, Mg, P, Zn	900 µg/g	50 g	Base Oil 75	AM-900Z
	900 µg/g	100 g		AM-900Y
	1,000 µg/g	50 g		AM-1000Z
	1,000 µg/g	100 g		AM-1000Y
	5,000 µg/g	50 g		AM-5000Z
	5,000 µg/g	100 g		AM-5000Y

Base Oil and Kerosene Blanks

Base Oil 20 and 75 are the same certified base oils that are used in our singles and multi-element blends.

Base Oil 20 Blank, 500 mL	
Matrix	**Part #**
Base Oil 20	BASE20

Base Oil 20 Blank, 1 Gallon	
Matrix	**Part #**
Base Oil 20	BASE20-G

Base Oil 75 Blank, 500 mL	
Matrix	**Part #**
Base Oil 75	BASE75

Base Oil 75 Blank, 1 Gallon	
Matrix	**Part #**
Base Oil 75	BASE75-G

Kerosene Blank, 500 mL	
Matrix	**Part #**
Kerosene	KER-BLK

Kerosene Blank, 1 Gallon	
Matrix	**Part #**
Kerosene	KER-BLK-G

B100 Biodiesel Standards

Governments worldwide have passed regulations that mandate lower levels of sulfur in biodiesel fuel. To comply with the implementation of these regulations, Spex CertiPrep offers specifically designed Certified Reference Materials for industrial use. Our B100 Biodiesel Standards meet the requirements for testing ASTM Methods D6751, D5453 and EN 14214.

B100 Biodiesel Standards				
Description	**Concentration**	**Volume**	**Matrix**	**Part #**
Certified Matrix Blank	N/A	100 mL	B100	BF-BLKY
Certified Matrix Blank	N/A	500 mL	B100	BF-BLKX
Sulfur	5 µg/g	100 mL	B100	BFS-5Y
Sulfur	10 µg/g	100 mL	B100	BFS-10Y
Sulfur	15 µg/g	100 mL	B100	BFS-15Y
Sulfur	20 µg/g	100 mL	B100	BFS-20Y
Sulfur	25 µg/g	100 mL	B100	BFS-25Y
Sulfur	50 µg/g	100 mL	B100	BFS-50Y
Sulfur	100 µg/g	100 mL	B100	BFS-100Y
Ca, K, Mg, Na, P	5 µg/g	100 mL	B100	BFM-5Y
Ca, K, Mg, Na, P	10 µg/g	100 mL	B100	BFM-10Y
Ca, K, Mg, Na, P	20 µg/g	100 mL	B100	BFM-20Y

Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil

Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil				
Description	**Concentration**	**Volume**	**Matrix**	**Part #**
Sulfur Blank	0 µg/g	100 mL	Base Oil 20	DSS8-Y
Sulfur	5 µg/g	100 mL	Base Oil 20	DSS8-5Y
Sulfur	10 µg/g	100 mL	Base Oil 20	DSS8-10Y
Sulfur	15 µg/g	100 mL	Base Oil 20	DSS8-15Y
Sulfur	20 µg/g	100 mL	Base Oil 20	DSS8-20Y
Sulfur	25 µg/g	100 mL	Base Oil 20	DSS8-25Y
Sulfur	50 µg/g	100 mL	Base Oil 20	DSS8-AY
Sulfur	75 µg/g	100 mL	Base Oil 20	DSS8-75Y
Sulfur	100 µg/g	100 mL	Base Oil 20	DSS8-1Y
Sulfur	200 µg/g	100 mL	Base Oil 20	DSS8-BY
Sulfur	300 µg/g	100 mL	Base Oil 20	DSS8-CY
Sulfur	500 µg/g	100 mL	Base Oil 20	DSS8-1AY
Sulfur	750 µg/g	100 mL	Base Oil 20	DSS8-1BY
Sulfur	1,000 µg/g	100 mL	Base Oil 20	DSS8-2Y

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Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil

Set for Sulfur Standards	
Contents	**Part #**
DSS8-1AY	DSS8-SET
DSS8-1BY	
DSS8-1Y	
DSS8-2Y	
DSS8-AY	
DSS8-BY	
DSS8-CY	
BASE20	

Set for Ultra Low Sulfur Standards	
Contents	**Part #**
SDFS-10-Y	SDFS-SET
SDFS-100-Y	
SDFS-15-Y	
SDFS-20-Y	
SDFS-25-Y	
SDFS-5-Y	
SDFS-50-Y	
SDFS-BLK-Y	

Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel

Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel				
Description	**Concentration**	**Volume**	**Matrix**	**Part #**
Sulfur Blank	0 µg/g	100 mL	#2 Diesel Fuel	SDFS-BLK-Y
Sulfur	5 µg/g	100 mL	#2 Diesel Fuel	SDFS-5-Y
Sulfur	10 µg/g	100 mL	#2 Diesel Fuel	SDFS-10-Y
Sulfur	15 µg/g	100 mL	#2 Diesel Fuel	SDFS-15-Y
Sulfur	20 µg/g	100 mL	#2 Diesel Fuel	SDFS-20-Y
Sulfur	25 µg/g	100 mL	#2 Diesel Fuel	SDFS-25-Y
Sulfur	50 µg/g	100 mL	#2 Diesel Fuel	SDFS-50-Y
Sulfur	75 µg/g	100 mL	#2 Diesel Fuel	SDFS-75-Y
Sulfur	100 µg/g	100 mL	#2 Diesel Fuel	SDFS-100-Y
Sulfur	200 µg/g	100 mL	#2 Diesel Fuel	SDFS-200-Y
Sulfur	300 µg/g	100 mL	#2 Diesel Fuel	SDFS-300-Y
Sulfur	400 µg/g	100 mL	#2 Diesel Fuel	SDFS-400-Y
Sulfur	500 µg/g	100 mL	#2 Diesel Fuel	SDFS-500-Y
Sulfur	750 µg/g	100 mL	#2 Diesel Fuel	SDFS-750-Y
Sulfur	1,000 µg/g	100 mL	#2 Diesel Fuel	SDFS-1000-Y

HCS PICTOGRAMS & HAZARDS

As of June 1, 2015, OSHA's Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. The HCS is designed to meet the requirements of the Globally Harmonized System (GHS).

Health Hazard

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Flame

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

Exclamation Mark

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

Gas Cylinder

- Gases Under Pressure

Corrosion

- Skin Corrosion / Burns
- Eye Damage
- Corrosive to Metals

Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Flame Over Circle

- Oxidizers

Environment (Non-Mandatory)

- Aquatic Toxicity

Skull and Crossbones

- Acute Toxicity (fatal or toxic)

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section 13

Fusion Fluxes & Additives

Fusion Fluxes & Additives for XRF, ICP and AA

Fusion is a technique used to prepare Inorganic samples, with a view to analyze them by X-Ray Fluorescence (XRF), Inductively Coupled Plasma (ICP), Atomic Absorption (AA), or any traditional wet chemistry method. Typical samples include: cements, ores, slag, sediments, soils, rocks, ceramics, pigments, glasses and even metals. A fusion can produce either a small, homogeneous glass disk (or "bead") for XRF, or an acid solution for other analytical methods. Fusion is an extremely effective method of preparation for oxides, sulfides, fluorides, ferroalloys, and other compounds for analysis by XRF, AA, ICP, DCP, etc. The samples are, if necessary, pulverized and mixed with a flux; this mixture is heated until the flux melts and the sample dissolves in it, yielding a clear, homogeneous melt. The melt can be cast as a glass disk for XRF or dissolved in dilute acids for analysis in solution form. In many cases, fusion fluxing is simpler and the analytical results more accurate than if the sample was prepared by conventional acid dissolution or pressed powder methods.

Spex CertiPrep has a line of pure and ultra-pure Fusion Fluxes and Additives. Both lines are of a high purity, with the ultra pure line having a purity of 99.998%. These fluxes are made from a "micro bead" formula that ensures the same ratio of components is in each bead with no harmful dust to clog your instruments. Our highly standardized manufacturing process produces identical batches with no appreciable lot-to-lot variations, thus maintaining a high level of consistency and quality.

Features of our Fluxes:

- **Homogeneity** - Each flux has the same composition throughout. If a flux is not homogeneous, segregation will affect the XRF intensities.
- **Purity** - With pure fluxes, no element impurity exceeds 10 µg/mL. With ultra pure fusion flux, impurities are practically non-existent.
- **High Density** - Our fluxes have a density of 1.4 as compared to 0.3 for fine fluxes. High density flux is easier to handle, measure and, with certain applications, smaller, less expensive platinum ware can be used.
- **Not Hydroscopic** - All of our fluxes have a water content of < 0.05%. The major disadvantage of absorbed water is a loss of accuracy, in the analytical result. This is due to an error in the sample/flux ratio; additionally, the volatilization of water can sometimes occur suddenly, blowing a fraction of the flux sample out of the crucible.
- **Granularity** - All of our fluxes have a granularity greater than 500 µm which means that they contain no dust. Due to electrostatic forces, dusty flux sticks to the weighing pan, the funnel, and the crucible wall, resulting in a loss of flux and the formation of glass droplets on the wall of the crucible.
- **Outstanding Fluidity** - Granular flux will not stick to surfaces and will leave the crucible wall clean after fusion.

Spex SamplePrep offers two approaches to fusion fluxing: the Spex SamplePrep Automated Fluxer for rapid, repetitive fusions, and graphite crucibles for smaller scale operation.

Spex SamplePrep Graphite Crucibles

Spex SamplePrep graphite crucibles are a cost effective alternative to metal (platinum/gold) crucibles used to contain samples during fusion. Graphite crucibles are disposable, eliminating both the need for time consuming cleaning and the possibility for sample cross contamination. Chemically inert and heat resistant, graphite will not combine with samples during fusion.

Pure Fusion Fluxes		
Description	**Weight**	**Part #**
Lithium Metaborate (100%)	1 kg	FFB-0000-02
Lithium Metaborate (99.5%) | Lithium Bromide (0.50%)	1 kg	FFB-0005-02
Lithium Metaborate (98.50%) | Lithium Bromide (1.50%)	1 kg	FFB-0007-02
Lithium Tetraborate (100%)]	1 kg	FFB-1000-02
Lithium Tetraborate (99.5%) | Lithium Bromide (0.50%)	1 kg	FFB-1005-02
Lithium Tetraborate (99.5%) | lithium Iodide (0.50%)	1 kg	FFB-1007-02
Lithium Tetraborate (67%) | Lithium Metaborate (33%)	1 kg	FFB-6700-02
Lithium Tetraborate (65.75%) | Lithium Metaborate (33.75%) | Lithium Bromide (0.50%)	1 kg	FFB-6705-02
Lithium Tetraborate (50%) | Lithium Metaborate (50%)	1 kg	FFB-5000-02
Lithium Tetraborate (49.75%) | Lithium Metaborate (49.75%) | Lithium Bromide (0.50%)	1 kg	FFB-5005-02
Lithium Tetraborate (49.75%) | Lithium Metaborate (49.75%) | Lithium Iodide (0.50%)	1 kg	FFB-5007-02
Lithium Tetraborate (49.50%) | Lithium Metaborate (49.50)| Lithium Bromide (1.00%)	1 kg	FFB-5010-02
Lithium Tetraborate (35%) | Lithium Metaborate (65%)	1 kg	FFB-3500-02
Lithium Tetraborate (34.83%) | Lithium Metaborate (64.67%) | Lithium Bromide (0.50%)	1 kg	FFB-3505-02

Ultra Pure Fusion Fluxes		
Description	**Weight**	**Part #**
Lithium Metaborate (100%)	1 kg	FFB-0000-03
Lithium Metaborate (99.5%) | Lithium Bromide (0.50%)	1 kg	FFB-0005-03
Lithium Metaborate (98.50%) | Lithium Bromide (1.50%)	1 kg	FFB-0007-03
Lithium Tetraborate (100%)]	1 kg	FFB-1000-03
Lithium Tetraborate (99.5%) | Lithium Bromide (0.50%)	1 kg	FFB-1005-03
Lithium Tetraborate (99.5%) | lithium Iodide (0.50%)	1 kg	FFB-1007-03
Lithium Tetraborate (67%) | Lithium Metaborate (33%)	1 kg	FFB-6700-03
Lithium Tetraborate (66.67%) | Lithium Metaborate (32.83%) | Lithium Bromide (0.50%)	1 kg	FFB-6705-03
Lithium Tetraborate (50%) | Lithium Metaborate (50%)	1 kg	FFB-5000-03
Lithium Tetraborate (49.75%) | Lithium Metaborate (49.75%) | Lithium Bromide (0.50%)	1 kg	FFB-5005-03
Lithium Tetraborate (49.75%) | Lithium Metaborate (49.75%) | Lithium Iodide (0.50%)	1 kg	FFB-5007-03
Lithium Tetraborate (35%) | Lithium Metaborate (65%)	1 kg	FFB-3500-03
Lithium Tetraborate (34.83%) | Lithium Metaborate (64.67%) | Lithium Bromide (0.50%)	1 kg	FFB-3505-03

Helpful Hint:

Can't find the blend you are looking for? Contact us today and ask about our custom mixes. We can make a Fusion Flux to meet your exact needs.

Ultra Pure Additives*		
Description	**Package Size**	**Part #**
Lithium Bromide Crystals	125 g	FFB-100-03
Lithium Bromide Solution	15 mL	FFB-103-03
Lithium Bromide Solution (10 pack)	10 x 15mL	FFB-105-03
Lithium Carbonate	500 g	FFB-400-03
Lithium Carbonate	1 kg	FFB-401-03
Lithium Iodide Crystals	125 g	FFB-110-03
Lithium Iodide Solution	15 mL	FFB-113-03
Lithium Iodide Solution (10 pack)	10 x 15 mL	FFB-115-03
Lithium Nitrate Crystals	250 g	FFB-300-03
Lithium Nitrate Crystals	500 g	FFB-301-03

** Additives do not come with Certificate of Analysis.*

Did You Know?

Collectively our employees speak 15 different languages!
Languages include: English, French, Russian, Spanish, Mandarin, Japanese, Portuguese, Hindi, Chinese, Sindhi, Hebrew, Gujarati, Indonesian, Punjabi, and German.

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section 14

Laboratory Products & Contamination Control

Laboratory Products & Contamination Control

We are the industry leader for over 60 years in the Certified Reference Materials (CRM) marketplace, we continue to meet the needs of laboratories worldwide with innovation and research.

Our contamination control products are designed and Made by Chemists for Chemists® in response to the need for cost effective, easy-to-use equipment, and high purity matrix/wash blanks for the clean laboratory environment.

New, sophisticated instruments which can detect contaminants at parts per trillion (ppt) levels have necessitated the need for eliminating contaminants right at the source. Our dedicated chemists have designed, tested, and approved these products for your use.

Do you know where contamination can come from?

- Powder in latex gloves used frequently in labs contain high levels of zinc.
- Yellow stoppers used for sealing volumetric flasks contain high levels of cadmium.
- Dental work containing mercury amalgam fillings can contaminate samples that are directly exposed to exhalation.
- Calamine lotion is pure zinc oxide.
- Hair dyes contain lead acetate.
- Eye makeup contains mercury as a preservative.

Visit **spex.com** to download slides and see a recording of our "*Clean Laboratory Techniques*" presentation.

Pipette Washer/Dryer (Patented)

One major source of contamination is the volumetric pipette. At Spex CertiPrep, our chemists realized that they were spending valuable time manually washing and rinsing pipettes. Conventional washers were expensive and too large to comfortably fit in our laboratory. Our chemists designed a device that could be hooked up to a water line to allow the flow of water or other liquid through the inside and over the outside of the pipettes. As a result, our chemists spent less time cleaning pipettes, and more time manufacturing Spex CertiPrep Certified Reference Materials (CRMs); used and trusted by labs all over the world.

The pipette washer/dryer is easy to use. Simply insert up to 23 pipettes at a time, close the door and attach the tubing to the wash or rinse line. The washer can also be used with the washer basin and pump to circulate wash or rinse solution through the pipettes. The solution shoots out of the pipette tip, reflects off the ceiling portion of the washer and rains a shower down over the outside of the pipettes; thus cleaning both the inside and outside of the pipettes.

To dry the insides of the pipettes, the line is connected to a vacuum source and air is pulled in through the pipette tips until the inside of all of the pipettes are dry.

Product Features:

- Lightweight and compact, the washer/dryer fits within a sink or on a lab bench.
- Durable polyethylene construction.
- Convenient, independent on/off valves control flow to the front and back rows of washers and the main water supply.
- Transparent door closes to prevent splashing when washer is in use.
- 23 cone-shaped, plastic pipette holders accommodate pipettes 0.5-250 mL in size.
- Optional pump and basin available separately.

Technical service available 7:30 AM - 5:30 PM EST. Speak directly with the chemists who developed the washer/dryer.

Demo units available. Please contact us at +1.732.549.7144 or 1.800.LAB.SPEX or via email at **spexsales@antylia.com** for information and availability.

Pipette Washer/Dryer and Optional Accessories

Description	Specifications	Volts	Hz	Amps	Part #
Pipette Washer/Dryer	3 ft. tall x 1 ft. wide x 1 ft. deep	-	-	-	PIPWASH-1
Pipette Washer Pump	Capacity: 205 Gal/Hr	115 V	60 Hz	1.1 Amps	PIPPUMP-115V
Pipette Washer Pump	Capacity: 205 Gal/Hr	230 V	60 Hz	1.1 Amps	PIPPUMP-230V
Pipette Washer Basin	-	-	-	-	PIPBASIN-1

OdorEroder®

OdorEroder® effectively neutralizes a wide range of offensive chemical odors and fumes in the lab, everything from Aldehydes to Xylenes, to cannabis.

These non-toxic, environmentally safe purple beads are placed where odor causing chemicals in the air pass near the beads. When this occurs, the purple beads absorb and chemically transform the odor-causing chemicals into harmless compounds that remain trapped within the beads. As the purple beads absorb, they start turning brown. When a majority of the beads have turned brown, it is time to replace the OdorEroder®. Depending on the exposure, the OdorEroder® lasts up to three months.

OdorEroder® is effective in the following areas:

- Hoods
- Waste disposal areas
- Lab benches
- Chemical storage cabinets
- Glove boxes
- Lab refrigerators
- Other odor-causing areas within a lab

OdorEroder®	
Description	**Part #**
OdorEroder, 100 g	ODER-100G
OdorEroder, 250 g	ODER-250G

MiniG®

The 1600 MiniG® is the ideal solution for the labs that want a compact yet powerful tool for QuEChERS sample preparation. The clamp holds up to six 50 mL vials and the vigorous vertical movement is both consistent for every vial and results in improved extraction from samples.

Specifications:

- Safety interlock prevents unit from operating when lid is open. Window allows analyst to view samples during operation.
- Vertical clamp movement ensures thorough extraction. Adjustable clamp holds 6 x 50 mL vials, 24 x 15 mL vials or up to 48 x 2 mL vials.
- Digital timer display with adjustable operating time.
- Compact, powerful motor agitates samples from 500 - 1500 rpm.

MiniG®	
Description	**Part #**
MiniG - Shaker and Tissue Homogenizer	1600
Ceramic Grinding Media - 5/32 in. x 5/16 in.	CP2185
Ceramic Grinding Media 3/8 in. x 7/8 in.	CP2183
Ceramic Grinding Media - 5/16 in. x 5/8 in.	CP2184

PLAL2-2M	10	PLCD2-2X	11	PLCU2-3Y	12	PLLA2-2M	14
PLAL2-2Y	10	PLCD2-3Y	11	PLCU2-3X	12	PLLA2-2Y	14
PLAL2-2T	10	PLCD2-3X	11	PLCU1-3X	12	PLLA2-2X	14
PLAL2-2X	10	PLCA2-2M	11	PLDY2-2M	12	PLLA2-3Y	14
PLAL1-2X	10	PLCA2-2Y	11	PLDY2-2Y	12	PLLA2-3X	14
PLAL2-3Y	10	PLCA2-2T	11	PLDY2-2X	12	PLPB2-2M	14
PLAL2-3X	10	PLCA2-2X	11	PLER2-2M	12	PLPB2-2Y	14
PLAL1-3X	10	PLCA1-2X	11	PLER2-2Y	12	PLPB2-2T	14
PLSB7-2M	10	PLCA2-3Y	11	PLER2-2X	12	PLPB2-2X	14
PLSB7-2Y	10, 49, 69	PLCA2-3T	11	PLEU2-2M	12	PLPB2-3Y	14
PLSB7-2T	10	PLCA2-3X	11	PLEU2-2Y	12	PLPB2-3X	14
PLSB7-2X	10, 49	PLCA1-3X	11	PLEU2-2X	12	PLLI2-2M	14
PLSB5-2X	10	PLC9-2M	11	PLGD2-2M	13	PLLI2-2Y	14
PLSB7-3Y	10	PLC9-2Y	11	PLGD2-2Y	13	PLLI2-2X	14
PLSB7-3X	10	PLC9-2X	11	PLGD2-2X	13	PLLI1-2X	14
PLAS2-2M	10	PLCE2-2M	11	PLGD2-3Y	13	PLLI2-3Y	14
PLAS2-2Y	10	PLCE2-2Y	11	PLGD2-3X	13	PLLI2-3X	14
PLAS2-2T	10	PLCE2-2X	11	PLGA2-2M	13	PLLI1-3X	14
PLAS2-2X	10	PLCE2-3Y	11	PLGA2-2Y	13	PLLU2-2M	15
PLAS1-2X	10	PLCE2-3X	11	PLGA2-2X	13	PLLU2-2Y	15
PLAS2-3Y	10	PLCS2-2M	11	PLGE9-2M	13	PLLU2-2X	15
PLAS2-3X	10	PLCS2-2Y	11	PLGE9-2Y	13	PLMG2-2M	15
PLBA2-2M	10	PLCS2-2X	11	PLGE9-2X	13	PLMG2-2Y	15
PLBA2-2Y	10	PLCS2-3Y	11	PLAU3-2M	13	PLMG2-2T	15
PLBA2-2T	10	PLCS2-3X	11	PLAU3-2Y	13	PLMG2-2X	15
PLBA2-2X	10	PLCR2-2M	12	PLAU3-2X	13	PLMG1-2X	15
PLBA2-3Y	10	PLCR2-2Y	12	PLHF1-2M	13	PLMG2-3Y	15
PLBA2-3X	10	PLCR2-2T	12	PLHF1-2Y	13	PLMG2-3X	15
PLBE2-2M	10	PLCR2-2X	12	PLHF1-2X	13	PLMG1-3X	15
PLBE2-2Y	10	PLCR1-2X	12	PLHO2-2M	13	PLMN2-2M	15
PLBE2-2T	10	PLCR9-2X	12	PLHO2-2Y	13	PLMN2-2Y	15
PLBE2-2X	10	PLCR2-3Y	12	PLHO2-2X	13	PLMN2-2T	15
PLBE2-3Y	10	PLCR2-3X	12	PLIN2-2M	14	PLMN2-2X	15
PLBE2-3X	10	PLCR9-3X	12	PLIN2-2Y	14	PLMN2-3Y	15
PLBI4-2M	10	PLCO2-2M	12	PLIN2-2X	14	PLMN2-3X	15
PLBI4-2Y	10	PLCO2-2Y	12	PLFE2-2M	14	PLHG2-1AY	15
PLBI4-2X	10	PLCO2-2T	12	PLFE2-2Y	14	PLHG2-1AX	15
PLB9-2M	11	PLCO2-2X	12	PLFE2-2T	14	PLHG2-1Y	15, 69
PLB9-2Y	11	PLCO1-2X	12	PLFE2-2X	14	PLHG2-1X	15
PLB9-2T	11	PLCO2-3Y	12	PLFE1-2X	14	PLHG4-2M	15
PLB9-2X	11	PLCO2-3X	12	PLFE2-3Y	14	PLHG4-2Y	15
PLB9-3Y	11	PLCU2-2M	12	PLFE2-3X	14	PLHG4-2T	15
PLB9-3X	11	PLCU2-2Y	12	PLFE1-3X	14	PLHG4-2X	15
PLCD2-2M	11	PLCU2-2T	12	PLIR3-2M	14	PLHG4-3Y	15
PLCD2-2Y	11	PLCU2-2X	12	PLIR3-2Y	14	PLHG4-3X	15
PLCD2-2T	11	PLCU1-2X	12	PLIR3-2X	14	PLMO9-2M	16

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PLMO9-2Y 16
PLMO9-2T 16
PLMO9-2X 16
PLMO9-3Y 16
PLMO9-3X 16
PLND2-2M 16
PLND2-2Y 16
PLND2-2X 16
PLNI2-2M 16
PLNI2-2Y 16
PLNI2-2T 16
PLNI2-2X 16
PLNI2-3Y 16
PLNI2-3X 16
PLNB9-2M 16
PLNB9-2Y 16
PLNB9-2X 16
PLNB9-3Y 16
PLNB9-3X 16
PLPD3-2M 16
PLPD3-2Y 16
PLPD3-2X 16
PLP9-2M 16
PLP9-2Y 16
PLP9-2T 16
PLP9-2X 16
PLP9-3Y 16
PLP9-3X 16
PLPT3-2M 17
PLPT3-2Y 17
PLPT3-2X 17
PLK2-2M 17
PLK2-2Y 17
PLK2-2T 17
PLK2-2X 17
PLK1-2X 17
PLK2-3Y 17
PLK2-3X 17
PLK1-3X 17
PLPR2-2M 17
PLPR2-2Y 17
PLPR2-2X 17
PLRE9-2M 17
PLRE9-2Y 17
PLRE9-2X 17
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Ordering Information & Technical Support

Phone:	+1.732.549.7144 • 1.800.LAB.SPEX (1.800.522.7739)
Fax:	+1.732.603.9647
E-mail:	spexsales@antylia.com
Online Orders and Live Chat:	www.spex.com
Ask A Chemist:	AskAChemist@antylia.com
Mailing Address:	Spex CertiPrep • 203 Norcross Avenue • Metuchen, NJ 08840

TERMS & CONDITIONS

GENERAL CONDITIONS

Payment terms are Net 30 days to rated organizations or payment can be made by credit card. Orders are shipped FCA Metuchen, New Jersey, and are shipped in accordance with IATA or DOT regulations. All freight charges are prepaid and added to the invoice unless otherwise specified on your order.

RETURN AND/OR EXCHANGE

Contact our Sales Department for a Return Authorization Number and instructions before shipping. Unauthorized returns will be refused. Transportation is the responsibility of the customer; all materials must be packed, marked, labeled, and shipped in accordance with regulations governing transportation of hazardous materials, if applicable. Credit for returned merchandise will be issued only if goods are unopened, resalable and received within 30 days of the original invoice date. Returned items are subject to a 25% restocking fee.

LIMITED LIABILITY

Purchaser's sole and exclusive remedy for damages and seller's sole and exclusive liability for damages for any cause whatsoever, including alleged negligence, is limited to the refund of the purchase price of the product or replacement of the product at seller's election. In no event shall seller be liable for direct, indirect, incidental, or consequential damages, including lost profits.

EXPORT ORDERS

Spex CertiPrep maintains authorized distributors in many countries around the world. Please visit the following web page at spex.com/distributors for a complete list of international distributors.

PRECAUTIONS

Spex CertiPrep products are not for any cosmetic, drug or household applications. Our acceptance of a purchase order is with the assumption that products will be used only by qualified individuals who are trained in appropriate procedures. Customer must ensure safe storage, handling and application of all products ordered from this catalog. We assume requisitioner's to be competent, safety-conscious professionals.

Spex CertiPrep offers Custom Certified Reference Materials because we realize that no two laboratories face exactly the same samples, or precisely the same requirements. We specialize in evaluating what compounds work well together and the solvents needed to keep the standard stable. Simply choose the organic products you need by filling out the online order form at spex.com/CustomProduct/OrganicProduct.

Standards available for LC, LC/MS, GC, or GC/MS.

CAPABILITIES:

- Concentration of standards: 0.01 µg/mL to 1%
- Sizes available: 1 mL ampules to 1 L bottles
- Over 4,000 organic products available
- All solvents available: Acetonitrile to Xylene
- Extensive experience in biological matrices including urine and blood

BENEFITS:

- Complete 1-year supply of standards with SAME LOT #
- Bar coding for easy tracking of standards within the lab
- Filling process tracked for guaranteed homogeneity
- Lot-to-lot consistency for seamless use through the years
- Mistake-proof instructions included for easy transition between different users

CUSTOM PACKAGING

Spex CertiPrep can provide a variety of custom packaging options, depending on your applications. This can be done using materials provided by you or from our own inventory.

Certified Reference Materials of the Highest Quality - How Can We Prove It?

To ensure the validity of results from today's high-performance instrumentation, Spex CertiPrep has developed an extensive line of the highest quality certified reference materials. How can we prove it? The International Organization for Standardization (ISO) has established a set of guidelines designed to define common business practices, increase responsibility and ensure clarity and full disclosure in the industry. As shown below, there are three ISO quality management systems that are most relevant for reference material manufacturers - ISO 9001, ISO/IEC 17025 and ISO 17034.

Each level has its own set of internationally recognized criteria against which companies are formally measured. Each level is more difficult to achieve and fewer companies are able to meet the required criteria. Spex CertiPrep is proud to be accredited for all three. By taking the extra step of choosing to demonstrate our competence and comply with these standards, we are continuously proving that our tests and calibration results are technically competent and our products truly are of the highest quality.

Levels of Accreditation - About Each Standard and What it Means to You

Level 1: ISO 9001:2015 - Customer Satisfaction (all types of organizations)
Certified by UL-DQS as an ISO 9001:2015 facility for our Quality Management System

Open to all types of organizations • Written procedures • Documented complaints

Level 2: ISO/IEC 17025:2017 - Technically Sound Products (testing and/or calibration labs)
Accredited by A2LA as an ISO/IEC 17025:2017 Certified Chemical Testing Laboratory

Specifically for organizations carrying out testing and/or calibration • Competent at quality related tests • Consistent manufacturing

Level 3: ISO 17034:2016 - Traceable & Accurate Reference Materials (reference material producers)
Accredited by A2LA as an ISO 17034:2016 Certified Inorganic and Organic Reference Material Producer

Specifically for reference material producers • Validate methods to prove accuracy • Report uncertainty and sources of error

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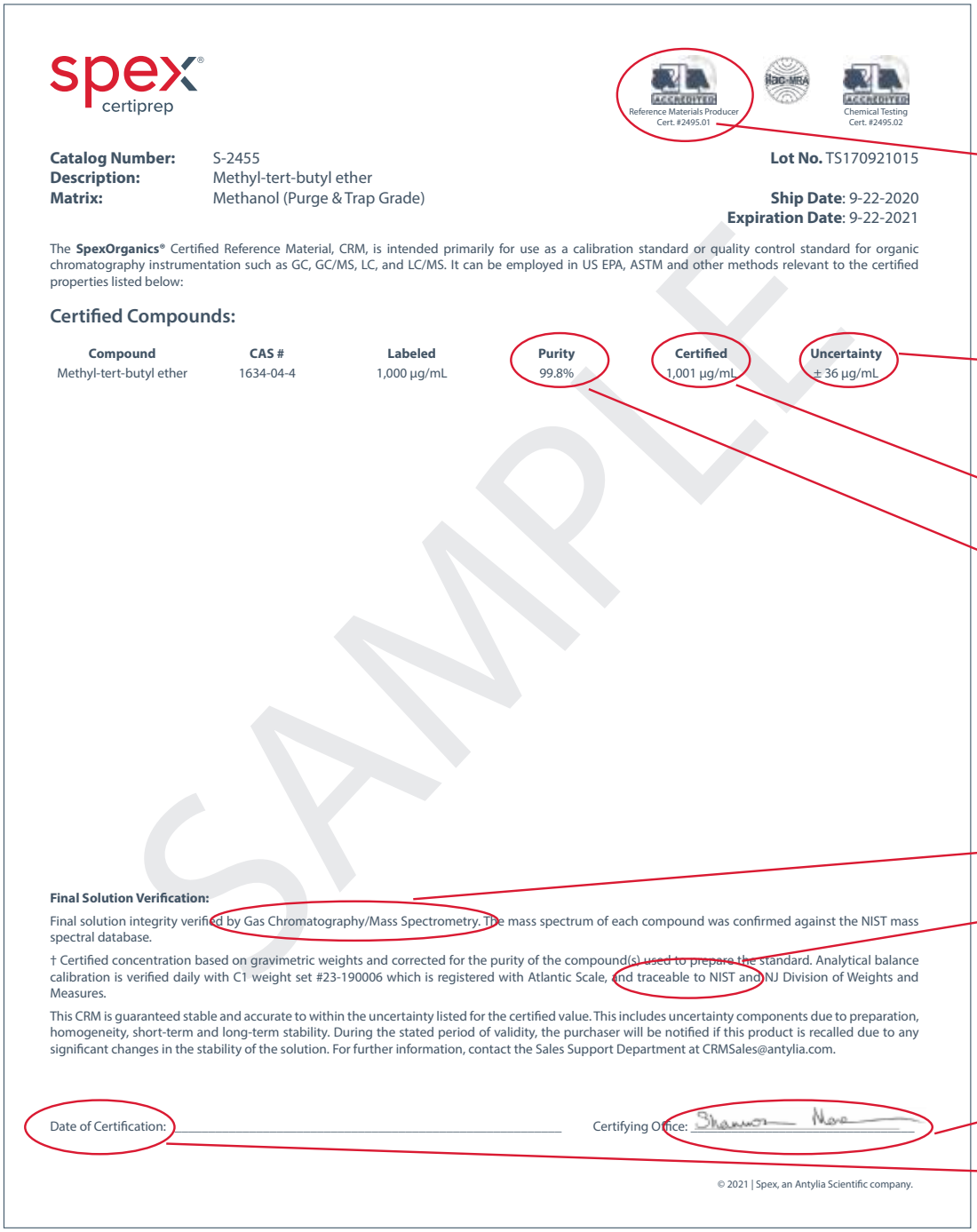
Every accredited manufacturer of Certified Reference Materials supplies a Certificate of Analysis (COA) with their products. ISO Guide 31 and ISO 17034 outline the information required for a Certificate of Analysis. In order to comply with the ISO standards, an accredited CRM manufacturer must supply more than a dozen informational and analytical values such as certifying bodies, material descriptions, intended use, instructions for use, homogeneity, stability, certified values and their uncertainties, and traceability. Not all certificates are alike. Spex CertiPrep has been supplying some of the most comprehensive Certificates of Analysis in the CRM industry for years. Our certificates are easy to read and have all of the information an analyst would need to use our standards. We have highlighted what you should look for in a Certificate of Analysis and why our certificate is one of the best.



spex certiprep

ACCREDITED Reference Materials Producer Cert. #2495.01 · ILAC-MRA · ACCREDITED Chemical Testing Cert. #2495.02

Catalog Number: S-2455
Description: Methyl-tert-butyl ether
Matrix: Methanol (Purge & Trap Grade)

Lot No. TS170921015

Ship Date: 9-22-2020
Expiration Date: 9-22-2021

The **SpexOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC/MS, LC, and LC/MS. It can be employed in US EPA, ASTM and other methods relevant to the certified properties listed below:

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified	Uncertainty
Methyl-tert-butyl ether	1634-04-4	1,000 µg/mL	99.8%	1,001 µg/mL	± 36 µg/mL

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short-term and long-term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at CRMSales@antylia.com.

Date of Certification: _____ Certifying Office: _____

Spex CertiPrep is accredited by A2LA for Organic and Inorganic Certified Reference Materials as complying with the requirements of ISO/IEC 17025 and ISO 17034, with the most comprehensive scope in the industry.

Includes factors associated with manufacturing process, as well as homogeneity and stability.

Compound purity taken into account when determining certified concentration.

Purity of starting material, verified in our laboratory..

Instrumentation verification on all standards.

Traceable to NIST.

Signed by Spex CertiPrep's Organic Operations Manager.

Stamped with month and year of certification.

spex® certiprep

Spex CertiPrep has been servicing the scientific community since 1954. We have grown into the industry's most passionate and reliable manufacturer of Certified Reference Materials (CRMs) and Calibration Standards for Analytical Spectroscopy and Chromatography.

We are pleased to share with you the latest and greatest Spex CertiPrep Certified Reference Materials catalog. This flip-book style catalog includes our Inorganic Certified Reference Materials on one side and Organic Certified Reference Materials on the other.

Our primary focus is to provide Inorganic and Organic CRMs of the highest quality and superior customer support. The Inorganic Standards are manufactured for AA, ICP, ICP-MS, IC, XRF, and other analytical instrumentation. The Organic Standards are manufactured for GC, GC/MS, HPLC, LC/MS, and other analytical instrumentation.

Spex CertiPrep Group is accredited by A2LA to ISO/IEC 17025:2017 and ISO 17034:2016 and by DQS to ISO 9001:2015. Our accreditation is the most comprehensive in the industry and encompasses all of our manufactured products.

To request product catalogs, please contact us or visit our website at **www.spex.com**.

spex® sampleprep

Sample preparation is an important part of the quality control process. Spex SamplePrep's expertise and products can help analysts achieve accurate and consistent results by assuring reliable, reproducible samples.

Our sample preparation equipment products include cryogenic mills, cell lysers, pellet presses, ball mills, and automated fusion fluxers. We also provide XRF liquid cells, XRF window films and a selection of sample binders and grinding aids to simplify the sample preparation process. These products are used throughout the world in industrial, academic, research, and government laboratories. The uses cover many different fields of spectroscopy (XRF, ICP, ICP-MS, AA, IR) and their applications range from genetic research, forensics, geology, medicine, materials research, and agriculture.

We provide a Handbook of Sample Preparation and Handling that is known as a primary source of helpful advice for the preparation of samples. The topics covered in this handbook include grinding, pelletizing, fusion fluxing, and controlling contamination. Visit **www.spex.com** to learn more about our products, download the handbook or watch product demonstration videos.

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section 1

single-component organic standards

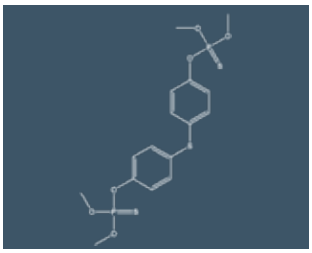
Single-Component Organic Standards

The following single-component standards are available as stock items from Spex CertiPrep. They are supplied in methanol, or in another solvent when appropriate. Additional solvents include methylene chloride, acetone, benzene, hexane, acetonitrile, THF, and water. Please inquire about the matrix for a particular item when ordering, if the matrix is important to your application, a substitution may be possible.

Concentrations other than these, as well as custom matrices, are readily available, but a minimum order of five ampules may be required in some cases.

This section also represents a partial listing of Spex CertiPrep's chemical inventory. Please use this list of chemicals to help design your custom standards. Our list of available components is constantly increasing, so if you require a component not found on this list, please contact us for assistance. Note: Compound properties have been compiled from various scientific sources, therefore, no guarantee as to accuracy.

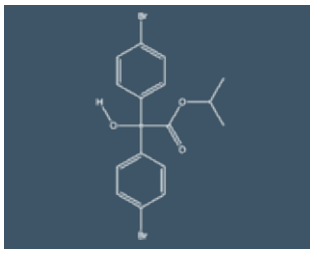
Volume for all Organic Singles is 1 mL



Abate (Temephos)

Molecular Weight	466.458
Molecular Formula	$C_{16}H_{20}O_6P_2S_3$
Density	1.32 g/cm^3
Melting Point	30 °C
Boiling Point	253 °C

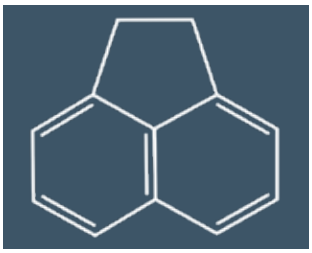
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3383-96-8	Methanol	S-102



Acarol (Bromopropylate)

Molecular Weight	428.12
Molecular Formula	$C_{17}H_{16}Br_2O_3$
Density	1.49 g/cm^3
Melting Point	77 °C

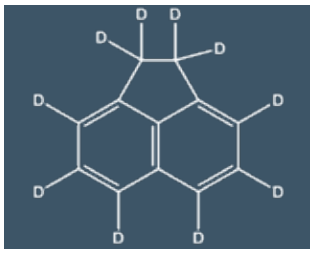
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	18181-80-1	Methanol-P&T	S-103



Acenaphthene

Molecular Weight	154.212
Molecular Formula	$C_{12}H_{10}$
Density	1.2 g/cm^3
Melting Point	93 °C
Boiling Point	278 °C

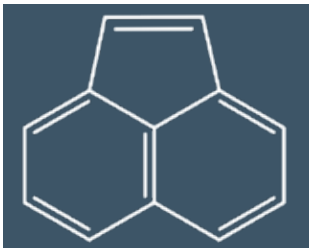
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	83-32-9	Acetonitrile	S-105-ACN
		Methylene Chloride	S-105



Acenaphthene-d$_{10}$

Molecular Weight	164.273
Molecular Formula	$C_{12}H_{10}$

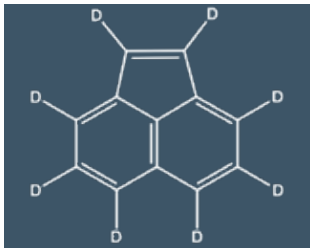
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	15067-26-2	Methanol-P&T	S-110



Acenaphthylene

Molecular Weight	152.196
Molecular Formula	$C_{12}H_8$
Density	0.898 g/cm^3
Melting Point	89 °C
Boiling Point	280 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	208-96-8	Methylene Chloride	S-115



Acenaphthylene-d$_8$

Molecular Weight	160.245
Molecular Formula	$C_{12}H_8$
Density	1.249 g/cm^3
Melting Point	92 to 95 °C
Boiling Point	299 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93951-97-4	Methylene Chloride	S-116

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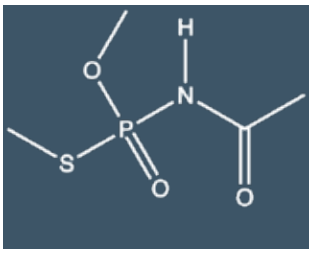
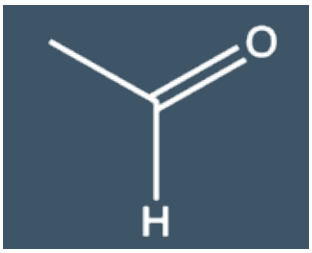
Volume for all Organic Singles is 1 mL



Acephate

Molecular Weight	183.162
Molecular Formula	$C_4H_{10}NO_3PS$
Density	1.35 g/cm^3
Melting Point	89 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	30560-19-1	Acetonitrile	S-120-ACN
		Methanol	S-120

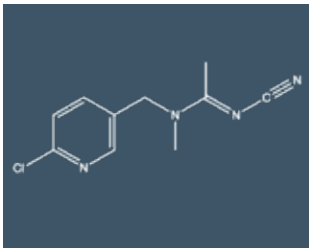


Acetaldehyde

Molecular Weight	44.053
Molecular Formula	C_2H_4O
Density	0.783 g/cm^3
Melting Point	-123 °C
Boiling Point	20 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-07-0	DI Water	S-125-W1.8*
		Methanol-P&T	S-125

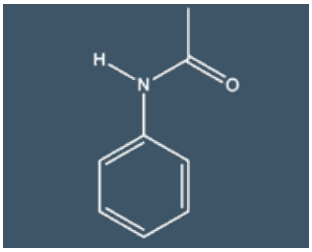
* Acetaldehyde, part # S-125-W1.8 is 1.8 mL.



Acetamiprid

Molecular Weight	222.676
Molecular Formula	$C_{10}H_{11}ClN_4$
Density	1.33 g/cm^3
Melting Point	99 °C
Boiling Point	Decomposes

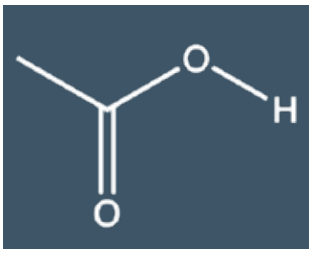
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	135410-20-7	Methanol	S-4677



Acetanilide

Molecular Weight	135.166
Molecular Formula	C_8H_9NO
Density	1.22 g/cm^3
Melting Point	114 °C
Boiling Point	304 °C

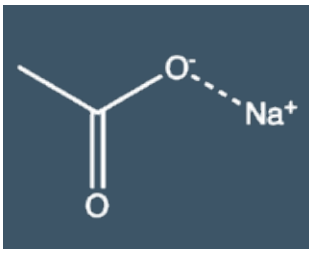
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	103-84-4	Methanol-P&T	S-132



Acetic acid

Molecular Weight	60.052
Molecular Formula	$C_2H_4O_2$
Density	1.045 g/cm^3
Melting Point	17 °C
Boiling Point	118 °C

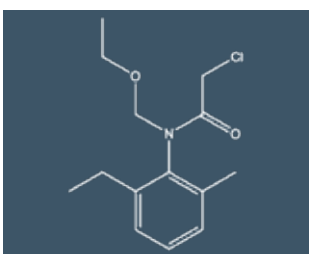
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	64-19-7	Methanol-P&T	S-133



Acetic acid, sodium salt

Molecular Weight	82.03
Molecular Formula	$C_2H_3NaO_2$
Density	1.528 g/cm^3
Melting Point	328 °C

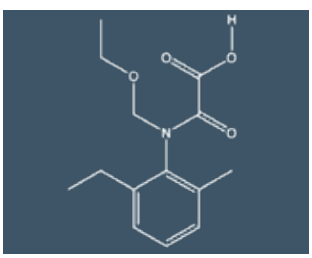
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	127-09-3	DI Water	S-134



Acetochlor

Molecular Weight	269.769
Molecular Formula	$C_{14}H_{20}ClNO_2$
Density	1.107 g/mL @25 °C
Melting Point	11 °C
Boiling Point	0.4 torr 134 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	34256-82-1	Methanol	S-135

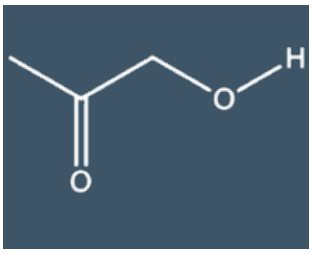


Acetochlor OA

Molecular Weight	265.309
Molecular Formula	$C_{14}H_{19}NO_4$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	194992-44-4	Acetonitrile	S-4631

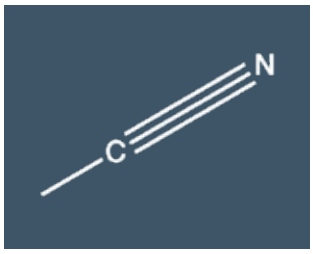
Volume for all Organic Singles is 1 mL



Acetol

Molecular Weight	74.079
Molecular Formula	$C_3H_6O_2$
Density	1.059 g/cm^3
Melting Point	-17 °C
Boiling Point	146 °C

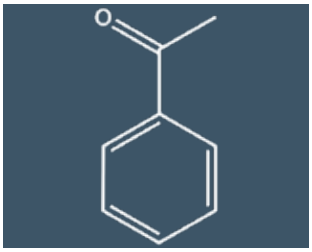
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	116-09-6	Methanol-P&T	S-138



Acetonitrile

Molecular Weight	41.05
Molecular Formula	C_2H_3N
Density	0.786 g/cm^3
Melting Point	-46 °C
Boiling Point	82 °C

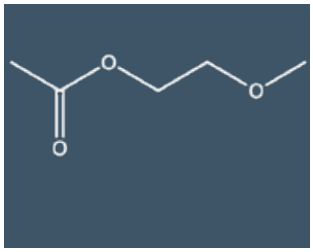
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-05-8	Methanol-P&T	S-145



Acetophenone

Molecular Weight	120.151
Molecular Formula	C_8H_8O
Density	1.03 g/cm^3
Melting Point	20 °C
Boiling Point	202 °C

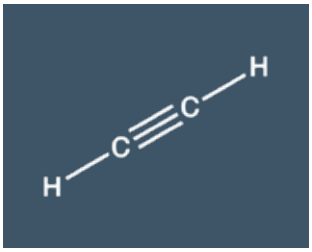
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-86-2	Methanol	S-155



1-Acetoxy-2-methoxyethane

Molecular Weight	118.132
Molecular Formula	$C_5H_{10}O_3$
Density	1.006 g/cm^3
Melting Point	-65 °C
Boiling Point	145 °C

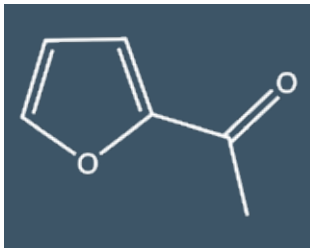
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-49-6	Methanol-P&T	S-157



Acetylene

Molecular Weight	26.038
Molecular Formula	C_2H_2
Density	0.377 g/cm^3
Melting Point	-81 °C
Boiling Point	-84 °C

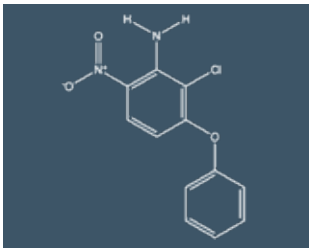
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-86-2	Methanol-P&T	S-158



2-Acetylfuran

Molecular Weight	110.112
Molecular Formula	$C_6H_6O_2$
Density	1.098 g/cm^3
Melting Point	30 °C
Boiling Point	168 °C

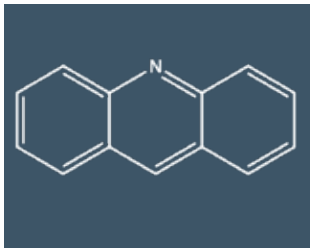
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1192-62-7	Methanol-P&T	S-161



Aclonifen

Molecular Weight	264.665
Molecular Formula	$C_{12}H_9ClN_2O_3$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74070-46-5	Methanol	S-5154



Acridine

Molecular Weight	179.222
Molecular Formula	$C_{13}H_9N$
Density	1.005 g/cm^3
Melting Point	107 °C
Boiling Point	346 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	260-94-6	Methanol-P&T	S-170

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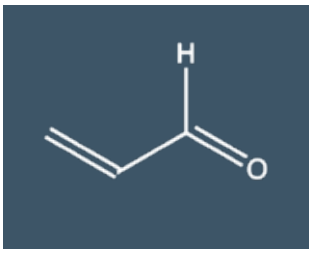
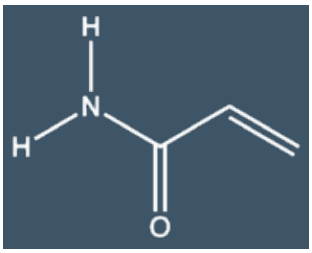
Volume for all Organic Singles is 1 mL



Acrolein

Molecular Weight	56.064
Molecular Formula	C_3H_4O
Density	0.84 g/cm^3
Melting Point	-88 °C
Boiling Point	53 °C

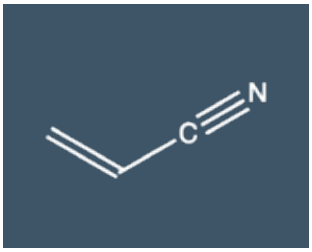
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-02-8	DI Water	S-175-W
		Methanol-P&T	S-175



Acrylamide

Molecular Weight	71.079
Molecular Formula	C_3H_5NO
Density	1.13 g/cm^3
Melting Point	85 °C
Boiling Point	125 °C @ 25 mm Hg

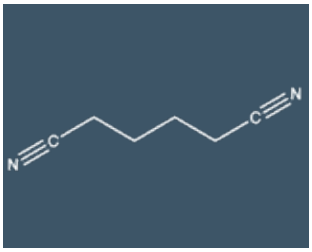
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-06-1	Methanol-P&T	S-177



Acrylonitrile

Molecular Weight	53.064
Molecular Formula	C_3H_3N
Density	0.8 g/cm^3
Melting Point	-82 to -84 °C
Boiling Point	77 °C

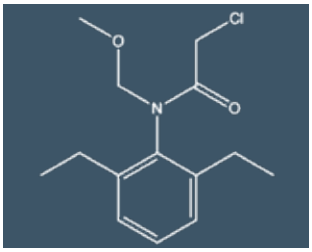
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-13-1	Methanol-P&T	S-180



Adiponitrile

Molecular Weight	108.144
Molecular Formula	$C_6H_8N_2$
Density	0.965 g/cm^3
Melting Point	1 °C
Boiling Point	295 °C

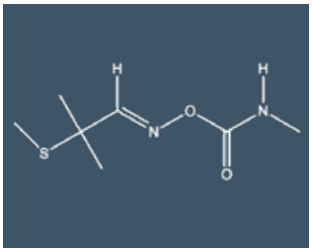
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-69-3	Methanol-P&T	S-5932



Alachlor

Molecular Weight	269.8
Molecular Formula	$C_{14}H_{20}ClNO_2$
Density	1.13 g/cm^3
Melting Point	41 °C

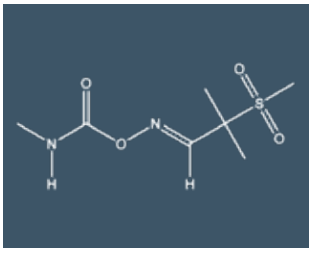
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	15972-60-8	Methanol	S-185



Aldicarb

Molecular Weight	190.261
Molecular Formula	$C_7H_{14}N_2O_2S$
Density	1.2 g/cm^3
Melting Point	99 °C
Boiling Point	Decomposes

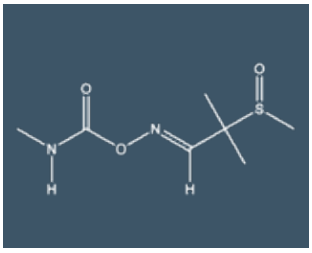
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	116-06-3	Acetonitrile	S-190
		Methanol	S-190-METH



Aldicarb sulfone

Molecular Weight	222.3
Molecular Formula	$C_7H_{14}N_2O_4S$
Density	1.35 g/cm^3
Melting Point	141 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1646-88-4	Acetone	S-194

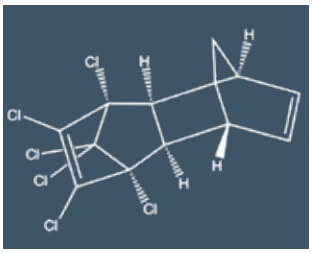


Aldicarb sulfoxide

Molecular Weight	206.3
Molecular Formula	$C_7H_{14}N_2O_3S$
Density	1.21 g/cm^3

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1646-87-3	Acetonitrile	S-195

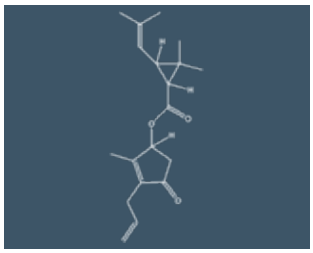
Volume for all Organic Singles is 1 mL



Aldrin

Molecular Weight	364.9
Molecular Formula	$C_{12}H_8Cl_6$
Density	1.60 g/cm^3
Melting Point	104 °C
Boiling Point	145 °C

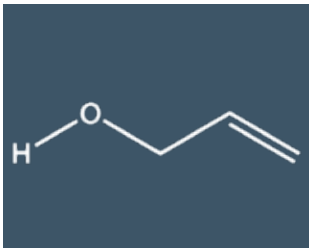
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	309-00-2	Methanol	S-205



Allethrin

Molecular Weight	302.414
Molecular Formula	$C_{19}H_{26}O_3$
Density	1.01 g/cm^3
Melting Point	4 °C
Boiling Point	153 °C

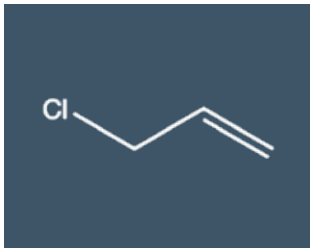
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	584-79-2	Methanol-P&T	S-4240



Allyl alcohol

Molecular Weight	58.08
Molecular Formula	C_3H_6O
Density	0.85 g/cm^3
Melting Point	-129 °C
Boiling Point	97 °C

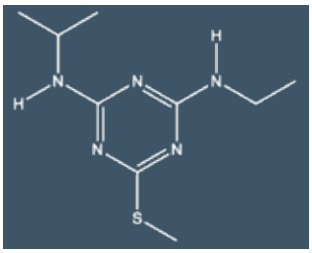
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-18-6	Methanol-P&T	S-207



Allyl chloride

Molecular Weight	76.523
Molecular Formula	C_3H_5Cl
Density	0.94 g/cm^3
Melting Point	-135 °C
Boiling Point	45 °C

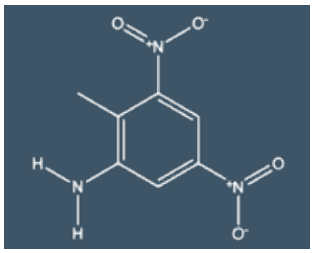
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-05-1	Methanol-P&T	S-210



Ametryn

Molecular Weight	227.33
Molecular Formula	$C_9H_{17}N_5S$
Density	1.18 g/cm^3
Melting Point	84 °C
Boiling Point	337 °C

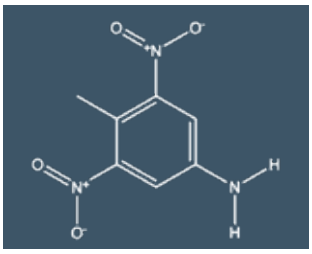
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	834-12-8	Methanol-P&T	S-215



2-Amino-4,6-dinitrotoluene

Molecular Weight	197.15
Molecular Formula	$C_7H_7N_3O_4$

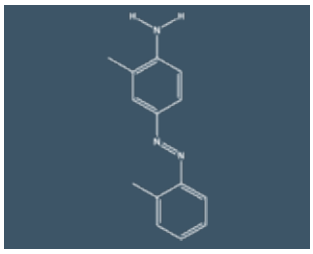
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	35572-78-2	Methanol	S-221



4-Amino-2,6-dinitrotoluene

Molecular Weight	197.15
Molecular Formula	$C_7H_7N_3O_4$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	19406-51-0	Methanol	S-226



o-Aminoazotoluene

Molecular Weight	225.295
Molecular Formula	$C_{14}H_{15}N_3$
Density	0.57 g/cm^3
Melting Point	101 to 102 °C
Boiling Point	Sublimes > 150 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	97-56-3	Methanol	S-4476

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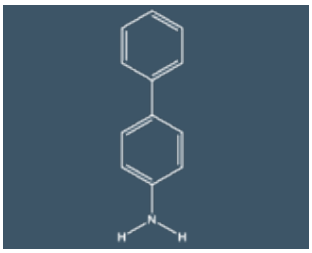
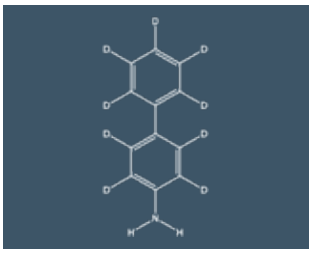
Volume for all Organic Singles is 1 mL



4-Aminobiphenyl

Molecular Weight	169.227
Molecular Formula	$C_{12}H_{11}N$
Density	1.16 g/cm^3
Melting Point	53 °C
Boiling Point	302 °C

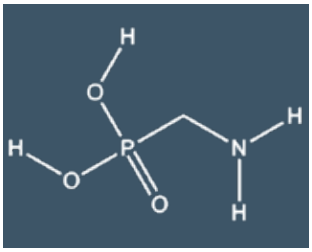
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	92-67-1	Methanol-P&T	S-225



4-Aminobiphenyl-d$_9$

Molecular Weight	178.282
Molecular Formula	$C_{12}H_{11}N$

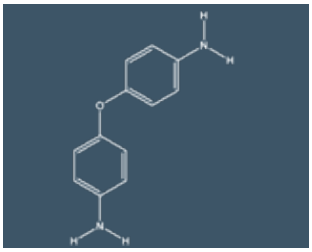
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	344298-96-0	Ethyl Acetate	S-6144



Aminomethyl phosphonic acid

Molecular Weight	111.037
Molecular Formula	CH_6NO_3P
Density	1.6 g/cm^3
Melting Point	300 °C
Boiling Point	358 °C

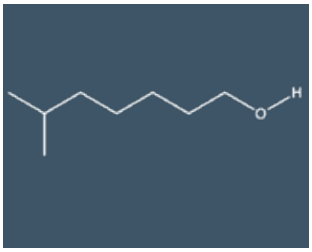
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1066-51-9	DI Water	S-4006



4-Aminophenylether

Molecular Weight	200.241
Molecular Formula	$C_{12}H_{12}N_2O$
Melting Point	189 °C
Boiling Point	> 300 °C

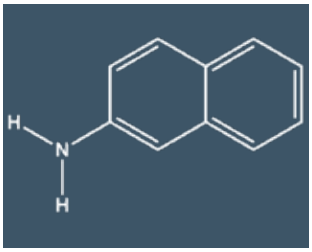
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	101-80-4	Methanol-P&T	S-240



1-Aminonaphthalene

Molecular Weight	143.189
Molecular Formula	$C_{10}H_9N$
Density	1.114 g/cm^3
Melting Point	47 to 50 °C
Boiling Point	301 °C

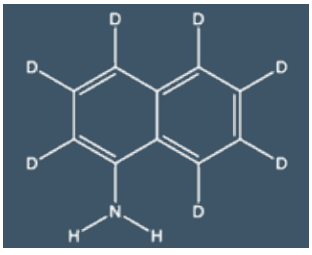
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	134-32-7	Methanol-P&T	S-230



2-Aminonaphthalene

Molecular Weight	143.189
Molecular Formula	$C_{10}H_9N$
Density	1.061 g/cm^3
Melting Point	306 °C
Boiling Point	113 °C

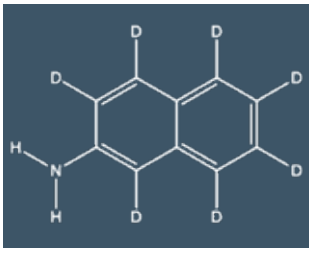
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91-59-8	Methanol-P&T	S-235



1-Aminonaphthalene-d$_7$

Molecular Weight	150.232
Molecular Formula	$C_{10}H_9N$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78832-53-8	Ethyl Acetate	S-6146

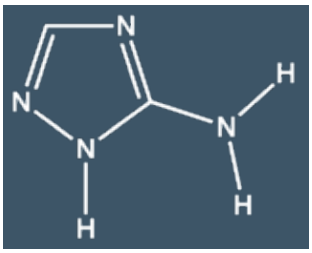


2-Aminonaphthalene-d$_7$

Molecular Weight	150.232
Molecular Formula	$C_{10}H_9N$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93951-94-1	Ethyl Acetate	S-6145

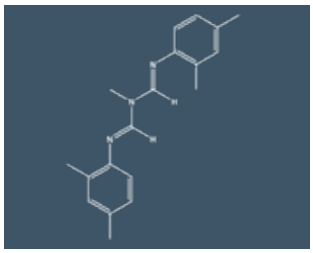
Volume for all Organic Singles is 1 mL



Aminotriazole

Molecular Weight	84.082
Molecular Formula	$C_2H_4N_4$
Density	1.138 g/cm^3
Melting Point	147 to 159 °C

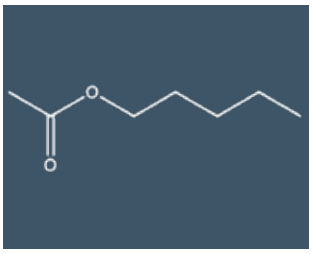
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	61-82-5	Acetone	S-245



Amitraz

Molecular Weight	293.414
Molecular Formula	$C_{19}H_{23}N_3$
Density	1.128 g/cm^3
Melting Point	86 °C

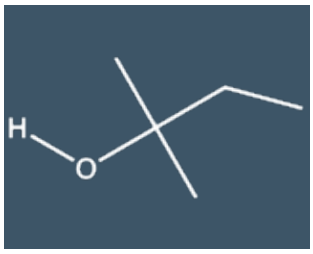
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	33089-61-1	Methanol-P&T	S-246



Amyl acetate
(Isomers of pentyl acetate & 2-pentyl acetate)

Molecular Weight	130.187
Molecular Formula	$C_7H_{14}O_2$
Density	0.88 g/cm^3
Melting Point	-71 °C
Boiling Point	149 °C

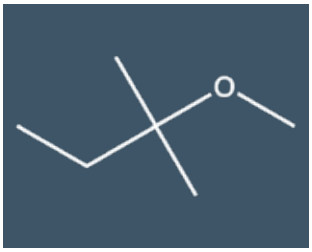
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	628-63-7	Methanol-P&T	S-255



tert-Amyl alcohol

Molecular Weight	88.15
Molecular Formula	$C_5H_{12}O$
Density	0.805 g/cm^3
Melting Point	-9 °C
Boiling Point	102 °C

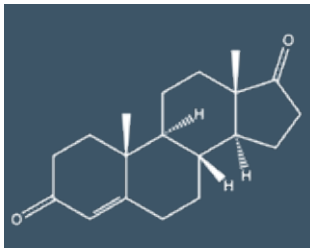
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-85-4	Methanol-P&T	S-260



tert-Amyl methyl ether

Molecular Weight	102.177
Molecular Formula	$C_6H_{14}O$
Density	0.766 g/cm^3
Melting Point	-80 °C
Boiling Point	86 °C

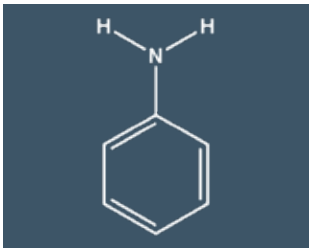
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	994-05-8	Methanol-P&T	S-265



4-Androstene-3,17-dione

Molecular Weight	286.415
Molecular Formula	$C_{19}H_{26}O_2$
Density	1.1 g/cm^3
Melting Point	173 °C
Boiling Point	431 °C

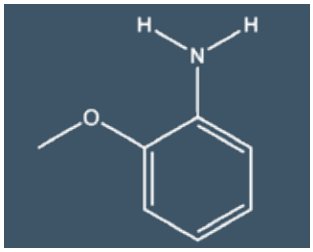
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	63-05-8	Methanol	S-4434



Aniline

Molecular Weight	93.129
Molecular Formula	C_6H_7N
Density	1.02 g/cm^3
Melting Point	-6 °C
Boiling Point	184 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	62-53-3	Methanol	S-280



o-Anisidine

Molecular Weight	123.155
Molecular Formula	C_7H_9NO
Density	1.092 g/cm^3
Melting Point	5 °C
Boiling Point	224 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90-04-0	Methanol-P&T	S-285

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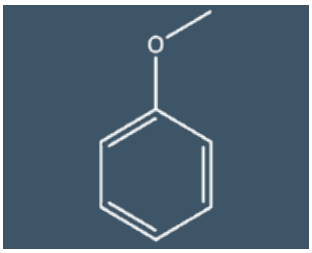
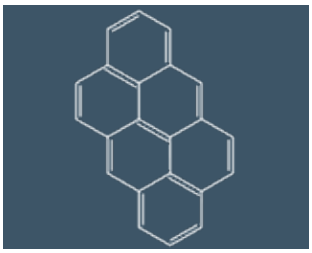
Volume for all Organic Singles is 1 mL



Anisole

Molecular Weight	108.14
Molecular Formula	C_7H_8O
Density	0.996 g/cm^3
Melting Point	-37 °C
Boiling Point	155 °C

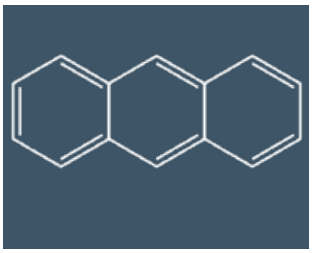
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-66-3	Methanol	S-288



Anthanthrene

Molecular Weight	276.338
Molecular Formula	$C_{22}H_{12}$
Density	1.36 g/cm^3
Melting Point	245 °C
Boiling Point	497 °C

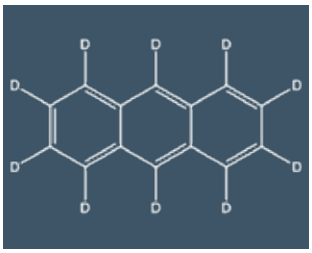
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	191-26-4	Methylene Chloride	S-4739



Anthracene

Molecular Weight	178.234
Molecular Formula	$C_{14}H_{10}$
Density	1.24 g/cm^3
Melting Point	218 °C
Boiling Point	340 °C

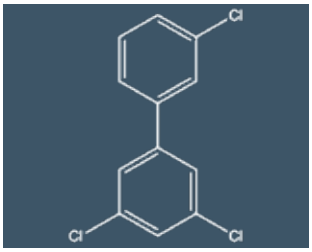
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-12-7	Methylene Chloride	S-290



Anthracene-d$_{10}$

Molecular Weight	188.295
Molecular Formula	$C_{14}H_{10}$
Density	1.194 g/cm^3
Melting Point	218 to 220 °C
Boiling Point	337 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1719-06-8	Acetonitrile	S-291-ACN
		Methylene Chloride	S-291



Aroclor 1016

Molecular Weight	257.538
Molecular Formula	$C_{12}H_7Cl_3$
Density	1.33 g/cm^3
Boiling Point	350 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	12674-11-2	Methanol	S-310

Aroclor 1221

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	11104-28-2	Methanol	S-315

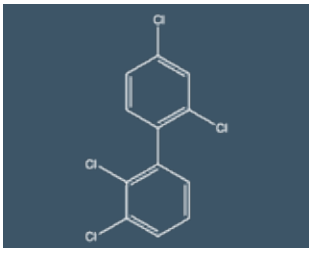
* No Image Available

Aroclor 1232

Molecular Weight	221
Molecular Formula	$C_{12}H_9Cl$
Density	1.270 g/cm^3
Boiling Point	290 to 325 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	11141-16-5	Methanol	S-317

* No Image Available

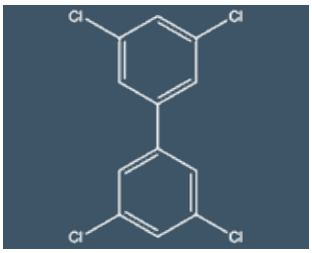


Aroclor 1242

Molecular Weight	291.98
Molecular Formula	$C_{12}H_6Cl_4$
Density	1.39 g/cm^3
Melting Point	-19 °C
Boiling Point	325 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	53469-21-9	Methanol	S-325

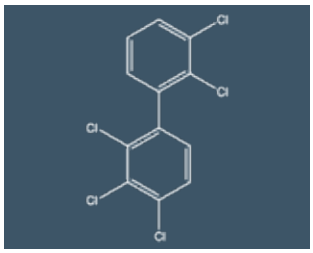
Volume for all Organic Singles is 1 mL



Aroclor 1248

Molecular Weight	291.98
Molecular Formula	$C_{12}H_6Cl_4$
Density	1.405 g/cm^3
Melting Point	357 °C
Boiling Point	382 °C

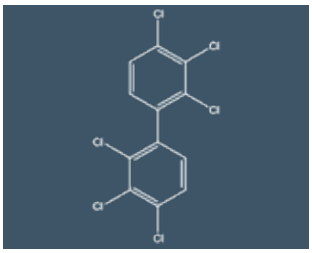
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	12672-29-6	Methanol-P&T	S-330



Aroclor 1254

Molecular Weight	326.422
Molecular Formula	$C_{12}H_5Cl_5$
Density	1.495 g/cm^3
Melting Point	10 °C
Boiling Point	365 to 390 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	11097-69-1	Isooctane	S-335-ISOOCT



Aroclor 1260

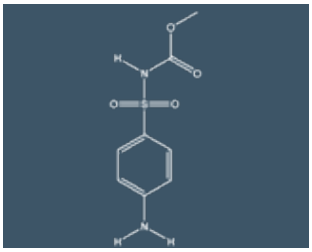
Molecular Weight	360.864
Molecular Formula	$C_{12}H_4Cl_6$
Density	1.4 g/cm^3
Melting Point	141 °C
Boiling Point	385 to 420 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	11096-82-5	Isooctane	S-340-ISOOCT

Aroclor 1262

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	37324-23-5	Hexane	S-345

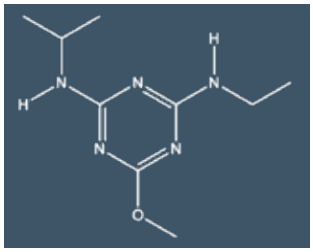
* No Image Available.



Asulam

Molecular Weight	230.238
Molecular Formula	$C_8H_{10}N_2O_4S$
Density	1.419 g/cm^3

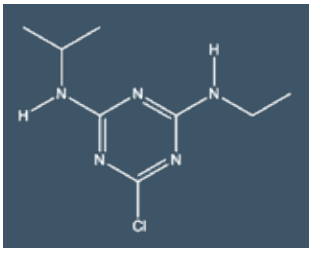
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3337-71-1	Methanol-P&T	S-4201



Atraton

Molecular Weight	211.269
Molecular Formula	$C_9H_{17}N_5O$

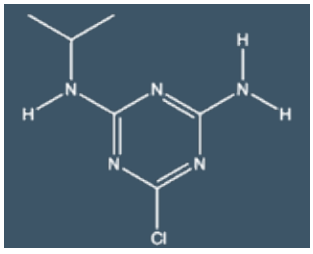
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1610-17-9	Methanol	S-360



Atrazine

Molecular Weight	215.7
Molecular Formula	$C_8H_{14}ClN_5$
Density	1.23 g/cm^3
Melting Point	176 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1912-24-9	Acetone	S-365



Atrazine desethyl

Molecular Weight	187.6
Molecular Formula	$C_6H_{10}ClN_5$
Density	1.38 g/cm^3
Melting Point	125 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6190-65-4	Methanol	S-1145

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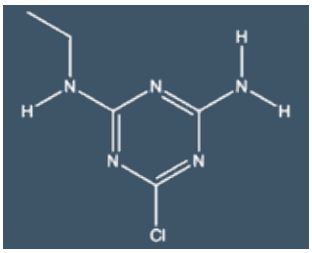
Volume for all Organic Singles is 1 mL



Atrazine desisopropyl

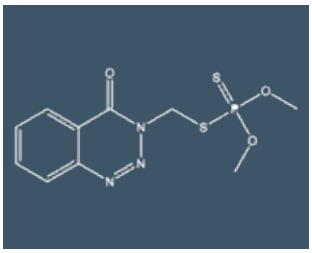
Molecular Weight	173.604
Molecular Formula	$C_5H_8ClN_5$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1007-28-9	Methanol	S-1135

Azadirachtin

Molecular Weight	720.71
Molecular Formula	$C_{35}H_{44}O_{16}$
Density	1.51 g/cm^3
Melting Point	154 to 158 °C

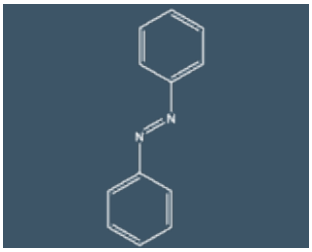
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	11141-17-6	Acetonitrile	S-6124



Azinphos methyl

Molecular Weight	317.3
Molecular Formula	$C_{10}H_{12}N_3O_2PS_2$
Density	1.44 g/cm^3
Melting Point	73 °C
Boiling Point	Decomposes

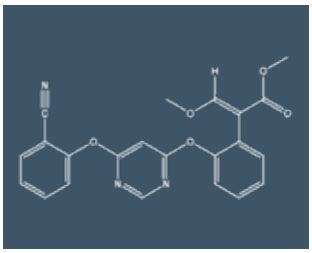
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	86-50-0	Acetone	S-2085



Azobenzene

Molecular Weight	182.226
Molecular Formula	$C_{12}H_{10}N_2$
Density	1.203 g/cm^3
Melting Point	68 °C
Boiling Point	293 °C

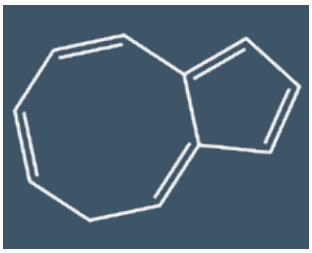
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	103-33-3	Methanol	S-370



Azoxystrobin

Molecular Weight	403.4
Molecular Formula	$C_{22}H_{17}N_3O_5$
Density	1.34 g/cm^3
Melting Point	116 °C
Boiling Point	360 °C

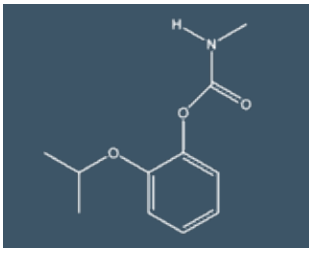
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	131860-33-8	Methanol-P&T	S-3984



Azulene

Molecular Weight	128.174
Molecular Formula	$C_{10}H_8$
Melting Point	100 °C
Boiling Point	242 °C

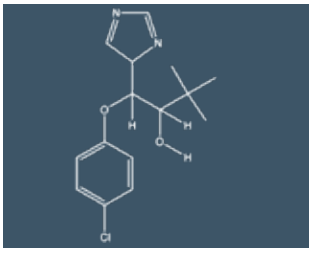
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	275-51-4	Methanol-P&T	S-372



Baygon (Propoxur)

Molecular Weight	209.2
Molecular Formula	$C_{11}H_{15}NO_3$
Density	1.18 g/cm^3
Melting Point	90 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	114-26-1	Acetonitrile	S-3200-ACN
		Methanol	S-3200

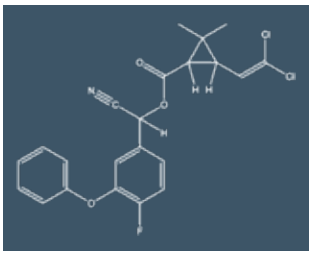


Baytan (Triadimenol)

Molecular Weight	295.767
Molecular Formula	$C_{14}H_{18}ClN_3O_2$
Density	1.22 g/cm^3
Melting Point	124 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	55219-65-3	Methanol-P&T	S-3996

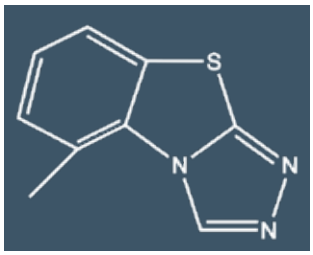
Volume for all Organic Singles is 1 mL



Baythroid (Cyfluthrin)

Molecular Weight	434.288
Molecular Formula	$C_{22}H_{18}Cl_2FNO_3$
Density	1.34 g/cm^3
Melting Point	60 °C

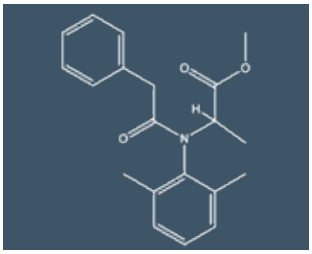
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	68359-37-5	Acetone	S-376-AC
		Methanol-P&T	S-376



Beam

Molecular Weight	189.236
Molecular Formula	$C_9H_7N_3S$
Melting Point	188 °C

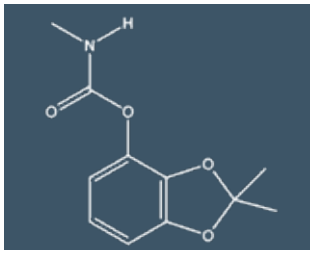
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	41814-78-2	Methanol-P&T	S-377



Benalaxyl

Molecular Weight	325.408
Molecular Formula	$C_{20}H_{23}NO_3$
Density	1.181 g/cm^3

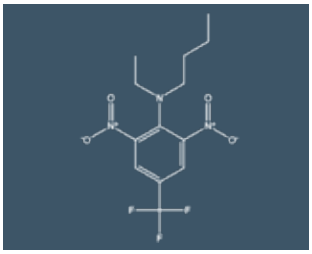
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	71626-11-4	Methanol-P&T	S-4262



Bendiocarb

Molecular Weight	223.228
Molecular Formula	$C_{11}H_{13}NO_4$
Density	1.25 g/cm^3
Melting Point	129 °C

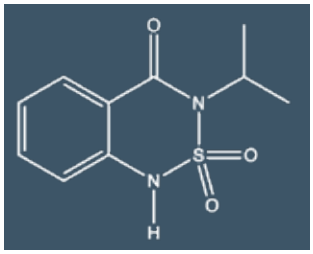
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	22781-23-3	Methanol	S-379



Benfluralin

Molecular Weight	355.283
Molecular Formula	$C_{13}H_{16}F_3N_3O_4$
Melting Point	65 °C
Boiling Point	148 °C

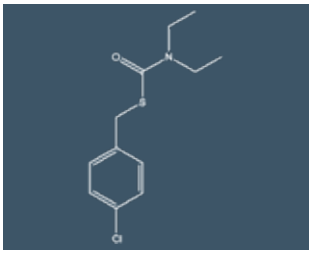
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1861-40-1	Methanol	S-380



Bentazon

Molecular Weight	240.3
Molecular Formula	$C_{10}H_{12}N_2O_3S$
Density	1.41 g/cm^3
Melting Point	139 °C
Boiling Point	Decomposes

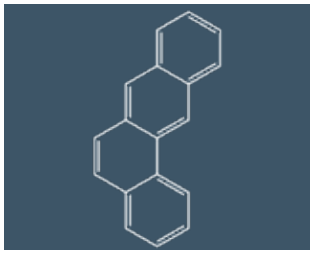
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25057-89-0	Methyl Tertiary Butyl Ether	S-395



Benthiocarb

Molecular Weight	257.776
Molecular Formula	$C_{12}H_{16}ClNOS$
Density	1.67 g/cm^3
Melting Point	3.3 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	28249-77-6	Methanol-P&T	S-400



Benz(a)anthracene

Molecular Weight	228.294
Molecular Formula	$C_{18}H_{12}$
Density	1.274 g/cm^3
Melting Point	162 °C
Boiling Point	438 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-55-3	Methylene Chloride	S-425

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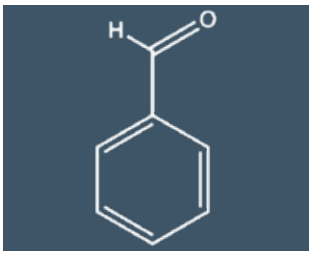
Volume for all Organic Singles is 1 mL



Benzaldehyde

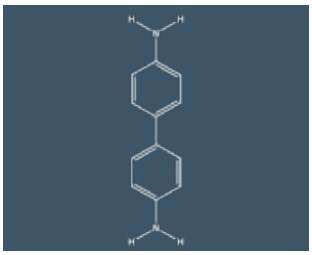
Molecular Weight	106.124
Molecular Formula	C_7H_6O
Density	1.05 g/cm^3
Melting Point	-57 °C
Boiling Point	178 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-52-7	Methanol-P&T	S-402

Benzene

Molecular Weight	78.114
Molecular Formula	C_6H_6
Density	0.88 g/cm^3
Melting Point	6 °C
Boiling Point	80 °C

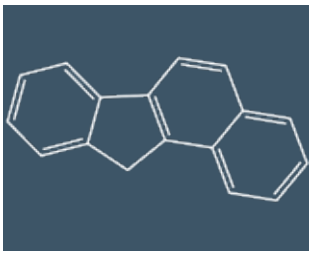
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	71-43-2	Methanol-P&T	S-405



Benzidine

Molecular Weight	184.242
Molecular Formula	$C_{12}H_{12}N_2$
Melting Point	120 °C
Boiling Point	401 °C

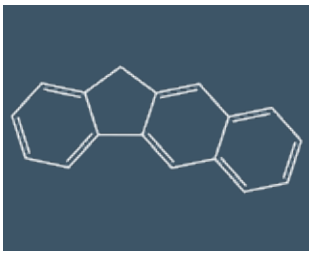
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	92-87-5	Methanol	S-410



Benzo(a)fluorene

Molecular Weight	216.283
Molecular Formula	$C_{17}H_{12}$
Melting Point	189 °C
Boiling Point	399 °C

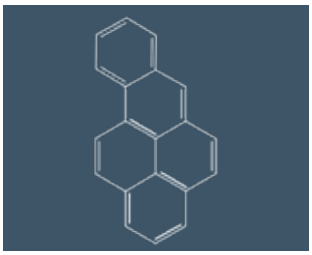
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	238-84-6	Methanol-P&T	S-3921



2,3-Benzofluorene

Molecular Weight	216.283
Molecular Formula	$C_{17}H_{12}$
Melting Point	212 °C

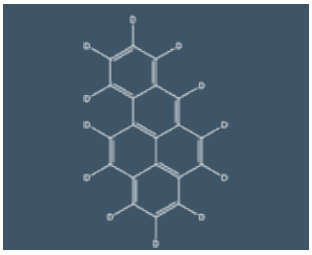
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	243-17-4	Methylene Chloride	S-3920



Benzo(a)pyrene

Molecular Weight	252.316
Molecular Formula	$C_{20}H_{12}$
Density	1.351 g/cm^3
Melting Point	178 °C
Boiling Point	496 °C

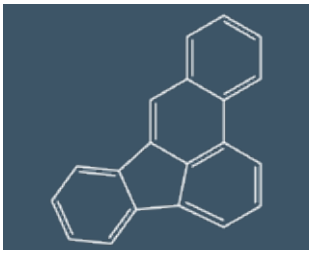
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	50-32-8	Methylene Chloride	S-430



Benzo(a)pyrene-d$_{12}$

Molecular Weight	264.389
Molecular Formula	$C_{20}H_{12}$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	63466-71-7	Methylene Chloride	S-431

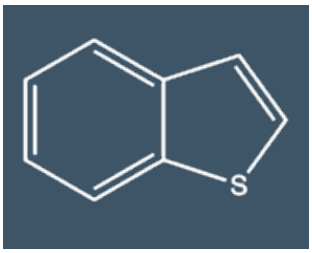


Benzo(b)fluoranthene

Molecular Weight	252.316
Molecular Formula	$C_{20}H_{12}$
Melting Point	168 °C
Boiling Point	481 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	205-99-2	Methylene Chloride	S-435

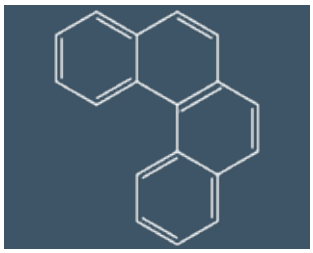
Volume for all Organic Singles is 1 mL



Benzo(b)thiophene

Molecular Weight	134.196
Molecular Formula	C_8H_6S
Density	1.15 g/cm^3
Melting Point	32 °C
Boiling Point	221 °C

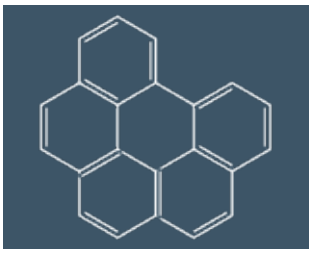
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-15-8	Methanol-P&T	S-437



Benzo(c)phenanthrene

Molecular Weight	228.294
Molecular Formula	$C_{18}H_{12}$
Density	1.19 g/cm^3
Melting Point	65 to 67 °C
Boiling Point	424 °C

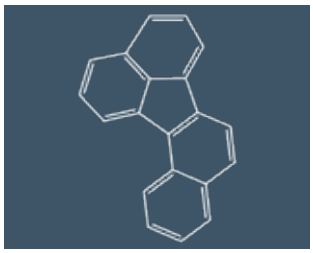
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	195-19-7	Methylene Chloride	S-439



Benzo(g,h,i)perylene

Molecular Weight	267.338
Molecular Formula	$C_{22}H_{12}$
Density	1.3 g/cm^3
Melting Point	277 to 279 °C
Boiling Point	550 °C

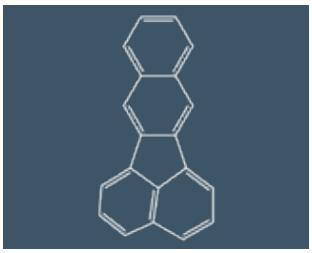
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	191-24-2	Methylene Chloride	S-445



Benzo(j)fluoranthene

Molecular Weight	252.316
Molecular Formula	$C_{20}H_{12}$
Melting Point	165 °C
Boiling Point	480 °C

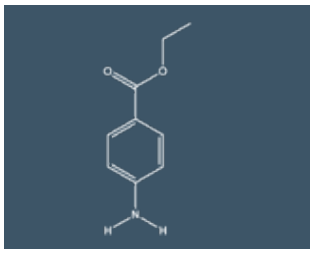
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	205-82-3	Methylene Chloride	S-450



Benzo(k)fluoranthene

Molecular Weight	252.316
Molecular Formula	$C_{20}H_{12}$
Melting Point	217 °C
Boiling Point	480 °C

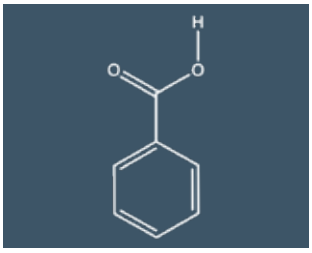
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	207-08-9	Methylene Chloride	S-455



Benzocaine

Molecular Weight	165.192
Molecular Formula	$C_9H_{11}NO_2$
Melting Point	92 °C
Boiling Point	310 °C

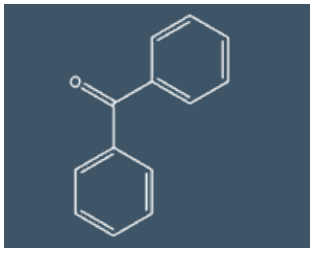
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	94-09-7	Methanol	S-411



Benzoic acid

Molecular Weight	122.123
Molecular Formula	$C_7H_6O_2$
Density	1.3 g/cm^3
Melting Point	122 °C
Boiling Point	249 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	65-85-0	Methylene Chloride	S-415

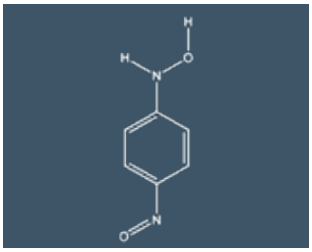


Benzophenone

Molecular Weight	182.222
Molecular Formula	$C_{13}H_{10}O$
Density	1.085 g/cm^3
Melting Point	49 °C
Boiling Point	305 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119-61-9	Methylene Chloride	S-418

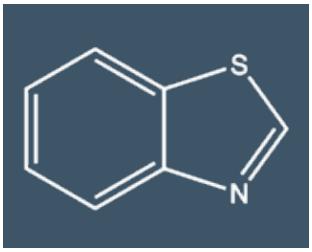
Volume for all Organic Singles is 1 mL



1,4-Benzoquinone dioxime

Molecular Weight	138.126
Molecular Formula	$C_6H_6N_2O_2$
Density	1.49 g/cm^3
Melting Point	240 °C
Boiling Point	315 °C

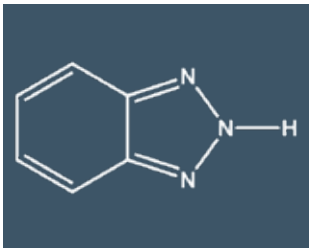
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	105-11-3	Methylene Chloride:Acetone	S-421



Benzothiazole

Molecular Weight	135.184
Molecular Formula	C_7H_5NS
Density	1.246 g/cm^3
Melting Point	2 °C
Boiling Point	227 °C

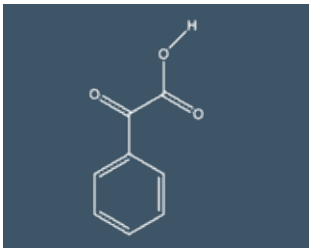
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-16-9	Methanol-P&T	S-422



Benzotriazole

Molecular Weight	119.127
Molecular Formula	$C_6H_5N_3$
Density	1.36 g/cm^3
Melting Point	99 °C
Boiling Point	204 °C

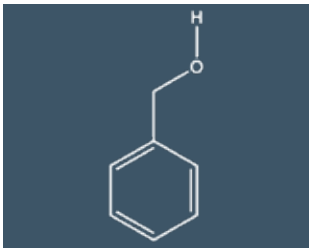
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-14-7	Methanol	S-4121



Benzoylformic acid

Molecular Weight	150.133
Molecular Formula	$C_8H_6O_3$
Melting Point	66 °C
Boiling Point	163 °C

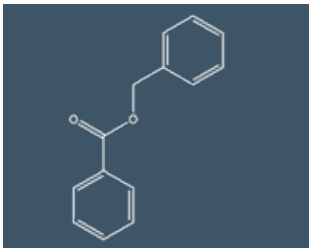
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	611-73-4	HPLC Acetonitrile	S-5222



Benzyl alcohol

Molecular Weight	108.14
Molecular Formula	C_7H_8O
Density	1.05 g/cm^3
Melting Point	-15 °C
Boiling Point	205 °C

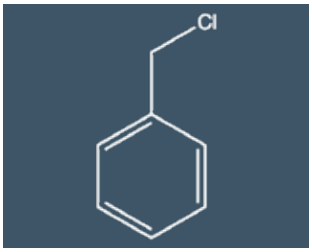
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-51-6	Methanol-P&T	S-460



Benzyl benzoate

Molecular Weight	212.248
Molecular Formula	$C_{14}H_{12}O_2$
Density	1.1 g/cm^3
Melting Point	21 °C
Boiling Point	324 °C

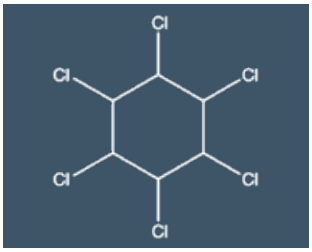
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-51-4	Cyclohexane	S-462-CYC
		Methanol-P&T	S-462



Benzyl chloride

Molecular Weight	126.583
Molecular Formula	C_7H_7Cl
Density	1.10 g/cm^3
Melting Point	-43 °C
Boiling Point	174 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-44-7	Methanol-P&T	S-465

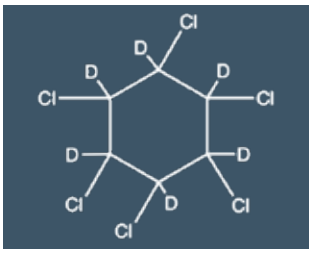


alpha-BHC

Molecular Weight	290.814
Molecular Formula	$C_6H_6Cl_6$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	319-84-6	Methanol-P&T	S-470

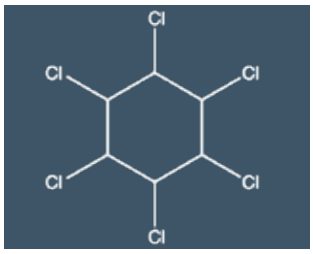
Volume for all Organic Singles is 1 mL



alpha-BHC-d_6 (a-1,2,3,4,5,6-Hexachlorocyclohexane-d_6)

Molecular Weight	296.851
Molecular Formula	$C_6H_6Cl_6$
Melting Point	160 °C

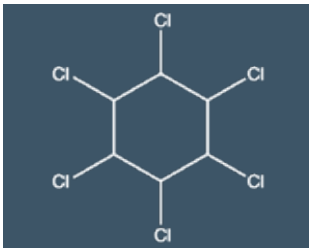
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	86194-41-4	Methanol-P&T	S-490



beta-BHC

Molecular Weight	290.814
Molecular Formula	$C_6H_6Cl_6$
Density	1.89 g/cm³
Melting Point	113 °C

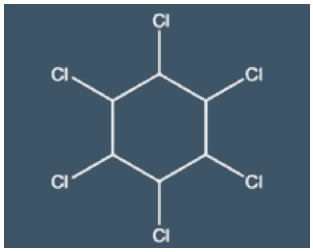
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	319-85-7	Methanol-P&T	S-475



delta-BHC

Molecular Weight	290.814
Molecular Formula	$C_6H_6Cl_6$
Density	1.89 g/cm³

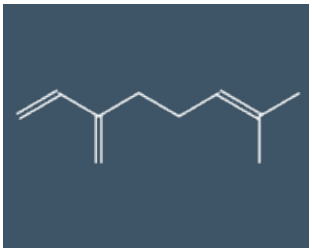
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	319-86-8	Methanol-P&T	S-480



gamma-BHC

Molecular Weight	290.814
Molecular Formula	$C_6H_6Cl_6$
Density	1.89 g/cm³

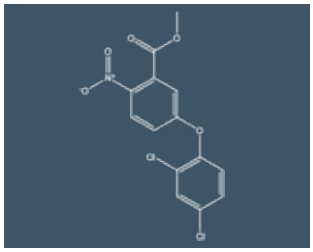
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	58-89-9	Methanol-P&T	S-485



beta-Myrcene

Molecular Weight	136.238
Molecular Formula	$C_{10}H_{16}$
Density	0.794 g/cm³
Melting Point	-10 °C
Boiling Point	167 °C

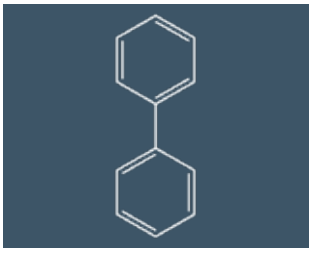
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-35-3	Hexane	S-2654



Bifenox

Molecular Weight	342.128
Molecular Formula	$C_{14}H_9Cl_2NO_5$
Density	1.155 g/cm³
Melting Point	85 °C

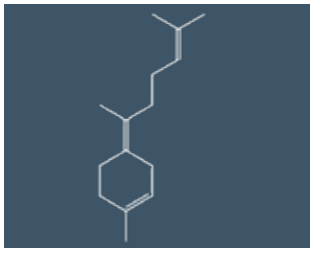
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	42576-02-3	Methanol-P&T	S-495



Biphenyl

Molecular Weight	154.212
Molecular Formula	$C_{12}H_{10}$
Density	1.04 g/cm³
Melting Point	70 °C
Boiling Point	256 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	92-52-4	Methylene Chloride	S-500



Bisabolene

Molecular Weight	204.357
Molecular Formula	$C_{15}H_{24}$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	495-62-5	Methanol-P&T	S-502

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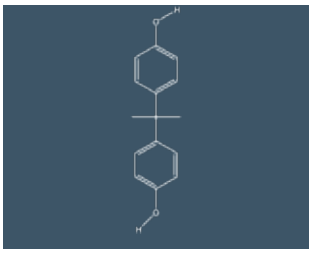
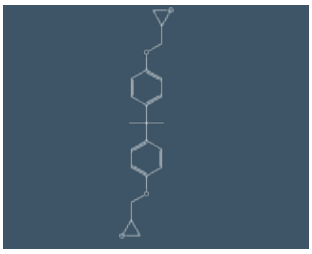
Volume for all Organic Singles is 1 mL



Bisphenol A

Molecular Weight	228.291
Molecular Formula	$C_{15}H_{16}O_2$
Density	1.195 g/cm^3
Melting Point	153 °C
Boiling Point	361 °C

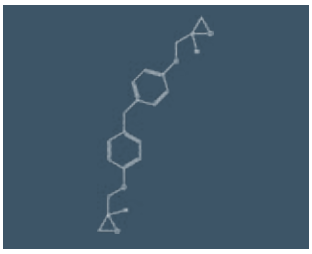
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	80-05-7	Acetone	S-509
		Methylene Chloride	S-509-MC



Bisphenol A diglycidyl ether

Molecular Weight	340.419
Molecular Formula	$C_{21}H_{24}O_4$
Density	1.16 g/cm^3
Melting Point	8 to 12 °C
Boiling Point	Decomposes

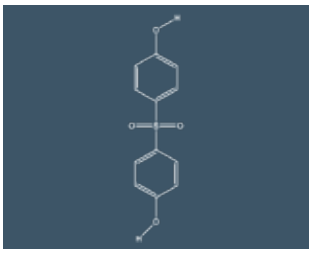
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1675-54-3	Acetonitrile	S-511



Bisphenol F diglycidyl ether

Molecular Weight	312.365
Molecular Formula	$C_{19}H_{20}O_4$

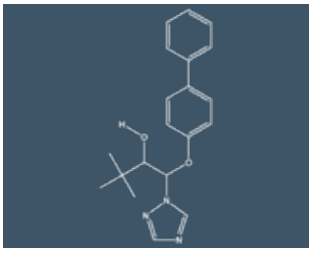
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2095-03-6	Acetonitrile	S-507



Bisphenol S

Molecular Weight	250.268
Molecular Formula	$C_{12}H_{10}O_4S$
Density	1.366 g/cm^3
Melting Point	205 °C

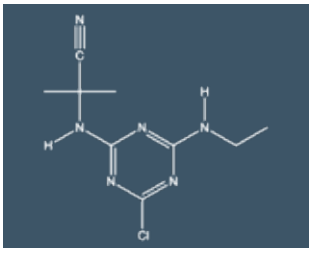
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	80-09-1	Methanol	S-5871



Bitertanol (mix of isomers)

Molecular Weight	337.423
Molecular Formula	$C_{20}H_{23}N_3O_2$

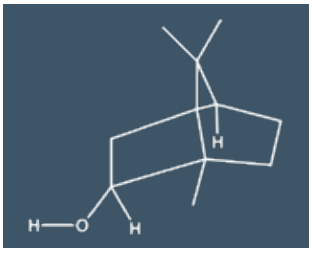
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	55179-31-2	Acetone	S-4679



Bladex

Molecular Weight	240.695
Molecular Formula	$C_9H_{13}ClN_6$
Density	1.26 g/cm^3
Melting Point	168 °C

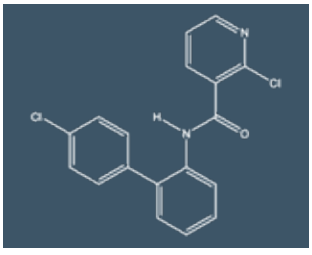
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	21725-46-2	Methanol-P&T	S-510



Borneol

Molecular Weight	154.253
Molecular Formula	$C_{10}H_{18}O$
Density	1.011 g/cm^3
Melting Point	202 °C
Boiling Point	212 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	507-70-0	Methanol-P&T	S-4570

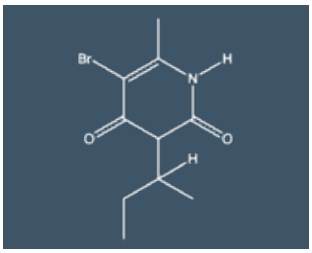


Boscalid

Molecular Weight	343.2
Molecular Formula	$C_{18}H_{12}Cl_2N_2O$
Density	1.38 g/cm^3
Melting Point	143 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	188425-85-6	Methanol	S-4815

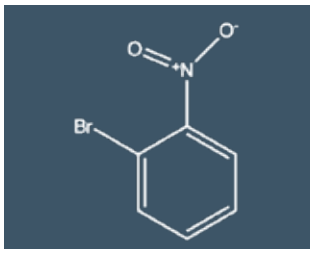
Volume for all Organic Singles is 1 mL



Bromacil

Molecular Weight	261.1
Molecular Formula	$C_9H_{13}BrN_2O_2$
Density	1.59 g/cm³
Melting Point	158 °C
Boiling Point	Decomposes

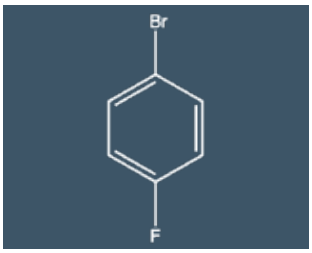
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	314-40-9	Methanol	S-515



1-Bromo-2-nitrobenzene

Molecular Weight	202.007
Molecular Formula	$C_6H_4BrNO_2$
Melting Point	41 °C
Boiling Point	261 °C

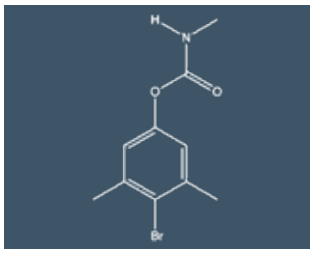
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	577-19-5	Methanol-P&T	S-590



1-Bromo-4-fluorobenzene

Molecular Weight	175
Molecular Formula	C_6H_4BrF
Density	1.495 g/cm³
Melting Point	-16 °C
Boiling Point	150 °C

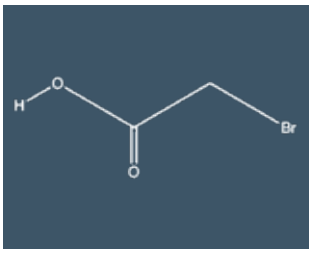
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	460-00-4	Methanol-P&T	S-593



4-Bromo-3,5-dimethylphenyl-n-methylcarbamate

Molecular Weight	285.115
Molecular Formula	$C_{10}H_{12}BrNO_2$
Melting Point	115 °C

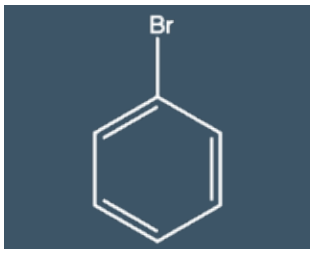
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	672-99-1	Methanol-P&T	S-591



Bromoacetic acid

Molecular Weight	138.948
Molecular Formula	$C_2H_3BrO_2$
Density	1.934 g/cm³
Melting Point	50 °C
Boiling Point	208 °C

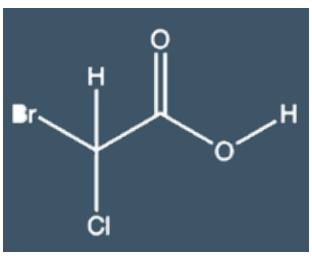
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-08-3	Methyl Tertiary Butyl Ether	S-520



Bromobenzene

Molecular Weight	157.01
Molecular Formula	C_6H_5Br
Density	1.49 g/cm³
Melting Point	-31 °C
Boiling Point	156 °C

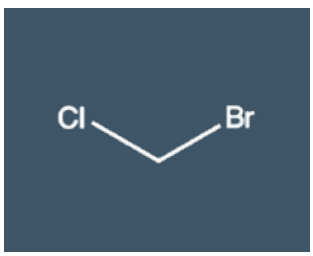
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-86-1	Methanol-P&T	S-525



Bromochloroacetic acid

Molecular Weight	173.39
Molecular Formula	$C_2H_2BrClO_2$
Density	1.985 g/cm³
Melting Point	28 °C
Boiling Point	215 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5589-96-8	Methyl Tertiary Butyl Ether	S-530



Bromochloromethane

Molecular Weight	129.381
Molecular Formula	CH_2BrCl
Density	1.93 g/cm³
Melting Point	-88 °C
Boiling Point	68 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-97-5	Methanol-P&T	S-535

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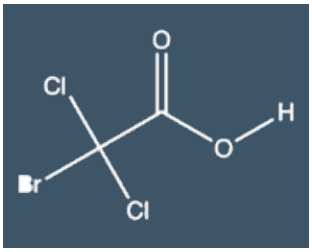
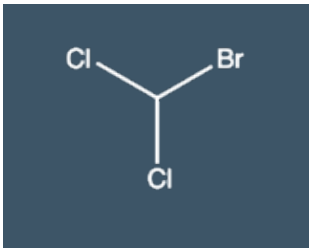
Volume for all Organic Singles is 1 mL



Bromodichloroacetic acid

Molecular Weight	207.832
Molecular Formula	$C_2H_2Cl_2O_2$
Density	1.985 g/cm^3
Melting Point	9 °C
Boiling Point	194 °C

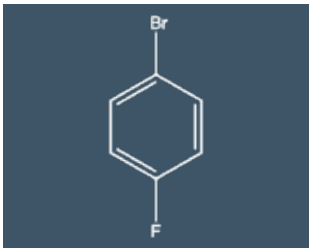
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	71133-14-7	Methyl Tertiary Butyl Ether	S-536



Bromodichloromethane

Molecular Weight	163.823
Molecular Formula	$CHBrCl_2$
Density	1.9 g/cm^3
Melting Point	-57 °C
Boiling Point	90 °C

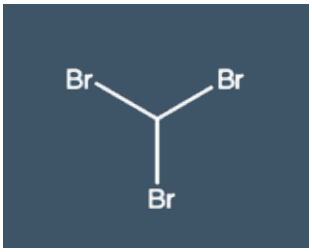
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-27-4	Methanol-P&T	S-542



4-Bromofluorobenzene

Molecular Weight	175
Molecular Formula	C_6H_4BrF
Density	1.49 g/cm^3
Melting Point	-16 °C
Boiling Point	150 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	460-00-4	Methanol-P&T	S-550



Bromoform

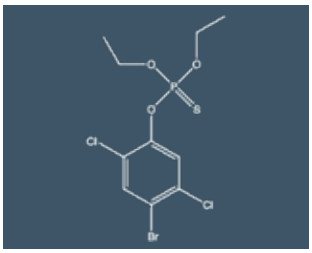
Molecular Weight	252.731
Molecular Formula	$CHBr_3$
Density	0.289 g/cm^3
Melting Point	4 °C
Boiling Point	149 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-25-2	Methanol-P&T	S-555

Bromomethane

Molecular Weight	94.939
Molecular Formula	CH_3Br
Density	1.73 g/cm^3
Melting Point	-94 °C
Boiling Point	4 °C

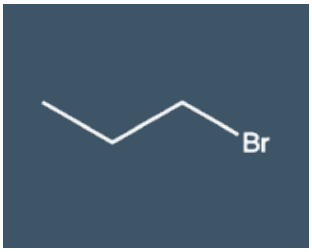
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-83-9	Dimethyl Formamide	S-560-DMF
		Methanol-P&T	S-560



Bromophos-ethyl

Molecular Weight	394.041
Molecular Formula	$C_{10}H_{12}BrCl_2O_3PS$
Density	1.53 g/cm^3
Boiling Point	128 °C

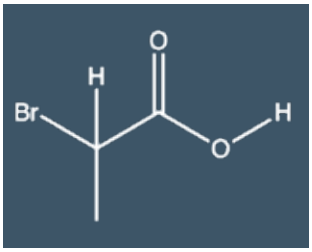
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4824-78-6	Methanol-P&T	S-565



1-Bromopropane

Molecular Weight	122.993
Molecular Formula	C_3H_7Br
Density	1.354 g/cm^3
Melting Point	-110 °C
Boiling Point	71 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-94-5	Methanol-P&T	S-6048

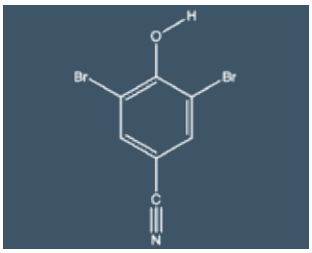


2-Bromopropionic acid

Molecular Weight	152.975
Molecular Formula	$C_3H_5BrO_2$
Density	1.7 g/cm^3
Boiling Point	203 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	598-72-1	Methanol-P&T	S-572

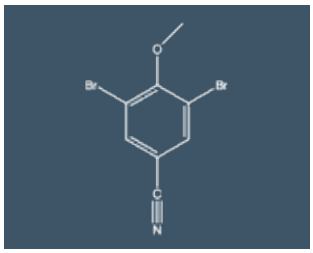
Volume for all Organic Singles is 1 mL



Bromoxynil

Molecular Weight	276.915
Molecular Formula	$C_7H_3Br_2NO$
Density	2.243 g/cm^3
Melting Point	194 to 195 °C

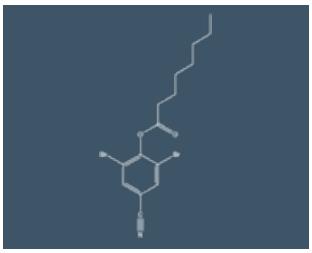
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1689-84-5	Methanol-P&T	S-575



Bromoxynil methyl ether

Molecular Weight	290.942
Molecular Formula	$C_8H_5Br_2NO$

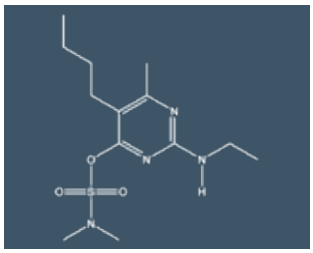
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3336-39-8	Methanol	S-10469



Bromoxynil octanoic acid ester

Molecular Weight	403.114
Molecular Formula	$C_{15}H_{17}Br_2NO_2$
Melting Point	45 to 46 °C

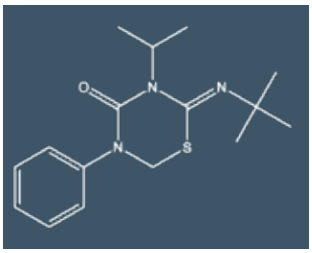
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1689-99-2	Methanol-P&T	S-577



Bupirimate

Molecular Weight	316.42
Molecular Formula	$C_{13}H_{24}N_4O_3S$

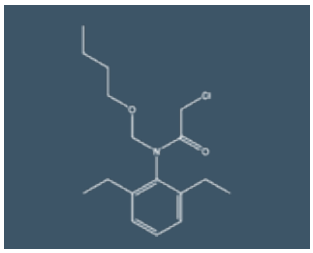
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	41483-43-6	Methanol-P&T	S-4272



Buprofezin

Molecular Weight	305.44
Molecular Formula	$C_{16}H_{23}N_3OS$
Density	1.18 g/cm^3
Melting Point	106 °C
Boiling Point	268 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	69327-76-0	Toluene	S-4254



Butachlor

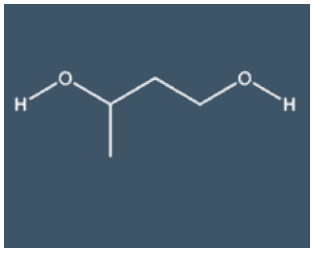
Molecular Weight	311.85
Molecular Formula	$C_{17}H_{26}ClNO_2$
Density	1.07 g/cm^3
Melting Point	-5 °C
Boiling Point	156 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	23184-66-9	Methanol	S-595

1,3-Butadiene

Molecular Weight	54.092
Molecular Formula	$C_4H_6O_2$
Density	0.621 g/cm^3
Melting Point	-109 °C
Boiling Point	-4 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-99-0	Methanol-P&T	S-600



1,3-Butanediol

Molecular Weight	90.122
Molecular Formula	$C_4H_{10}O_2$
Density	1.005 g/cm^3
Melting Point	-50 °C
Boiling Point	207 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-88-0	Methanol-P&T	S-607

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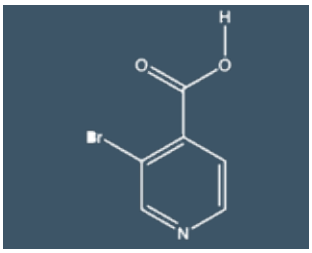
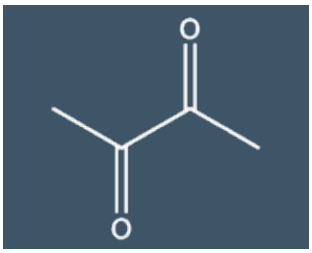
Volume for all Organic Singles is 1 mL



2,3-Butanediol

Molecular Weight	202.007
Molecular Formula	$C_6H_4BrNO_2$
Melting Point	300 °C

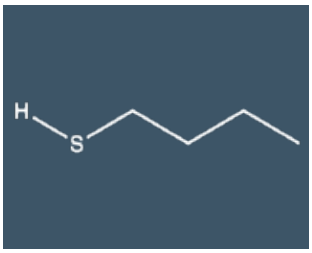
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	513-85-9	Methanol-P&T	S-4193



2,3-Butanedione

Molecular Weight	86.09
Molecular Formula	$C_4H_6O_2$
Density	0.99 g/cm^3
Melting Point	-2 °C
Boiling Point	88 °C

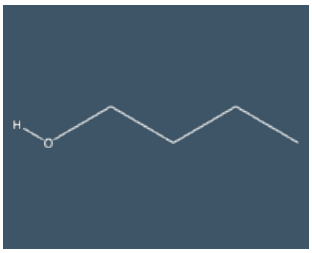
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	431-03-8	Methanol-P&T	S-609



1-Butanethiol

Molecular Weight	90.184
Molecular Formula	$C_4H_{10}S$
Density	0.83 g/cm^3
Melting Point	-116 °C
Boiling Point	98 °C

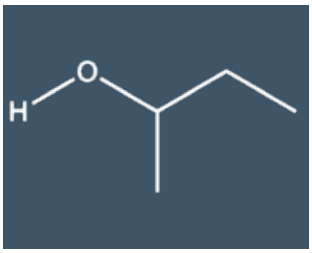
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-79-5	Methanol-P&T	S-608



1-Butanol

Molecular Weight	74.123
Molecular Formula	$C_4H_{10}O$
Density	0.81 g/cm^3
Melting Point	-90 °C
Boiling Point	117 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	71-36-3	Methanol-P&T	S-610



2-Butanol

Molecular Weight	74.123
Molecular Formula	$C_4H_{10}O$
Density	0.81 g/cm^3
Melting Point	-115 °C
Boiling Point	100 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-92-2	Methanol-P&T	S-615

2-Butanone

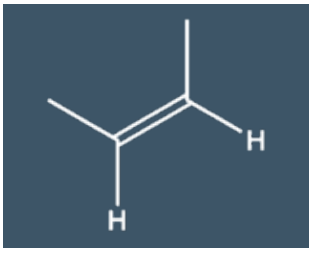
Molecular Weight	72.107
Molecular Formula	C_4H_8O
Density	0.803 g/cm^3
Melting Point	-87 °C
Boiling Point	80 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-93-3	Methanol-P&T	S-620

1-Butene

Molecular Weight	56.108
Molecular Formula	C_4H_8
Density	0.577 g/cm^3
Melting Point	-185 °C
Boiling Point	-6 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-98-9	Methanol-P&T	S-621

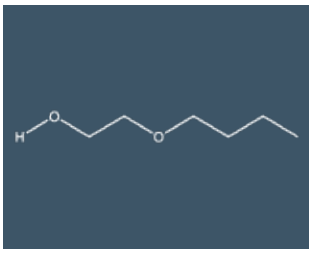


cis-2-Butene

Molecular Weight	56.108
Molecular Formula	C_4H_8
Density	0.616 g/cm^3
Melting Point	-139 °C
Boiling Point	4 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	590-18-1	Methanol-P&T	S-622

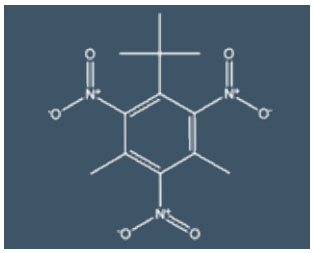
Volume for all Organic Singles is 1 mL



2-Butoxyethanol

Molecular Weight	118.176
Molecular Formula	$C_6H_{14}O_2$
Density	0.902 g/cm³
Melting Point	-75 °C
Boiling Point	168 °C

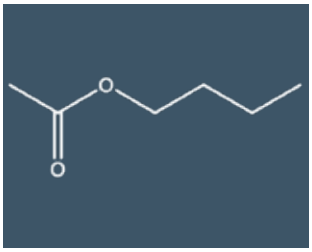
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-76-2	Methanol-P&T	S-630



5-tert-Butyl-2,4,6-trinitro-m-xylene

Molecular Weight	297.267
Molecular Formula	$C_{12}H_{15}N_3O_6$
Melting Point	110 °C

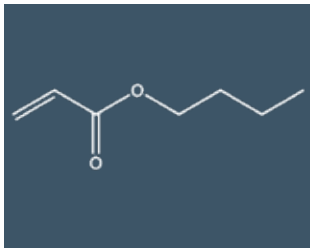
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	81-15-2	Methanol-P&T	S-3761



Butyl acetate

Molecular Weight	116.16
Molecular Formula	$C_6H_{12}O_2$
Density	0.887 g/cm³
Melting Point	-78 °C
Boiling Point	126 °C

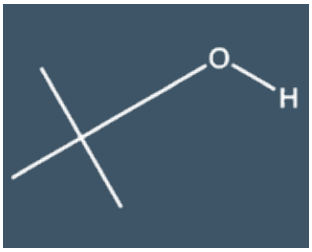
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-86-4	Methanol-P&T	S-635



Butyl acrylate

Molecular Weight	128.171
Molecular Formula	$C_7H_{12}O_2$
Density	0.899 g/cm³
Melting Point	-64 °C
Boiling Point	145 to 149 °C

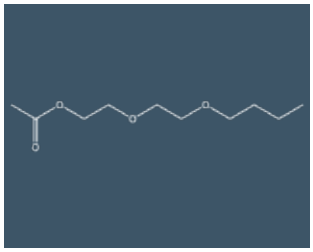
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	141-32-2	Methanol-P&T	S-655



tert-Butyl alcohol

Molecular Weight	74.123
Molecular Formula	$C_4H_{10}O$
Density	0.781 g/cm³
Melting Point	26 °C
Boiling Point	82 °C

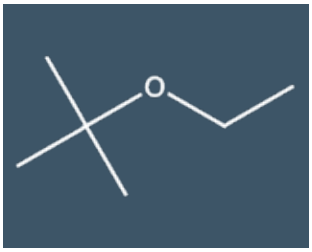
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-65-0	Methanol-P&T	S-3365



Butyl carbitol acetate

Molecular Weight	204.266
Molecular Formula	$C_{10}H_{20}O_4$
Density	0.985 g/cm³
Melting Point	-32 °C
Boiling Point	245 °C

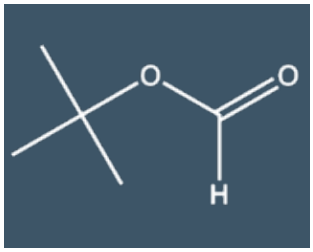
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	124-17-4	Methanol-P&T	S-640



tert-Butyl ethyl ether

Molecular Weight	102.177
Molecular Formula	$C_6H_{14}O$
Density	0.736 g/cm³
Melting Point	-94 °C
Boiling Point	73 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	637-92-3	Methanol-P&T	S-645



tert-Butyl formate

Molecular Weight	102.133
Molecular Formula	$C_5H_{10}O_2$
Density	0.872 g/cm³
Boiling Point	82 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	762-75-4	Methanol-P&T	S-646

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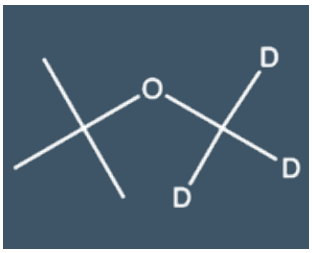
Volume for all Organic Singles is 1 mL

tert-Butyl methyl ether

Molecular Weight	88.15
Molecular Formula	$C_5H_{12}O$
Density	0.735 g/cm^3
Melting Point	-109 °C
Boiling Point	55 °C

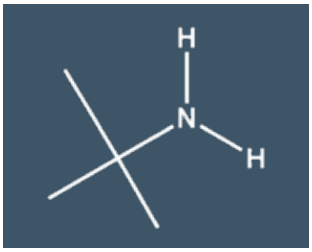
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1634-04-4	Methanol-P&T	S-650



tert-Butyl methyl-d$_3$ ether

Molecular Weight	91.168
Molecular Formula	$C_5H_{12}O$

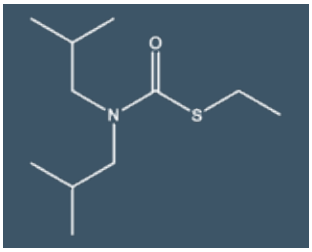
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	29366-08-3	Methanol-P&T	S-2455C



tert-Butylamine

Molecular Weight	73.139
Molecular Formula	$C_4H_{11}N$
Density	0.696 g/cm^3
Melting Point	-73 °C
Boiling Point	45 °C

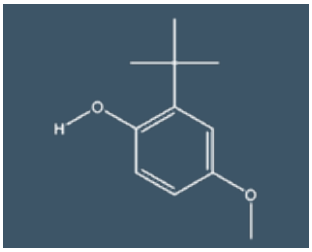
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-64-9	Methanol-P&T	S-3366



Butylate

Molecular Weight	217.371
Molecular Formula	$C_{11}H_{23}NOS$
Density	0.940 g/cm^3
Boiling Point	138 °C

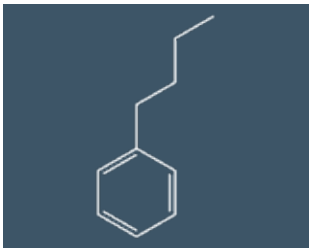
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2008-41-5	Methanol	S-660



Butylated hydroxyanisole

Molecular Weight	180.247
Molecular Formula	$C_{11}H_{16}O_2$
Density	1.059 g/cm^3
Melting Point	48 to 55 °C
Boiling Point	264 to 270 °C

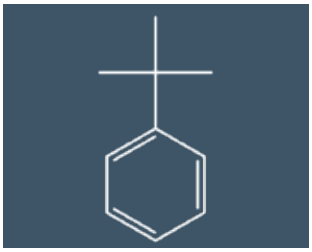
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25013-16-5	Methanol-P&T	S-662



n-Butylbenzene

Molecular Weight	134.222
Molecular Formula	$C_{10}H_{14}$
Density	0.860 g/cm^3
Melting Point	-88 °C
Boiling Point	183 °C

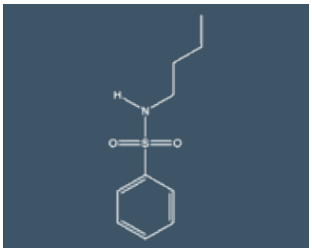
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	104-51-8	Methanol-P&T	S-665



tert-Butylbenzene

Molecular Weight	134.222
Molecular Formula	$C_{10}H_{14}$
Density	0.867 g/cm^3
Melting Point	-58 °C
Boiling Point	169 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-06-6	Methanol-P&T	S-675

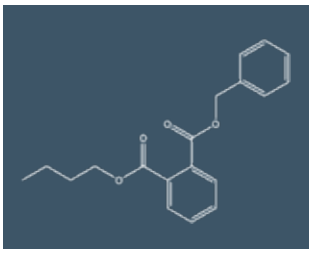


n-Butylbenzenesulfonamide

Molecular Weight	213.295
Molecular Formula	$C_{10}H_{15}NO_2S$
Density	1.15 g/cm^3
Boiling Point	314 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3622-84-2	Methanol-P&T	S-677

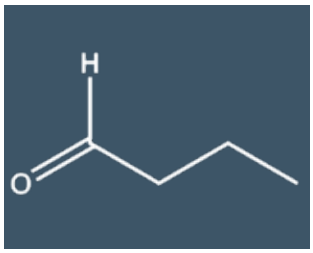
Volume for all Organic Singles is 1 mL



Butylbenzyl phthalate

Molecular Weight	312.365
Molecular Formula	$C_{19}H_{20}O_4$
Density	1.12 g/cm^3
Melting Point	-35 °C
Boiling Point	370 °C

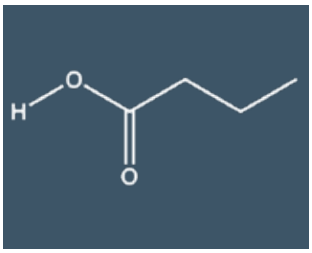
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	85-68-7	Methylene Chloride	S-680-MECL



Butyraldehyde

Molecular Weight	72.107
Molecular Formula	C_4H_8O
Density	0.802 g/cm^3
Melting Point	-97 °C
Boiling Point	75 °C

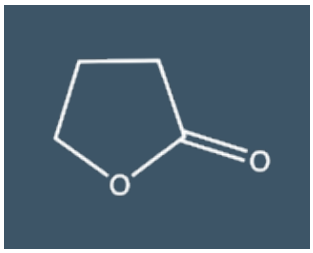
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-72-8	Methanol-P&T	S-700



Butyric acid

Molecular Weight	88.106
Molecular Formula	$C_4H_8O_2$
Density	0.959 g/cm^3
Melting Point	-8 °C
Boiling Point	164 °C

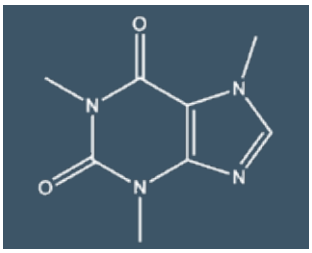
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-92-6	DI Water	S-702



gamma-Butyrolactone

Molecular Weight	86.09
Molecular Formula	$C_4H_6O_2$
Density	1.129 g/cm^3
Melting Point	-44 °C
Boiling Point	204 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	96-48-0	Methanol-P&T	S-701



Caffeine

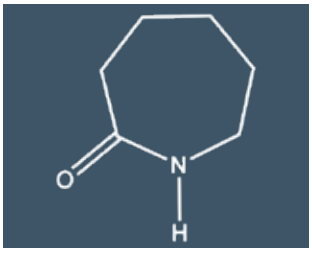
Molecular Weight	194.194
Molecular Formula	$C_8H_{10}N_4O_2$
Density	1.23 g/cm^3
Melting Point	238 °C
Boiling Point	178 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	58-08-2	Methanol	S-705

Camphor

Molecular Weight	152.237
Molecular Formula	$C_{10}H_{16}O$
Density	0.99 g/cm^3
Melting Point	180 °C
Boiling Point	209 °C

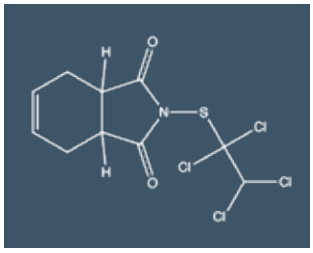
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76-22-2	Methanol-P&T	S-3925



Caprolactam

Molecular Weight	113.16
Molecular Formula	$C_6H_{11}NO$
Density	1.02 g/cm^3
Melting Point	69 °C
Boiling Point	270 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	105-60-2	Methanol-P&T	S-712



Captafol

Molecular Weight	349.047
Molecular Formula	$C_{10}H_9Cl_4NO_2S$
Density	1.00 g/cm^3
Melting Point	160 to 161 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2425-06-1	Acetone	S-715

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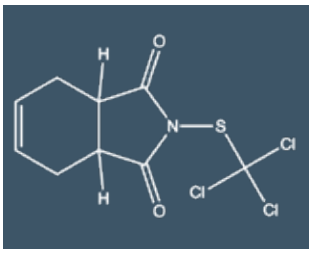
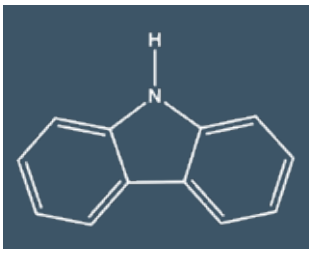
Volume for all Organic Singles is 1 mL



Captan

Molecular Weight	301.0
Molecular Formula	$C_9H_8Cl_3NO_2S$
Density	1.68 g/cm^3
Melting Point	174 °C
Boiling Point	Decomposes

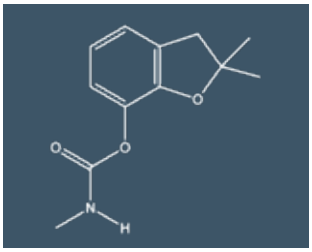
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	133-06-2	Acetone	S-720
		Acetonitrile	S-720-ACN



Carbazole

Molecular Weight	167.211
Molecular Formula	$C_{12}H_9N$
Density	1.10 g/cm^3
Melting Point	245 °C
Boiling Point	355 °C

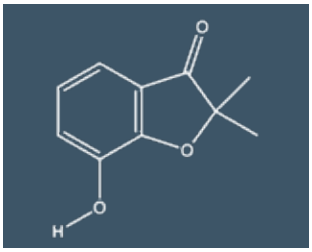
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	86-74-8	Methylene Chloride	S-730



Carbofuran

Molecular Weight	221.3
Molecular Formula	$C_{12}H_{15}NO_3$
Density	1.26 g/cm^3
Melting Point	153 °C
Boiling Point	254 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1563-66-2	Methanol	S-740



Carbofuranphenol

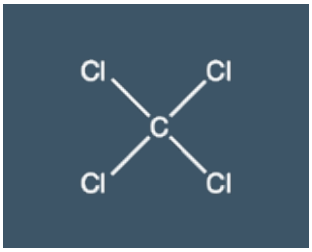
Molecular Weight	178.187
Molecular Formula	$C_{10}H_{10}O_3$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	17781-16-7	Methanol	S-4346

Carbon disulfide

Molecular Weight	76.131
Molecular Formula	CS_2
Density	1.263 g/cm^3
Melting Point	-112 °C
Boiling Point	46 °C

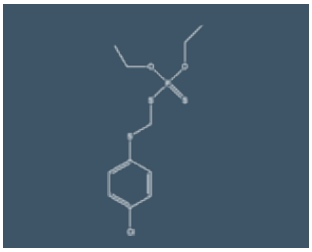
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-15-0	Methanol-P&T	S-745



Carbon tetrachloride

Molecular Weight	153.811
Molecular Formula	CCl_4
Density	1.594 g/cm^3
Melting Point	-23 °C
Boiling Point	76 to 77 °C

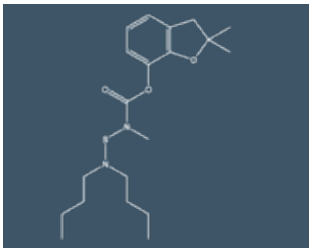
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-23-5	Methanol-P&T	S-750



Carbophenothion

Molecular Weight	342.9
Molecular Formula	$C_{11}H_{16}ClO_2PS_3$
Density	1.27 g/cm^3

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	786-19-6	Acetone	S-755-AC
		Methanol	S-755

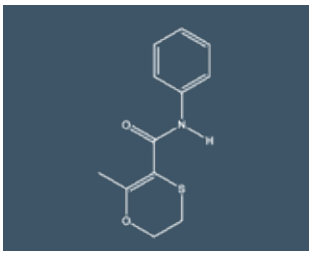


Carbosulfan

Molecular Weight	380.547
Molecular Formula	$C_{20}H_{32}N_2O_3S$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	55285-14-8	Methanol	S-742

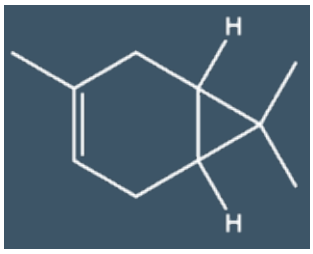
Volume for all Organic Singles is 1 mL



Carboxin

Molecular Weight	235.301
Molecular Formula	$C_{12}H_{13}NO_2S$
Density	1.7 g/cm^3
Melting Point	92 °C

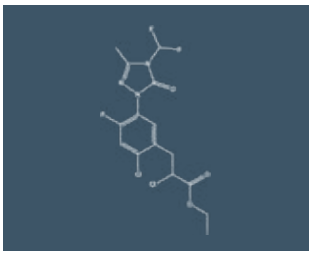
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5234-68-4	Acetone	S-760



3-Carene

Molecular Weight	136.238
Molecular Formula	$C_{10}H_{16}$
Density	0.86 g/cm^3
Melting Point	25 °C
Boiling Point	168 °C

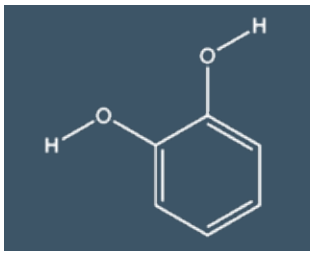
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13466-78-9	Methanol-P&T	S-4171



Carfentrazone-ethyl

Molecular Weight	412.19
Molecular Formula	$C_{15}H_{14}Cl_2F_3N_3O_3$
Density	1.457 g/cm^3
Melting Point	-22 °C
Boiling Point	350 to 355 °C

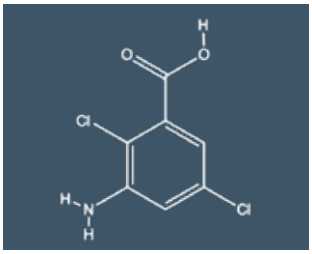
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	128639-02-1	Acetone	S-5040-AC
		Acetonitrile	S-5040



Catechol

Molecular Weight	110.112
Molecular Formula	$C_6H_6O_2$
Density	1.344 g/cm^3
Melting Point	105 °C
Boiling Point	245 °C

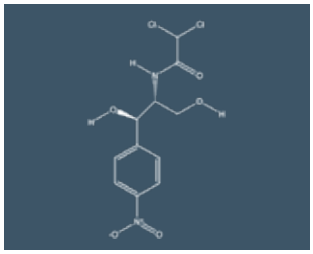
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-80-9	Methanol	S-761



Chloramben

Molecular Weight	206.022
Molecular Formula	$C_7H_5Cl_2NO_2$
Melting Point	200 to 201 °C

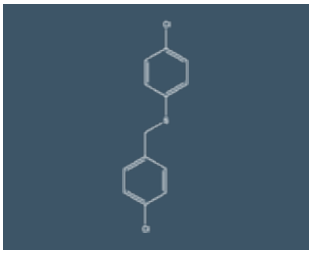
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	133-90-4	Methanol-P&T	S-765



Chloramphenicol

Molecular Weight	323.126
Molecular Formula	$C_{11}H_{12}Cl_2N_2O_5$
Melting Point	171 °C

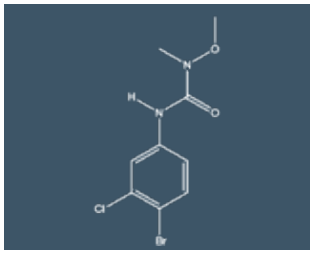
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-75-7	Methanol-P&T	S-4032



Chlorbenside

Molecular Weight	269.183
Molecular Formula	$C_{13}H_{10}Cl_2S$
Density	1.421 g/cm^3
Melting Point	75 to 76 °C
Boiling Point	83 to 84 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	103-17-3	Methanol	S-767



Chlorbromuron

Molecular Weight	293.545
Molecular Formula	$C_9H_{10}BrClN_2O_2$
Density	1.68 g/cm^3
Melting Point	95 to 97 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13360-45-7	Methanol-P&T	S-4275

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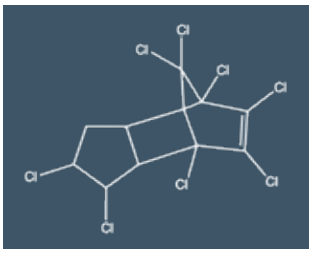
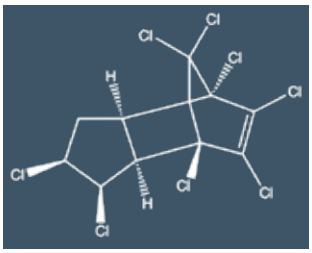
Volume for all Organic Singles is 1 mL



Chlordane

Molecular Weight	409.758
Molecular Formula	$C_{10}H_6Cl_8$
Density	1.6 g/cm^3
Melting Point	106 to 107 °C
Boiling Point	175 °C

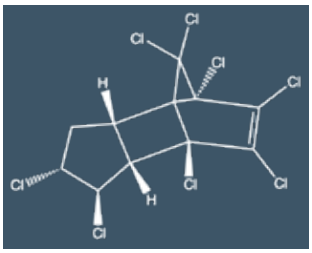
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57-74-9	Hexane	S-780



alpha-Chlordane

Molecular Weight	409.758
Molecular Formula	$C_{10}H_6Cl_8$
Density	1.80 g/cm^3

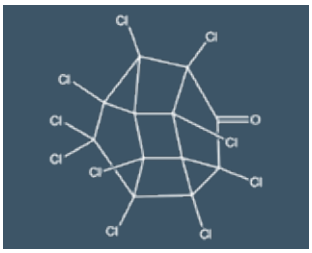
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5103-71-9	Methanol	S-770



gamma-Chlordane

Molecular Weight	409.758
Molecular Formula	$C_{10}H_6Cl_8$
Density	1.80 g/cm^3

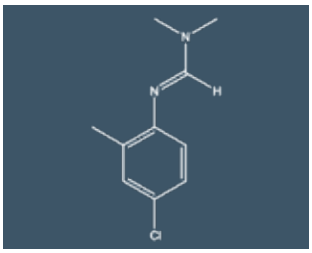
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5103-74-2	Methanol	S-775



Chlordecone (Kepone)

Molecular Weight	490.6
Molecular Formula	$C_{10}Cl_{10}O$
Density	1.60 g/cm^3
Melting Point	Decomposes
Boiling Point	Decomposes

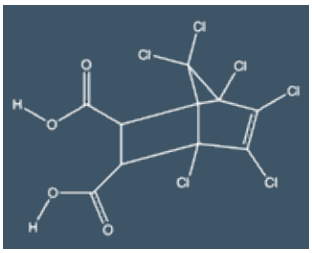
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	143-50-0	Methanol	S-2340



Chlordimeform

Molecular Weight	196.678
Molecular Formula	$C_{10}H_{13}ClN_2$
Density	1.105 g/cm^3
Melting Point	32 to 35 °C
Boiling Point	163 to 165 °C

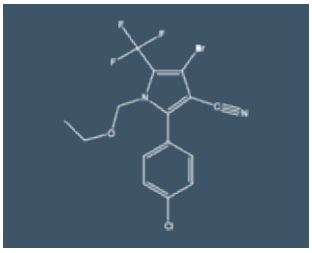
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6164-98-3	Methanol-P&T	S-783



Chlorendic acid

Molecular Weight	388.827
Molecular Formula	$C_9H_4Cl_6O_4$
Density	0.95 g/cm^3
Melting Point	209 °C

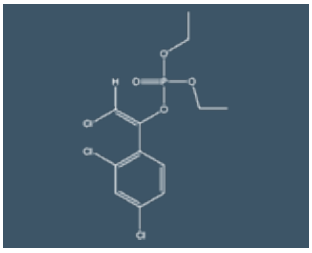
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-28-6	Methanol-P&T	S-4302



Chlorfenapyr

Molecular Weight	407.615
Molecular Formula	$C_{15}H_{11}BrClF_3N_2O$
Density	0.543 g/cm^3
Melting Point	100 to 101 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	122453-73-0	Acetonitrile	S-4961

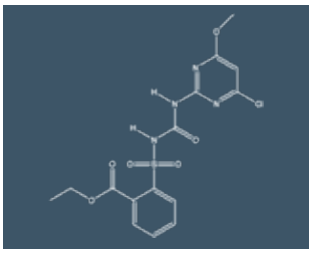


Chlorfenvinfos

Molecular Weight	359.564
Molecular Formula	$C_{12}H_{14}Cl_3O_4P$
Density	1.36 g/cm^3
Melting Point	-23 to -19 °C
Boiling Point	167 to 170 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	470-90-6	Acetone	S-785

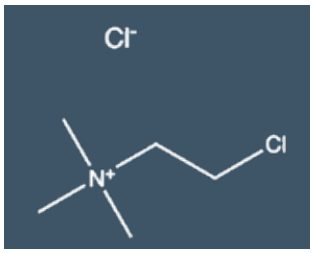
Volume for all Organic Singles is 1 mL



Chlorimuron ethyl

Molecular Weight	414.817
Molecular Formula	$C_{15}H_{15}ClN_4O_6S$
Density	1.51 g/cm³
Melting Point	181 °C

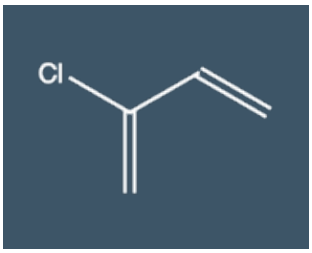
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90982-32-4	Acetone	S-3927



Chlormequat chloride

Molecular Weight	158.066
Molecular Formula	$C_5H_{13}Cl_2N$
Density	1.15 g/cm³
Melting Point	239 °C

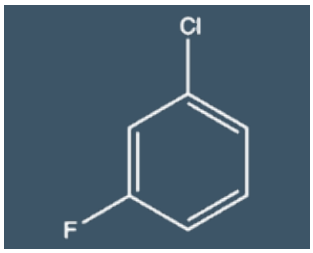
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	999-81-5	Methanol	S-4838



2-Chloro-1,3-butadiene

Molecular Weight	88.534
Molecular Formula	C_4H_5Cl
Density	0.958 g/cm³
Melting Point	-130 °C
Boiling Point	59 °C

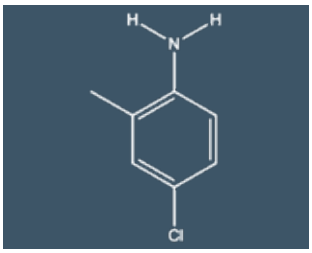
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126-99-8	Methanol-P&T	S-930



1-Chloro-3-fluorobenzene

Molecular Weight	130.546
Molecular Formula	C_6H_4ClF
Density	1.219 g/cm³
Boiling Point	128 °C

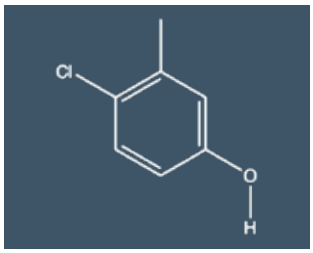
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	625-98-9	Methanol-P&T	S-944



4-Chloro-2-methylaniline

Molecular Weight	141.598
Molecular Formula	C_7H_8ClN
Density	1.19 g/cm³
Melting Point	29 °C
Boiling Point	241 °C

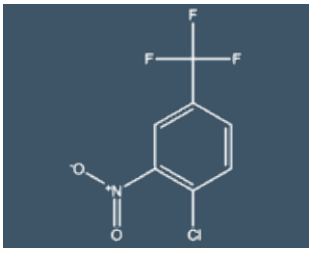
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-69-2	Methanol	S-4472



4-Chloro-3-methylphenol

Molecular Weight	142.582
Molecular Formula	C_7H_7ClO
Density	1.37 g/cm³
Melting Point	64 to 66 °C
Boiling Point	235 °C

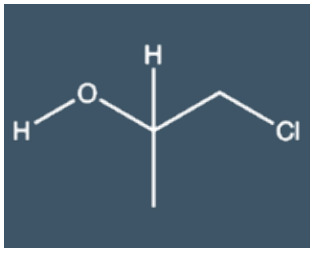
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	59-50-7	Methanol-P&T	S-945



4-Chloro-3-nitrobenzotrifluoride

Molecular Weight	225.551
Molecular Formula	$C_7H_3ClF_3NO_2$
Density	1.542 g/cm³
Melting Point	-3 °C
Boiling Point	223 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	121-17-5	Methanol-P&T	S-947



1-Chloro-2-propanol
(Contains 2-Chloro-1-propanol)

Molecular Weight	94.538
Molecular Formula	C_3H_7ClO
Density	1.115 g/cm³
Boiling Point	126 to 127 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	127-00-4	Methanol-P&T	S-908

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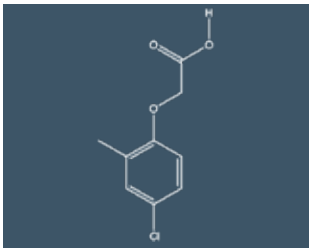
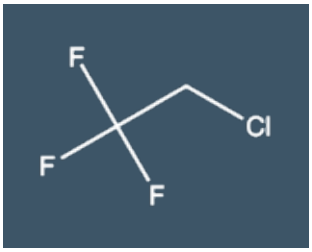
Volume for all Organic Singles is 1 mL



4-Chloro-o-tolyoxyacetic acid

Molecular Weight	200.618
Molecular Formula	$C_9H_9ClO_3$
Density	1.56 g/cm^3
Melting Point	113 to 119 °C

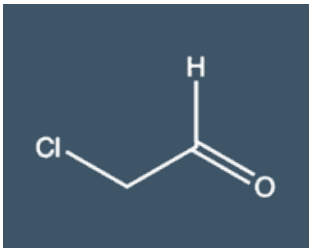
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	94-74-6	Methanol	S-955



2-Chloro-1,1,1-trifluoroethane

Molecular Weight	118.483
Molecular Formula	$C_2H_2ClF_3$
Density	1.389 g/cm^3
Melting Point	-105 °C
Boiling Point	6 °C

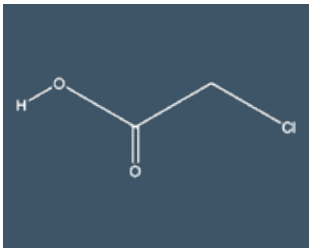
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-88-7	Methanol-P&T	S-958



Chloroacetaldehyde

Molecular Weight	78.495
Molecular Formula	C_2H_3ClO
Density	1.19 g/cm^3
Melting Point	-16 °C
Boiling Point	86 °C

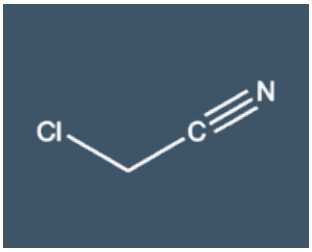
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-20-0	Methanol-P&T	S-792



Chloroacetic acid

Molecular Weight	94.494
Molecular Formula	$C_2H_3ClO_2$
Density	1.58 g/cm^3
Melting Point	53 °C
Boiling Point	189 °C

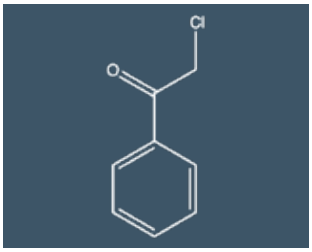
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-11-8	Methyl Tertiary Butyl Ether	S-795



Chloroacetonitrile

Molecular Weight	75.495
Molecular Formula	C_2H_2ClN
Density	1.193 g/cm^3
Melting Point	38 °C
Boiling Point	127 °C

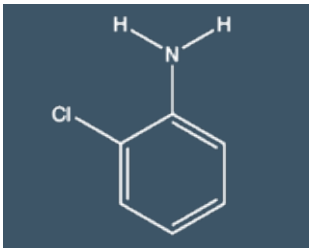
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-14-2	Methanol-P&T	S-797



2-Chloroacetophenone

Molecular Weight	154.593
Molecular Formula	$C_6H_5COCH_2Cl$
Density	1.324 g/cm^3
Melting Point	57 °C
Boiling Point	245 °C

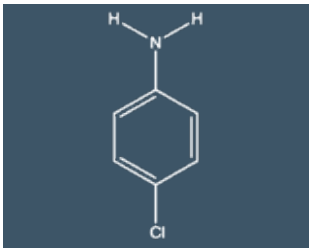
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	532-27-4	Methanol-P&T	S-794



2-Chloroaniline

Molecular Weight	127.571
Molecular Formula	C_6H_6ClN
Density	1.211 g/cm^3
Melting Point	-14 °C
Boiling Point	209 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-51-2	Methanol-P&T	S-802

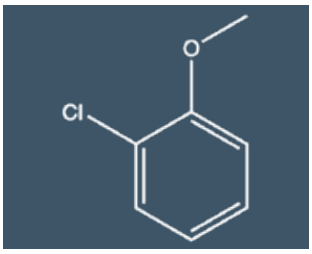


4-Chloroaniline (p-Chloroaniline)

Molecular Weight	127.571
Molecular Formula	C_6H_6ClN
Density	1.169 g/cm^3 @ 77 °C
Melting Point	70 °C
Boiling Point	232 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-47-8	Methanol-P&T	S-805

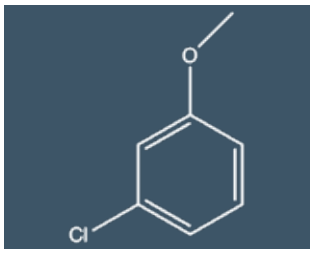
Volume for all Organic Singles is 1 mL



2-Chloroanisole

Molecular Weight	142.582
Molecular Formula	C_7H_7ClO
Density	1.164 g/cm^3
Melting Point	-27 °C
Boiling Point	195 °C

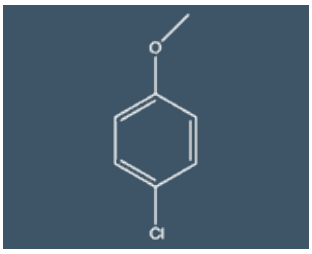
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	766-51-8	Methanol	S-5143



3-Chloroanisole

Molecular Weight	142.582
Molecular Formula	C_7H_7ClO
Density	1.164 g/cm^3
Boiling Point	193 °C

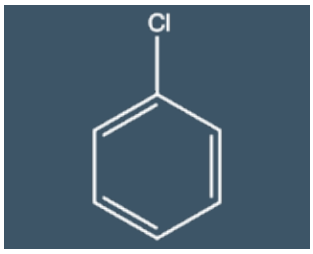
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2845-89-8	Methanol	S-5144



4-Chloroanisole

Molecular Weight	142.582
Molecular Formula	C_7H_7ClO
Density	1.164 g/cm^3
Melting Point	-18 °C
Boiling Point	200 °C

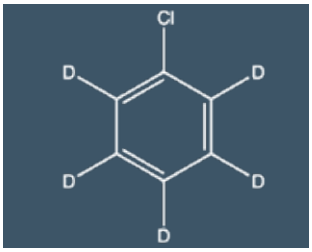
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	623-12-1	Methanol	S-5145



Chlorobenzene

Molecular Weight	112.556
Molecular Formula	C_6H_5Cl
Density	1.106 g/cm^3
Melting Point	-45 °C
Boiling Point	132 °C

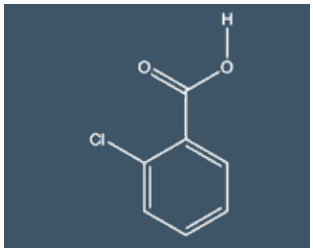
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-90-7	Methanol-P&T	S-810



Chlorobenzene-d$_5$

Molecular Weight	117.587
Molecular Formula	C_6H_5Cl
Density	1.157 g/cm^3
Boiling Point	130 °C

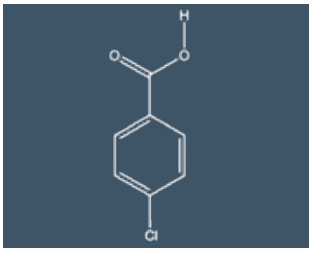
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3114-55-4	Methanol-P&T	S-815



o-Chlorobenzoic acid

Molecular Weight	156.565
Molecular Formula	$C_7H_5ClO_2$
Density	1.544 g/cm^3
Melting Point	142 °C
Boiling Point	285 °C

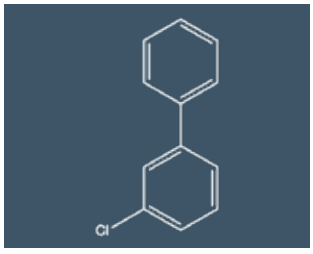
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	118-91-2	Methanol-P&T	S-830



p-Chlorobenzoic acid

Molecular Weight	156.565
Molecular Formula	$C_7H_5ClO_2$
Density	1.541 g/cm^3
Melting Point	243 °C
Boiling Point	Sublimes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-11-3	Methanol-P&T	S-835



3-Chlorobiphenyl

Molecular Weight	188.654
Molecular Formula	$C_{12}H_9Cl$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2051-61-8	Methylene Chloride	S-841

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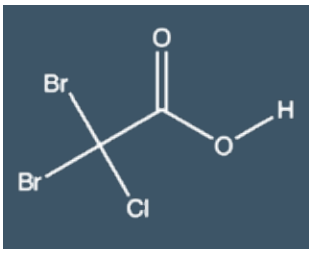
Volume for all Organic Singles is 1 mL



Chlorodibromoacetic acid

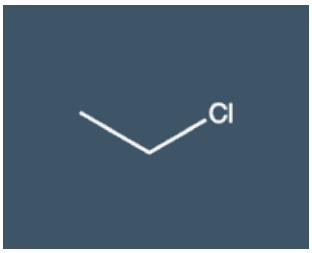
Molecular Weight	252.286
Molecular Formula	$C_2HBr_2ClO_2$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5278-95-5	Methyl Tertiary Butyl Ether	S-3892

1-Chlorobutane

Molecular Weight	92.566
Molecular Formula	C_4H_9Cl
Density	0.881 g/cm^3
Melting Point	-123 °C
Boiling Point	77 to 79 °C

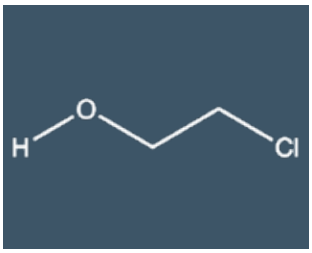
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-69-3	Methanol-P&T	S-838



Chloroethane

Molecular Weight	64.512
Molecular Formula	C_2H_5Cl
Density	0.921 g/cm^3
Melting Point	-139 °C
Boiling Point	12 °C

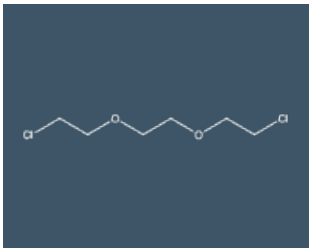
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-00-3	Methanol-P&T	S-845



2-Chloroethanol

Molecular Weight	80.511
Molecular Formula	C_2H_5ClO
Density	1.197 g/cm^3
Melting Point	-68 °C
Boiling Point	128 to 130 °C

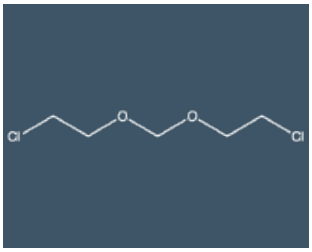
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-07-3	Methanol-P&T	S-847



1,2-bis(2-Chloroethoxy) ethane

Molecular Weight	187.06
Molecular Formula	$C_6H_{12}Cl_2O_2$
Density	1.197 g/cm^3
Melting Point	-32 °C
Boiling Point	235 to 241 °C

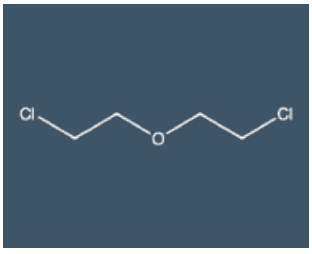
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112-26-5	Methanol-P&T	S-849



bis(2-Chloroethoxy) methane

Molecular Weight	173.033
Molecular Formula	$C_5H_{10}Cl_2O_2$
Density	1.23 g/cm^3
Melting Point	-33 °C
Boiling Point	218 °C

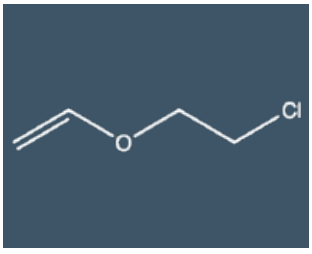
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-91-1	Methanol-P&T	S-850



bis(2-Chloroethyl)ether

Molecular Weight	143.007
Molecular Formula	$C_4H_8Cl_2O$
Density	1.22 g/cm^3
Melting Point	-50 °C
Boiling Point	178 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-44-4	Methanol-P&T	S-860

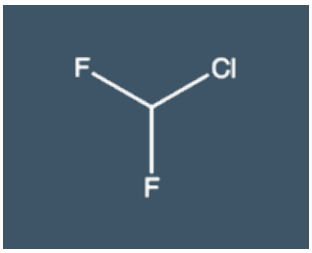


2-Chloroethyl vinyl ether

Molecular Weight	106.549
Molecular Formula	C_4H_7ClO
Density	1.048 g/cm^3
Melting Point	-70 °C
Boiling Point	110 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-75-8	Methanol-P&T	S-855

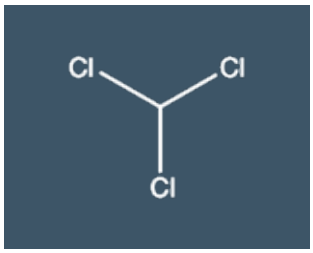
Volume for all Organic Singles is 1 mL



Chlorodifluoromethane

Molecular Weight	86.466
Molecular Formula	$CHClF_2$
Density	1.194 g/cm^3
Boiling Point	-41 °C

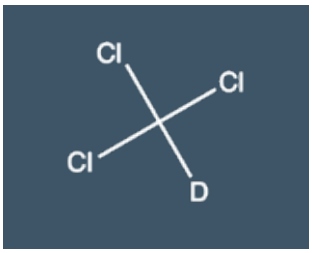
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-45-6	Methanol-P&T	S-840



Chloroform

Molecular Weight	119.369
Molecular Formula	$CHCl_3$
Density	1.489 g/cm^3
Melting Point	-63 °C
Boiling Point	61 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67-66-3	Methanol-P&T	S-865



Chloroform-d

Molecular Weight	120.375
Molecular Formula	$CHCl_3$
Density	1.5 g/cm^3
Melting Point	-64 °C
Boiling Point	61 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	865-49-6	Methanol	S-866

1-Chlorohexane

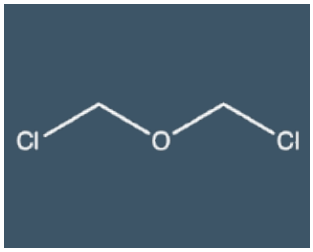
Molecular Weight	120.62
Molecular Formula	$C_6H_{13}Cl$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	544-10-5	Methanol-P&T	S-869

Chloromethane

Molecular Weight	50.485
Molecular Formula	CH_3Cl
Density	0.911 g/cm^3
Melting Point	-97 to -98 °C
Boiling Point	-24 °C

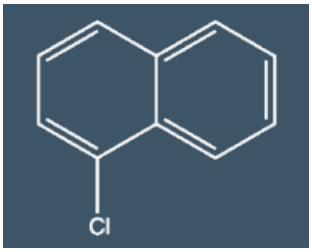
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-87-3	Methanol-P&T	S-875



bis(Chloromethyl) ether

Molecular Weight	114.953
Molecular Formula	$(CH_2Cl)_2O$
Density	1.315 g/cm^3
Melting Point	-42 °C
Boiling Point	104 to 106 °C

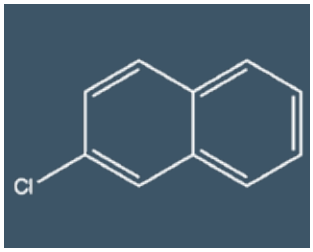
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	542-88-1	Isooctane	S-880



1-Chloronaphthalene

Molecular Weight	162.616
Molecular Formula	$C_{10}H_7Cl$
Density	1.194 g/cm^3
Melting Point	-3 °C
Boiling Point	259 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90-13-1	Methanol-P&T	S-885



2-Chloronaphthalene

Molecular Weight	1262.616
Molecular Formula	$C_{10}H_7Cl$
Density	1.138 g/cm^3
Melting Point	60 °C
Boiling Point	256 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91-58-7	Methanol-P&T	S-890

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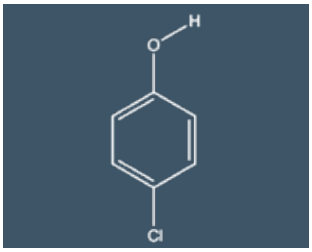
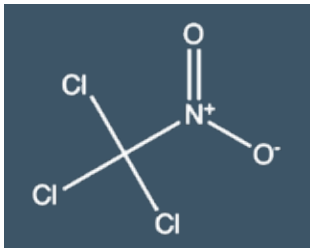
Volume for all Organic Singles is 1 mL



4-Chlorophenol

Molecular Weight	128.555
Molecular Formula	C_6H_5ClO
Density	1.3 g/cm^3
Melting Point	43 °C
Boiling Point	220 °C

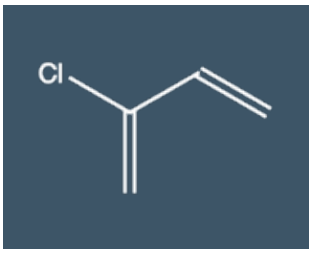
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-48-9	Methanol-P&T	S-906



Chloropicrin

Molecular Weight	164.366
Molecular Formula	CCl_3NO_2
Density	1.645 g/cm^3
Melting Point	-64 °C
Boiling Point	112 °C

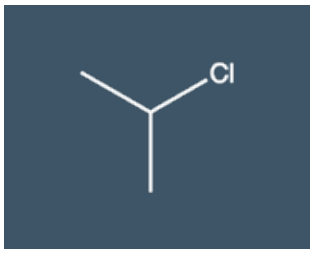
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76-06-2	Methanol	S-911



Chloroprene

Molecular Weight	88.535
Molecular Formula	C_4H_5Cl
Density	0.958 g/cm^3
Melting Point	-130 °C
Boiling Point	59 °C

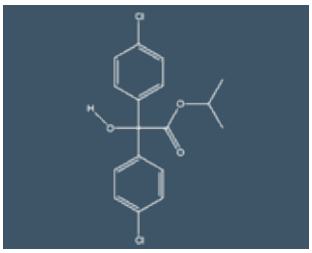
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126-99-8	Methanol-P&T	S-930A



2-Chloropropane

Molecular Weight	78.539
Molecular Formula	C_3H_7Cl
Density	0.862 g/cm^3
Melting Point	-117 °C
Boiling Point	36 °C

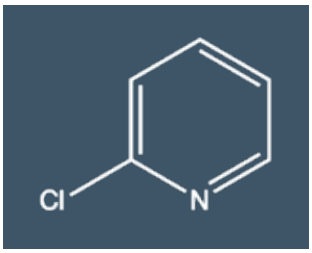
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-29-6	Methanol-P&T	S-912



Chloropropylate

Molecular Weight	339.212
Molecular Formula	$C_{17}H_{16}Cl_2O_3$
Density	1.36 g/cm^3
Melting Point	73 °C
Boiling Point	148 to 150 °C

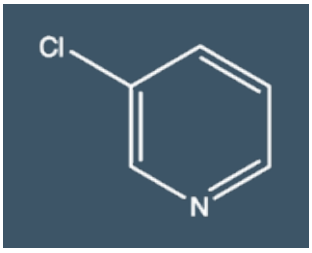
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5836-10-2	Methanol-P&T	S-963



2-Chloropyridine

Molecular Weight	113.544
Molecular Formula	C_5H_4ClN
Melting Point	-46 °C
Boiling Point	168 °C

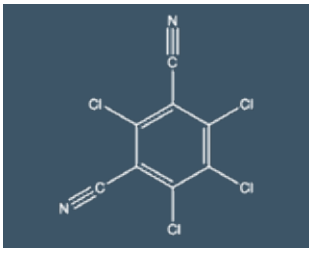
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-09-1	Methanol-P&T	S-3860



3-Chloropyridine

Molecular Weight	113.554
Molecular Formula	C_5H_4ClN
Density	1.21 g/cm^3
Boiling Point	148 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	626-60-8	Methanol-P&T	S-913

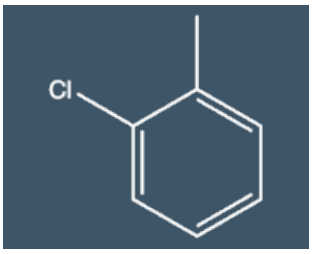


Chlorothalonil

Molecular Weight	265.9
Molecular Formula	$C_8Cl_4N_2$
Density	1.74 g/cm^3
Melting Point	252 °C
Boiling Point	350 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1897-45-6	Methanol	S-915

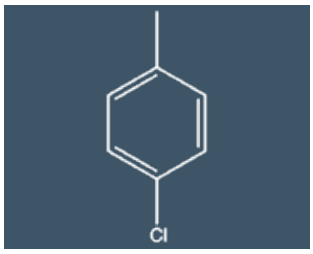
Volume for all Organic Singles is 1 mL



2-Chlorotoluene

Molecular Weight	126.583
Molecular Formula	C_7H_7Cl
Density	1.083 g/cm^3
Melting Point	-35 °C
Boiling Point	159 °C

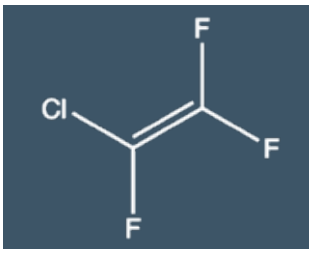
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-49-8	Methanol-P&T	S-920



4-Chlorotoluene

Molecular Weight	126.583
Molecular Formula	C_7H_7Cl
Density	1.069 g/cm^3
Melting Point	8 °C
Boiling Point	162 °C

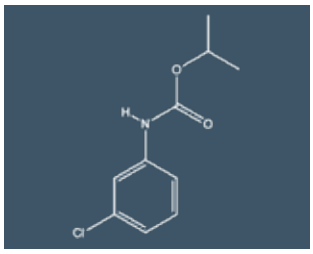
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-43-4	Methanol-P&T	S-925



Chlorotrifluoroethylene

Molecular Weight	116.467
Molecular Formula	C_2ClF_3
Density	1.54 g/cm^3
Melting Point	-158 °C
Boiling Point	-28 °C

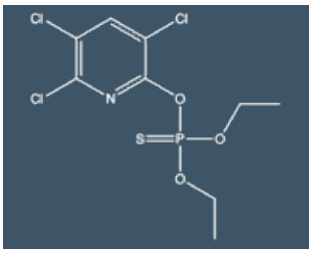
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-38-9	Methanol	S-4840



Chlorpropham

Molecular Weight	213.7
Molecular Formula	$C_{10}H_{12}ClNO_2$
Density	1.18 g/cm^3
Melting Point	36 °C
Boiling Point	256 °C

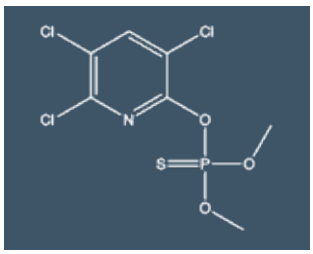
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	101-21-3	Methanol	S-960



Chlorpyrifos

Molecular Weight	350.6
Molecular Formula	$C_9H_{11}Cl_3NO_3PS$
Density	1.43 g/cm^3
Melting Point	41 °C
Boiling Point	Decomposes

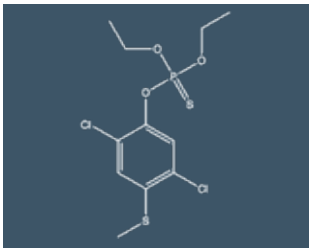
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2921-88-2	Acetone	S-965-A
		Methanol	S-965



Chlorpyrifos-methyl

Molecular Weight	322.521
Molecular Formula	$C_7H_7Cl_3NO_3PS$
Density	1.64 g/cm^3
Melting Point	46 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5598-13-0	Acetonitrile	S-966-ACN
		Methanol	S-966

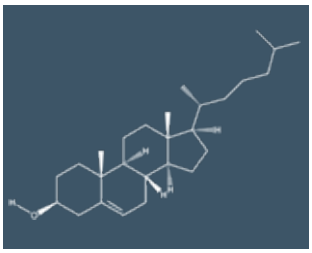


Chlorthiophos

Molecular Weight	361.232
Molecular Formula	$C_{11}H_{15}Cl_2O_3PS_2$
Density	1.345 g/cm^3
Boiling Point	150 °C @ 0.001 mm Hg

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	60238-56-4	Methanol-P&T	S-967

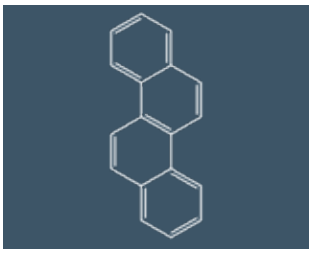
Volume for all Organic Singles is 1 mL



Cholesterol

Molecular Weight	386.664
Molecular Formula	$C_{27}H_{46}O$
Density	1.067 g/cm^3
Melting Point	149 °C

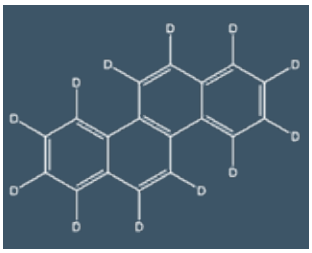
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57-88-5	Methanol	S-4702



Chrysene

Molecular Weight	228.294
Molecular Formula	$C_{18}H_{12}$
Density	1.274 g/cm^3
Melting Point	255 °C
Boiling Point	448 °C

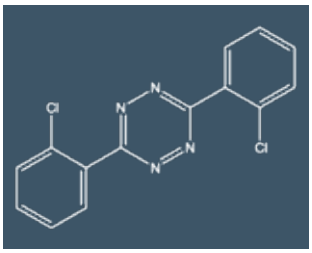
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	218-01-9	Methylene Chloride	S-970



Chrysene-d12

Molecular Weight	240.367
Molecular Formula	$C_{18}H_{12}$

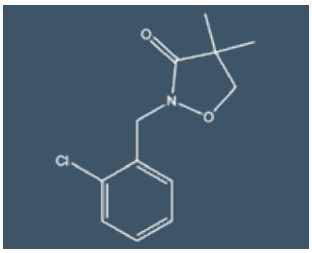
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1719-03-5	Methylene Chloride	S-975



Clofentezine

Molecular Weight	303.1
Molecular Formula	$C_{14}H_8Cl_2N_4$
Density	1.52 g/cm^3
Melting Point	183 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74115-24-5	Methanol	S-5772



Clomazone

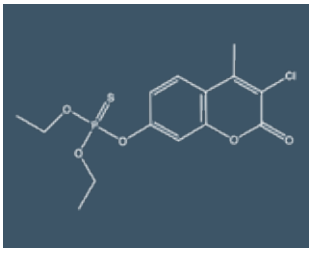
Molecular Weight	239.699
Molecular Formula	$C_{12}H_{13}NO_2S$
Density	1.192 g/cm^3
Melting Point	25 °C
Boiling Point	275 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	81777-89-1	Acetone	S-762

Coronene

Molecular Weight	300.36
Molecular Formula	$C_{24}H_{12}$

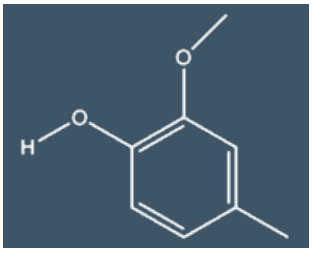
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	191-07-1	Methylene Chlorine	S-3919



Coumaphos

Molecular Weight	362.8
Molecular Formula	$C_{14}H_{16}ClO_5PS$
Density	1.41 g/cm^3
Melting Point	95 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-72-4	Acetone	S-980

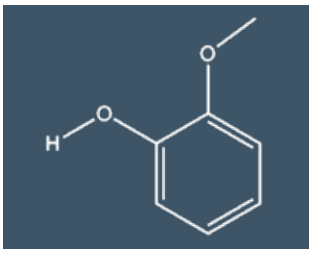


Creosol

Molecular Weight	138.166
Molecular Formula	$C_8H_{10}O_2$
Density	1.092 g/cm^3
Melting Point	6 °C
Boiling Point	220 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93-51-6	Methanol-P&T	S-987

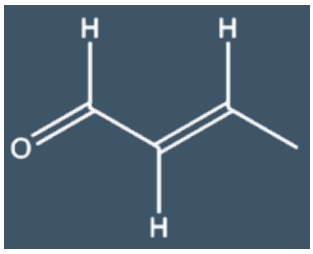
Volume for all Organic Singles is 1 mL



Creosote

Molecular Weight	124.139
Molecular Formula	$C_7H_8O_2$
Density	1.129 g/cm^3
Melting Point	32 °C
Boiling Point	205 °C

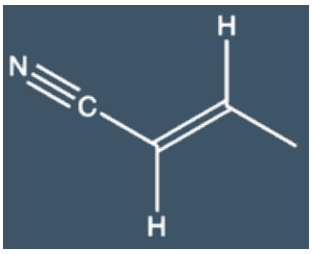
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	8021-39-4	Methylene Chloride	S-3847



Crotonaldehyde

Molecular Weight	70.091
Molecular Formula	C_4H_6O
Density	0.852 g/cm^3
Melting Point	-76 °C
Boiling Point	104 °C

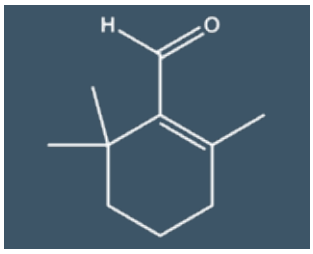
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-73-9	DI Water	S-990



Crotonitrile

Molecular Weight	67.091
Molecular Formula	C_4H_5N
Density	0.82 g/cm^3
Melting Point	-50 °C
Boiling Point	120 to 121 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4786-20-3	Methanol	S-992



beta-Cyclocitral

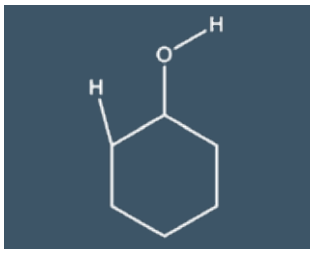
Molecular Weight	152.237
Molecular Formula	$C_{10}H_{16}O$
Density	0.943 g/cm^3
Boiling Point	62 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	432-25-7	Methanol	S-4427

Cyclohexane

Molecular Weight	84.162
Molecular Formula	C_6H_{12}
Density	0.778 g/cm^3
Melting Point	7 °C
Boiling Point	81 °C

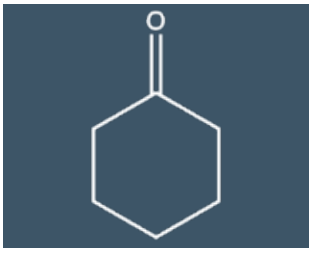
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-82-7	Methanol-P&T	S-1015



Cyclohexanol

Molecular Weight	100.161
Molecular Formula	$C_6H_{12}O$
Density	0.962 g/cm^3
Melting Point	25 °C
Boiling Point	161 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-93-0	Methanol-P&T	S-1020



Cyclohexanone

Molecular Weight	98.145
Molecular Formula	$C_6H_{10}O$
Density	0.08 g/cm^3
Melting Point	-31 °C
Boiling Point	155 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-94-1	Methanol-P&T	S-1025

Cyclohexene

Molecular Weight	82.146
Molecular Formula	C_6H_{10}
Density	0.811 g/cm^3
Melting Point	-104 °C
Boiling Point	83 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-83-8	Methanol-P&T	S-1030

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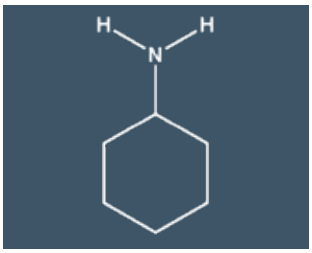
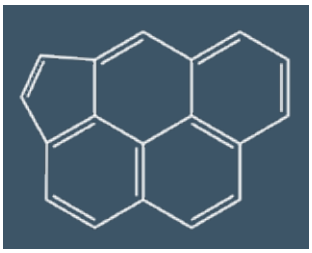
Volume for all Organic Singles is 1 mL



Cyclohexylamine

Molecular Weight	99.177
Molecular Formula	$C_6H_{13}N$
Density	0.865 g/cm^3
Melting Point	-18 °C
Boiling Point	135 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-91-8	Methanol-P&T	S-1027



Cyclopenta(c,d)pyrene

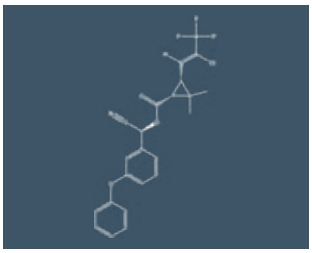
Molecular Weight	226.278
Molecular Formula	$C_{18}H_{10}$
Density	1.33 g/cm^3
Melting Point	170 °C
Boiling Point	438 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	27208-37-3	Methylene Chloride	S-4875

Cyclopentanone

Molecular Weight	84.118
Molecular Formula	C_5H_8O
Density	0.95 g/cm^3
Melting Point	-51 °C
Boiling Point	131 °C

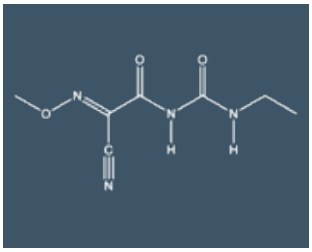
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-92-3	Methanol-P&T	S-1042



lambda-Cyhalothrin

Molecular Weight	449.854
Molecular Formula	$C_{23}H_{19}ClF_3NO_3$
Density	1.3 g/cm^3
Melting Point	49 °C

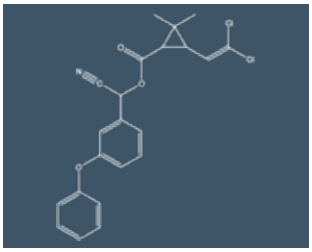
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91465-08-6	Acetone	S-1044-AC
		Toluene	S-1044



Cymoxanil

Molecular Weight	198.182
Molecular Formula	$C_7H_{10}N_4O_3$
Density	1.32 g/cm^3
Melting Point	160 to 161 °C

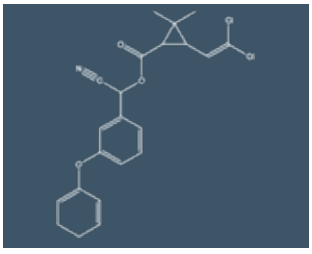
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57966-95-7	Methanol-P&T	S-3926



Cypermethrin

Molecular Weight	416.3
Molecular Formula	$C_{22}H_{19}Cl_2NO_3$
Density	1.25 g/cm^3
Melting Point	41 °C
Boiling Point	Decomposes

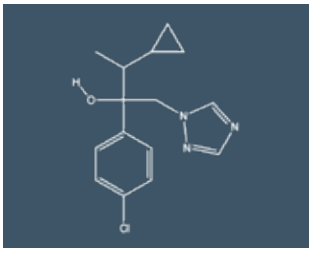
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	52315-07-8	Acetone	S-1041
		Acetonitrile	S-1041-ACN



alpha-Cypermethrin

Molecular Weight	416.298
Molecular Formula	$C_{22}H_{19}Cl_2NO_3$
Density	1.25 g/cm^3
Melting Point	70 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67375-30-8	Methanol	S-5908

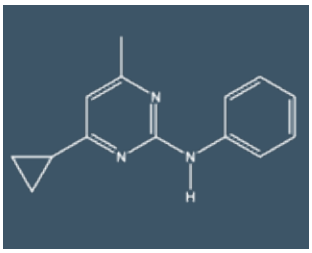


Cyproconazole (mix of isomers)

Molecular Weight	291.779
Molecular Formula	$C_{15}H_{18}ClN_3O$
Melting Point	106 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	94361-06-5	Methanol	S-4863

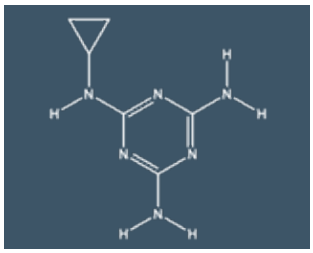
Volume for all Organic Singles is 1 mL



Cyprodinil

Molecular Weight	225.295
Molecular Formula	$C_{14}H_{15}N_3$
Density	1.21 g/cm^3
Melting Point	76 °C

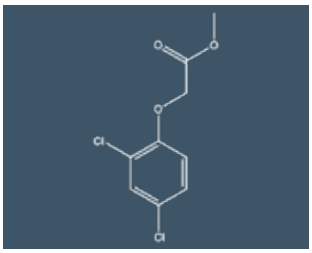
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	121552-61-2	Methanol	S-4622



Cyromazine

Molecular Weight	166.188
Molecular Formula	$C_6H_{10}N_6$
Density	1.35 g/cm^3
Melting Point	220 °C

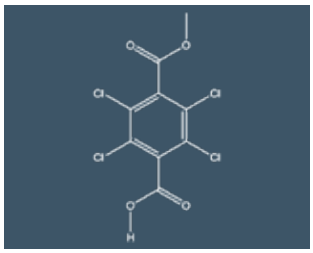
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	66215-27-8	Methanol-P&T	S-4255



2,4-D methyl ester

Molecular Weight	235.06
Molecular Formula	$C_9H_8Cl_2O_3$

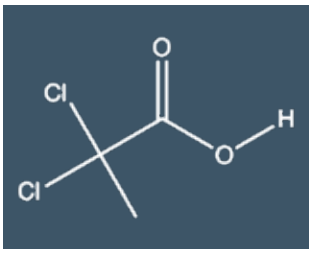
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1928-38-7	Methanol	S-1050



Dacthal monoacid

Molecular Weight	317.927
Molecular Formula	$C_9H_4Cl_4O_4$

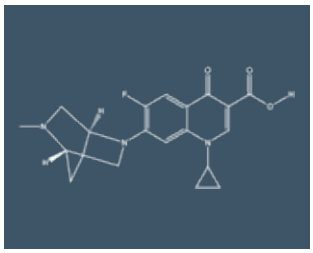
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	887-54-7	Acetonitrile	S-4385



Dalapon

Molecular Weight	142.963
Molecular Formula	$C_3H_4Cl_2O_2$
Density	1.401 g/cm^3
Melting Point	20 °C
Boiling Point	190 °C

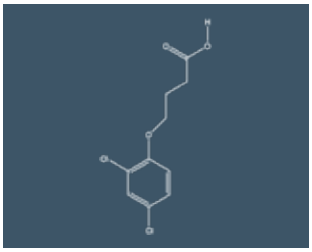
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-99-0	Methanol-P&T	S-1055



Danofloxacin

Molecular Weight	357.385
Molecular Formula	$C_{19}H_{20}FN_3O_3$

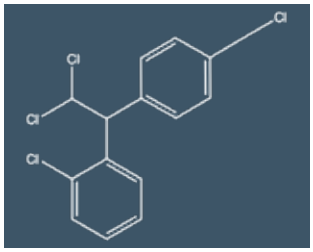
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112398-08-0	Methanol	S-4575



2,4-DB

Molecular Weight	249.1
Molecular Formula	$C_{10}H_{10}Cl_2O_3$
Density	1.46 g/cm^3
Melting Point	119 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	94-82-6	Methyl Tertiary Butyl Ether	S-1060



o,p'-DDD

Molecular Weight	320.0
Molecular Formula	$C_{14}H_{10}Cl_4$
Melting Point	77 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	53-19-0	Methanol-P&T	S-1070

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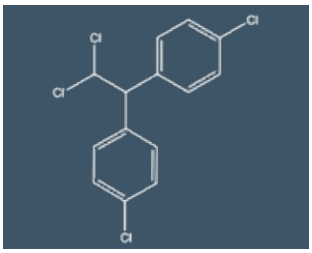
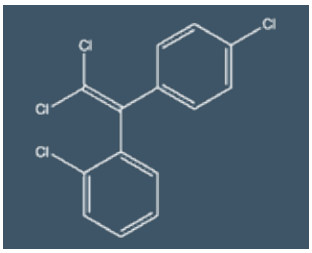
Volume for all Organic Singles is 1 mL



p,p'-DDD

Molecular Weight	320.0
Molecular Formula	$C_{14}H_{10}Cl_4$
Density	1.39 g/cm^3
Melting Point	110 °C
Boiling Point	350 °C

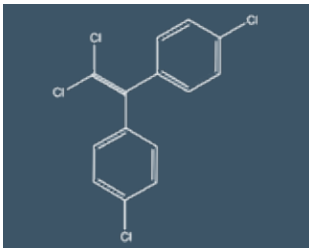
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	72-54-8	Acetone	S-1075-AC
		Methanol	S-1075



o,p'-DDE

Molecular Weight	318.0
Molecular Formula	$C_{14}H_8Cl_4$
Melting Point	75 °C

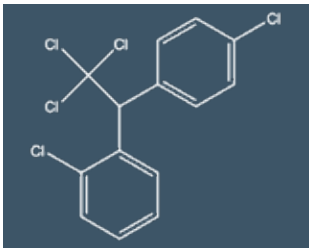
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3424-82-6	Methanol	S-1080



p,p'-DDE

Molecular Weight	318.0
Molecular Formula	$C_{14}H_8Cl_4$
Density	1.40 g/cm^3
Melting Point	89 °C

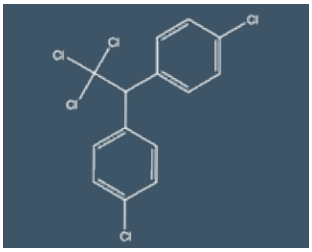
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	72-55-9	Methanol	S-1085



o,p'-DDT

Molecular Weight	354.5
Molecular Formula	$C_{14}H_9Cl_5$

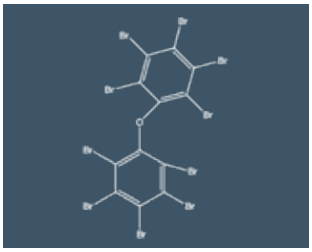
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	789-02-6	Methanol	S-1090



p,p'-DDT

Molecular Weight	354.5
Molecular Formula	$C_{14}H_9Cl_5$
Density	0.99 g/cm^3
Melting Point	109 °C
Boiling Point	185 °C

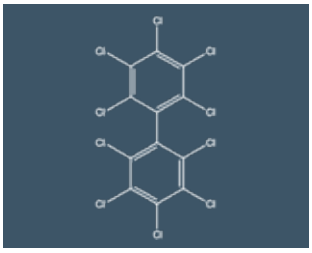
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	50-29-3	Methanol	S-1095



Decabromodiphenyl ether

Molecular Weight	959.171
Molecular Formula	$C_{12}Br_{10}O$
Density	3.4 g/cm^3
Melting Point	305 °C
Boiling Point	425 °C

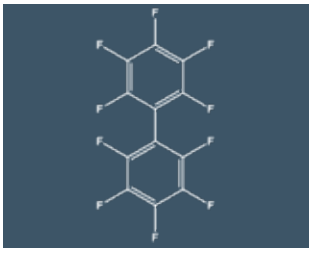
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1163-19-5	Toluene	S-5656



Decachlorobiphenyl

Molecular Weight	498.632
Molecular Formula	$C_{12}Cl_{10}$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2051-24-3	Hexane	S-1100
		Toluene	S-1100-TOL

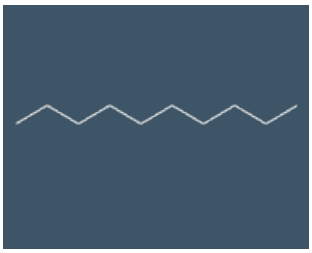


Decafluorobiphenyl

Molecular Weight	334.116
Molecular Formula	$C_6F_5C_6F_5$
Density	1.785 g/cm^3
Melting Point	68 °C
Boiling Point	206 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	434-90-2	Methanol	S-1103

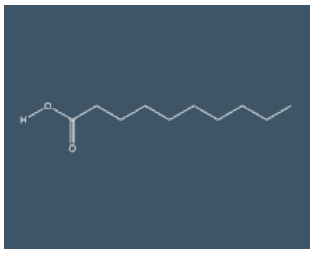
Volume for all Organic Singles is 1 mL



n-Decane

Molecular Weight	142.286
Molecular Formula	$C_{10}H_{22}$
Density	0.726 g/cm^3
Melting Point	-30 °C
Boiling Point	174 °C

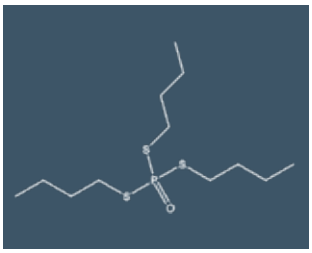
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	124-18-5	Methanol	S-1112-MEOH
		Methylene Chloride	S-1112
		Methylene Chloride	S-1115



Decanoic acid

Molecular Weight	172.268
Molecular Formula	$C_{10}H_{20}O_2$
Density	0.893 g/cm^3
Melting Point	32 °C
Boiling Point	269 °C

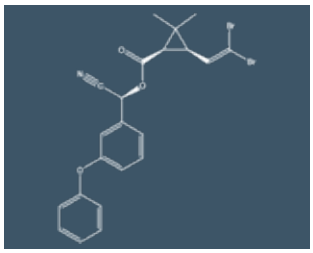
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	334-48-5	Methylene Chloride	S-1122



DEF

Molecular Weight	314.501
Molecular Formula	$C_{12}H_{27}OPS_3$
Density	1.057 g/cm^3
Melting Point	< -25 °C
Boiling Point	210 °C

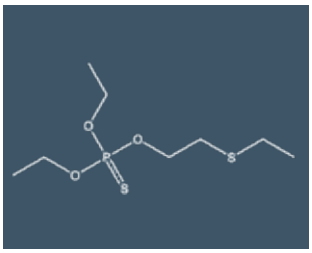
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-48-8	Acetone	S-1130-AC



Deltamethrin

Molecular Weight	505.206
Molecular Formula	$C_{22}H_{19}Br_2NO_3$
Density	0.5 g/cm^3
Melting Point	100 °C

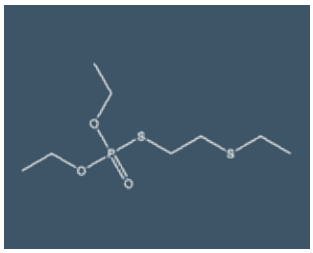
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	52918-63-5	Methanol-P&T	S-3977



Demeton O

Molecular Weight	258.331
Molecular Formula	$C_8H_{19}O_3PS_2$

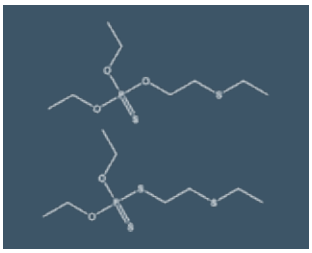
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	298-03-3	Methanol	S-4020



Demeton S

Molecular Weight	258.331
Molecular Formula	$C_8H_{19}O_3PS_2$
Density	1.13 g/cm^3
Boiling Point	128 °C

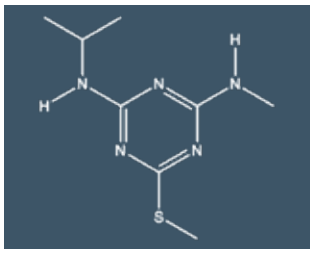
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126-75-0	Acetone	S-1141



Demeton O & S

Molecular Weight	516.662
Molecular Formula	$C_6H_{15}O_3PS_2$
Density	1.2 g/cm^3
Melting Point	-25 °C
Boiling Point	134 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	8065-48-3	Methanol	S-1140



Desmetryn

Molecular Weight	213.303
Molecular Formula	$C_8H_{15}N_5S$
Density	1.172 g/cm^3
Melting Point	85 °C
Boiling Point	339 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1014-69-3	Methanol-P&T	S-1146

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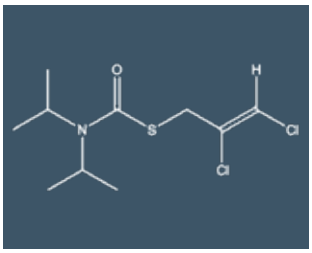
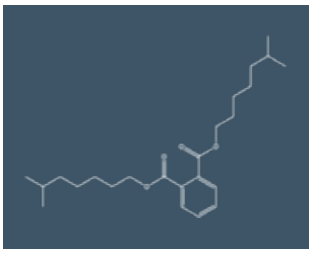
Volume for all Organic Singles is 1 mL



Di-allate (mix of isomers)

Molecular Weight	270.212
Molecular Formula	$C_{10}H_{17}Cl_2NOS$
Density	1.188 g/cm³ @25 °C
Melting Point	25 to 30 °C
Boiling Point	150 °C @ 9 mm Hg

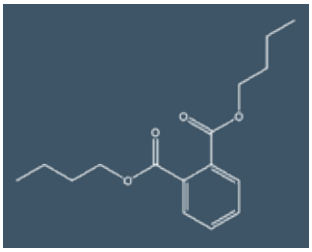
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2303-16-4	Acetone	S-1155



Di-iso-octyl phthalate

Molecular Weight	390.564
Molecular Formula	$C_{24}H_{38}O_4$
Melting Point	-45 °C
Boiling Point	370 °C

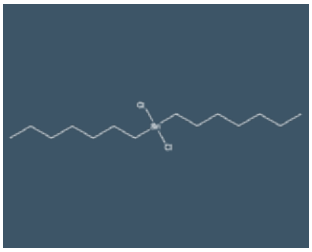
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	27554-26-3	Methanol	S-5738



Di-n-butyl phthalate

Molecular Weight	278.348
Molecular Formula	$C_{16}H_{22}O_4$
Density	1.049 g/cm³
Melting Point	35 °C
Boiling Point	340 °C

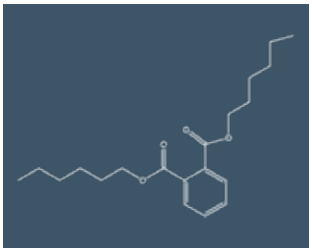
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84-74-2	Methanol-P&T	S-1770



Di-n-heptyltin dichloride

Molecular Weight	388.004
Molecular Formula	$C_{14}H_{30}Cl_2Sn$

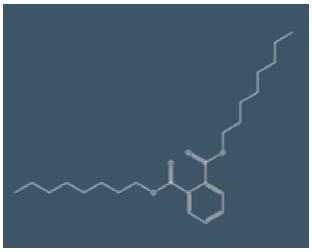
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74340-12-8	Ethanol	S-5518-ETOH



Di-n-hexyl phthalate

Molecular Weight	334.456
Molecular Formula	$C_{20}H_{30}O_4$
Density	0.995 g/cm³
Melting Point	-58 °C
Boiling Point	345 °C

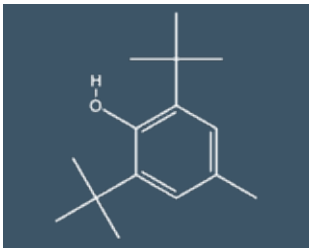
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84-75-3	Methanol-P&T	S-4155



Di-n-octyl phthalate

Molecular Weight	390.564
Molecular Formula	$C_{24}H_{38}O_4$
Density	0.98 g/cm³
Melting Point	25 °C
Boiling Point	220 °C

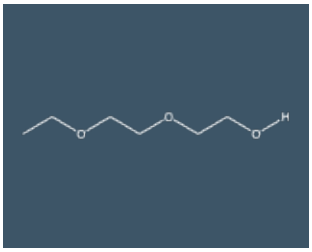
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	117-84-0	Methanol-P&T	S-1775



2,6-Di-tert-butyl-4-methylphenol

Molecular Weight	220.356
Molecular Formula	$C_{15}H_{24}O$
Density	1.04 g/cm³
Melting Point	71 °C
Boiling Point	265 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	128-37-0	Methanol-P&T	S-1785

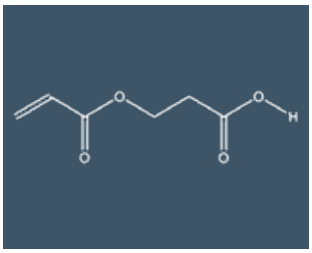


Di(ethylene glycol)ethyl ether

Molecular Weight	134.17
Molecular Formula	$C_6H_{14}O_3$
Density	0.989 g/cm³
Melting Point	-76 °C
Boiling Point	202 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-90-0	Methanol-P&T	S-3849

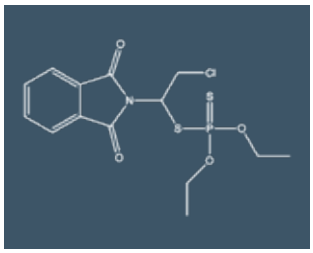
Volume for all Organic Singles is 1 mL



Diacrylic acid

Molecular Weight	144.126
Molecular Formula	$C_6H_8O_4$

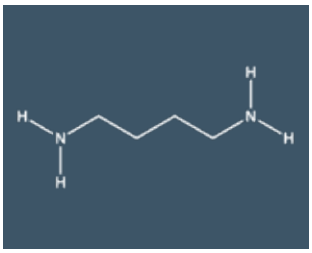
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	24615-84-7	Methanol-P&T	S-5050



Dialifos

Molecular Weight	393.837
Molecular Formula	$C_{14}H_{17}ClNO_4PS_2$
Melting Point	68 °C

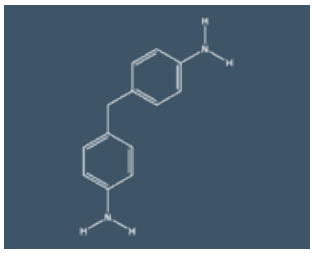
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	10311-84-9	Methanol-P&T	S-4288



1,4-Diaminobutane

Molecular Weight	88.154
Molecular Formula	$C_4H_{12}N_2$
Density	0.877 g/cm^3
Melting Point	28 °C
Boiling Point	159 °C

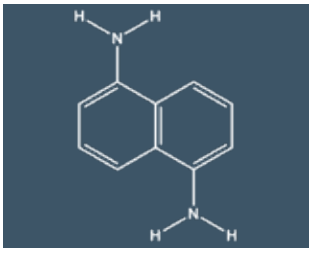
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-60-1	Methanol-P&T	S-1158



4,4'-Diaminodiphenyl-methane

Molecular Weight	198.269
Molecular Formula	$C_{13}H_{14}N_2$
Density	1.05 g/cm^3
Melting Point	93 °C
Boiling Point	398 °C

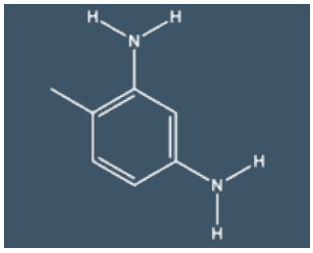
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	101-77-9	Methanol-P&T	S-1156



1,5-Diaminonaphthalene

Molecular Weight	158.204
Molecular Formula	$C_{10}H_{10}N_2$
Density	1.4 g/cm^3
Melting Point	187 °C

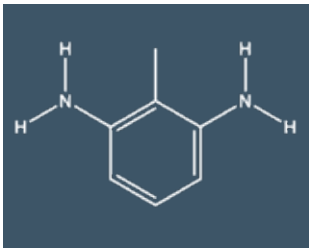
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2243-62-1	Methanol	S-5682



2,4-Diaminotoluene

Molecular Weight	122.171
Molecular Formula	$C_7H_{10}N_2$
Density	1.26 g/cm^3
Melting Point	99 °C
Boiling Point	292 °C

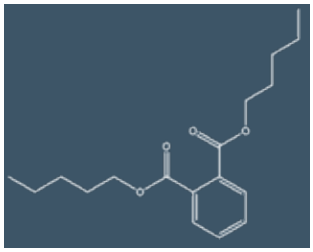
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-80-7	Methanol	S-1160



2,6-Diaminotoluene

Molecular Weight	122.171
Molecular Formula	$C_7H_{10}N_2$
Density	0.95 g/cm^3
Melting Point	106 °C
Boiling Point	289 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	823-40-5	Methanol-P&T	S-1162

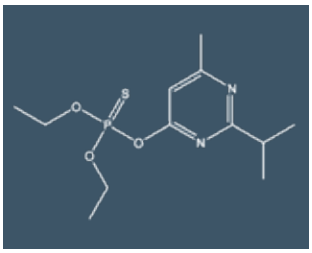


Diamyl phthalate

Molecular Weight	306.402
Molecular Formula	$C_{18}H_{26}O_4$
Density	1.022 g/cm^3
Melting Point	-55 °C
Boiling Point	342 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	131-18-0	Methanol	S-4157

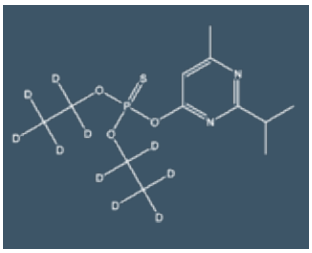
Volume for all Organic Singles is 1 mL



Diazinon

Molecular Weight	304.3
Molecular Formula	$C_{12}H_{21}N_2O_3PS$
Density	1.11 g/cm^3
Boiling Point	Decomposes

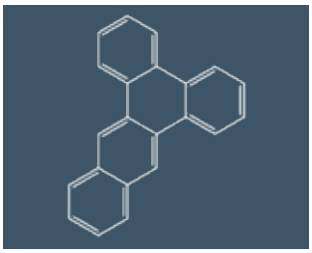
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	333-41-5	Acetone	S-1175



Diazinon-d_{10}

Molecular Weight	314.406
Molecular Formula	$C_{12}H_{21}N_2O_3PS$
Density	1.152 g/cm^3
Boiling Point	84 °C

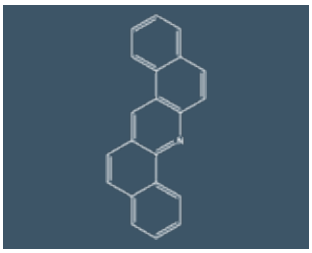
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100155-47-3	Methanol-P&T	S-4204



Dibenz(a,c)anthracene

Molecular Weight	278.354
Molecular Formula	$C_{22}H_{14}$

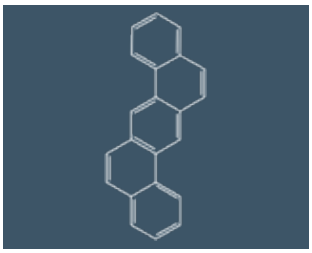
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	215-58-7	Methylene Chloride	S-3922



Dibenz(a,h)acridine

Molecular Weight	279.342
Molecular Formula	$C_{21}H_{13}N$
Density	1.274 g/cm^3
Melting Point	216 °C
Boiling Point	534 °C

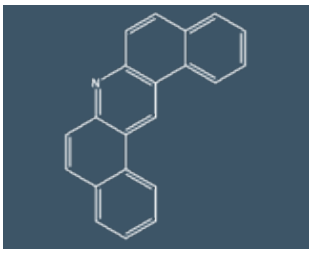
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	226-36-8	Methylene Chloride	S-1215



Dibenz(a,h)anthracene

Molecular Weight	278.354
Molecular Formula	$C_{22}H_{14}$
Density	1.282 g/cm^3
Melting Point	269 °C
Boiling Point	524 °C

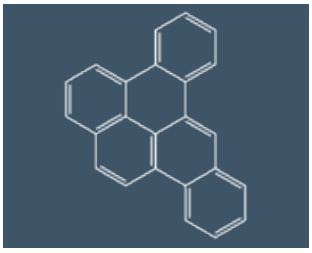
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	53-70-3	Methylene Chloride	S-1205



Dibenz(a,j)acridine

Molecular Weight	279.342
Molecular Formula	$C_{21}H_{13}N$
Density	1.274 g/cm^3
Melting Point	216 °C
Boiling Point	534 °C

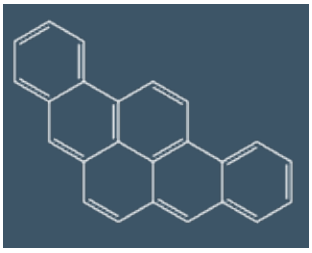
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	224-42-0	Methylene Chloride	S-1207



Dibenzo(a,e)pyrene

Molecular Weight	302.376
Molecular Formula	$C_{24}H_{14}$
Melting Point	244 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	192-65-4	Methylene Chloride: Benzene (50:50)	S-1200

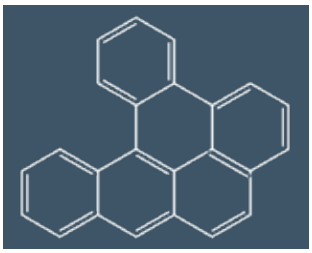


Dibenzo(a,i)pyrene

Molecular Weight	302.376
Molecular Formula	$C_{24}H_{14}$
Melting Point	284 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	189-55-9	Methylene Chloride: Benzene (50:50)	S-1195

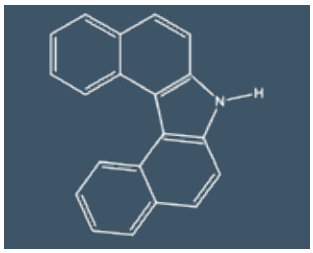
Volume for all Organic Singles is 1 mL



Dibenzo(a,l)pyrene

Molecular Weight	302.376
Molecular Formula	$C_{24}H_{14}$
Density	1.28 g/cm^3
Melting Point	165 °C
Boiling Point	631 °C

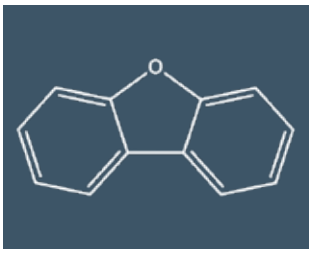
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	191-30-0	Methylene Chloride	S-1196



7H-Dibenzo(c,g)carbazole

Molecular Weight	267.331
Molecular Formula	$C_{20}H_{13}N$
Density	1.308 g/cm^3
Melting Point	158 °C
Boiling Point	544 °C

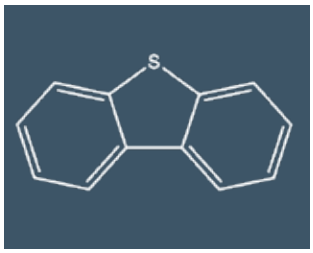
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	194-59-2	Methylene Chloride	S-1197



Dibenzofuran

Molecular Weight	168.195
Molecular Formula	$C_{12}H_8O$
Density	1.089 g/cm^3
Melting Point	87 °C
Boiling Point	287 °C

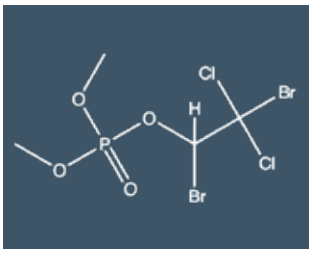
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	132-64-9	Methanol-P&T	S-1180



Dibenzothiophene

Molecular Weight	184.256
Molecular Formula	$C_{12}H_8S$
Density	1.252 g/cm^3
Melting Point	100 °C
Boiling Point	333 °C

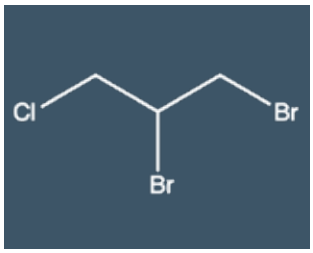
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	132-65-0	Methanol-P&T	S-1185



Dibrom (Naled)

Molecular Weight	380.778
Molecular Formula	$C_4H_7Br_2Cl_2O_4P$
Density	1.96 g/cm^3
Melting Point	27 °C
Boiling Point	200 °C

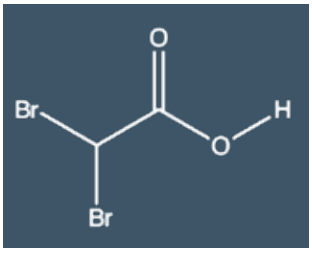
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	300-76-5	Methylene Chloride	S-2650



1,2-Dibromo-3-chloropropane

Molecular Weight	236.331
Molecular Formula	$C_3H_5Br_2Cl$
Density	2.05 g/cm^3
Melting Point	6 °C
Boiling Point	196 °C

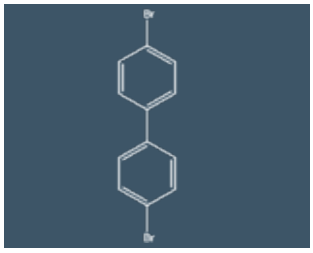
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	96-12-8	Methanol-P&T	S-1255



Dibromoacetic acid

Molecular Weight	217.844
Molecular Formula	$C_2H_2Br_2O_2$
Melting Point	48 °C
Boiling Point	232 to 234 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	631-64-1	Methyl Tertiary Butyl Ether	S-1220



4,4'-Dibromobiphenyl

Molecular Weight	312.004
Molecular Formula	$C_{12}H_8Br_2$
Density	1.867 g/cm^3
Melting Point	164 °C
Boiling Point	357 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	92-86-4	Acetone	S-1228

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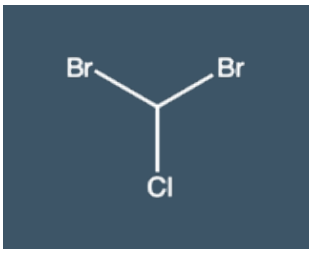
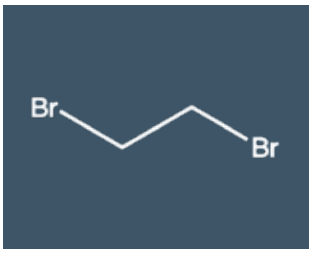
Volume for all Organic Singles is 1 mL



Dibromochloromethane

Molecular Weight	208.277
Molecular Formula	$CHBr_2Cl$
Density	2.45 g/cm^3
Melting Point	-20 °C
Boiling Point	247 °C

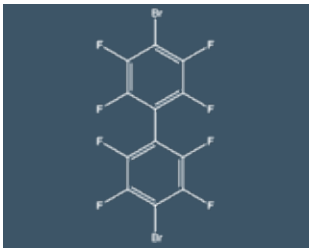
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	124-48-1	Methanol-P&T	S-1230



1,2-Dibromoethane

Molecular Weight	187.862
Molecular Formula	$C_2H_4Br_2$
Density	2.18 g/cm^3
Melting Point	10 °C
Boiling Point	131 °C

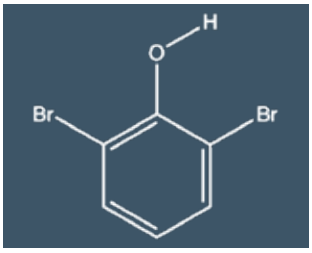
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-93-4	Methanol-P&T	S-1235



4,4′-Dibromooctafluoro-biphenyl

Molecular Weight	455.927
Molecular Formula	$C_{12}Br_2F_8$
Density	2.1 g/cm^3
Melting Point	113 to 115 °C
Boiling Point	260 to 330 °C

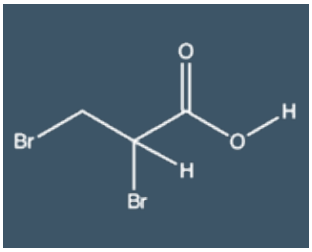
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	10386-84-2	Methyl Tertiary Butyl Ether	S-1250



2,6-Dibromophenol

Molecular Weight	251.905
Molecular Formula	$C_6H_4Br_2O$
Melting Point	56 °C

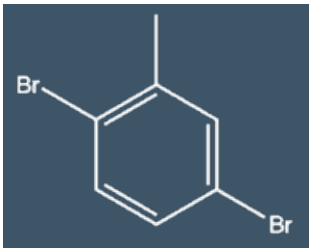
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	608-33-3	Methanol	S-5147



2,3-Dibromopropionic acid

Molecular Weight	231.871
Molecular Formula	$C_3H_4Br_2O_2$

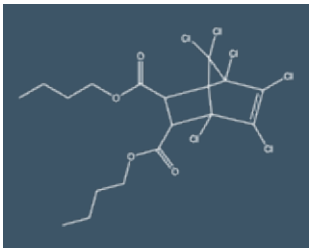
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	600-05-5	Methyl Tertiary Butyl Ether	S-3895



2,5-Dibromotoluene

Molecular Weight	249.933
Molecular Formula	$C_7H_6Br_2$
Density	1.813 g/cm^3
Melting Point	5 °C
Boiling Point	107 °C

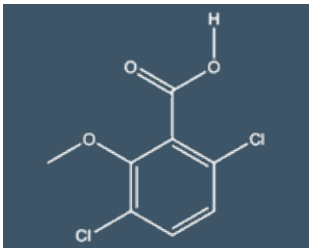
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	615-59-8	Methanol-P&T	S-1251



Dibutyl chlorendate

Molecular Weight	501.043
Molecular Formula	$C_{17}H_{20}Cl_6O_4$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1770-80-5	Methanol-P&T	S-1265

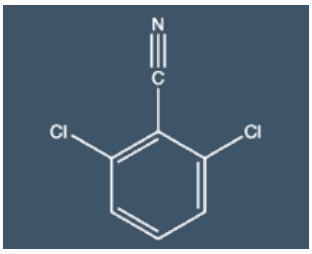


Dicamba

Molecular Weight	221.033
Molecular Formula	$C_8H_6Cl_2O_3$
Density	1.57 g/cm^3
Melting Point	115 °C
Boiling Point	200 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1918-00-9	Methanol	S-1270

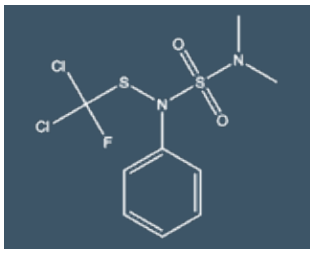
Volume for all Organic Singles is 1 mL



Dichlobenil

Molecular Weight	172.008
Molecular Formula	$C_7H_3Cl_2N$
Density	1.3 g/cm^3
Melting Point	146 °C
Boiling Point	270 °C

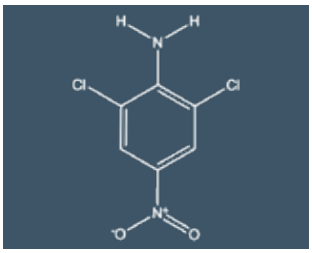
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1194-65-6	Methanol-P&T	S-1271



Dichlofluanid

Molecular Weight	333.217
Molecular Formula	$C_9H_{11}Cl_2FN_2O_2S_2$
Density	1.553 g/cm^3
Melting Point	105 °C
Boiling Point	337 °C

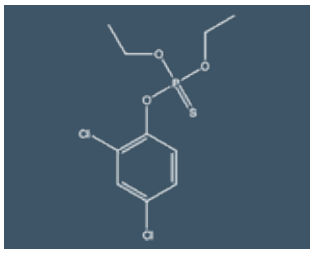
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1085-98-9	Methylene Chloride	S-1277



Dichloran

Molecular Weight	207.01
Molecular Formula	$C_6H_4Cl_2N_2O_2$
Density	0.28 g/cm^3
Melting Point	195 °C

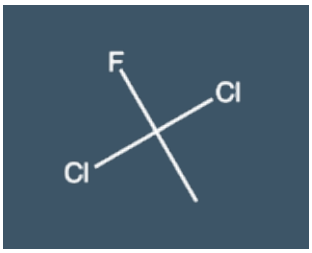
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-30-9	Methanol	S-1497



Dichlorfenthion

Molecular Weight	314.145
Molecular Formula	$C_{10}H_{13}Cl_2O_3PS$
Density	1.3 g/cm^3
Boiling Point	123 °C

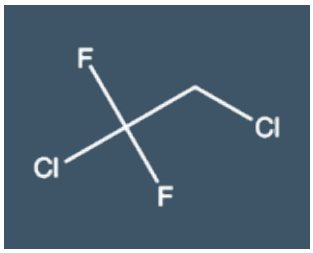
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	97-17-6	Methanol-P&T	S-1280



1,1-Dichloro-1-fluoroethane

Molecular Weight	116.994
Molecular Formula	$C_2H_3Cl_2F$
Density	1.24 g/cm^3
Melting Point	-104 °C
Boiling Point	32 °C

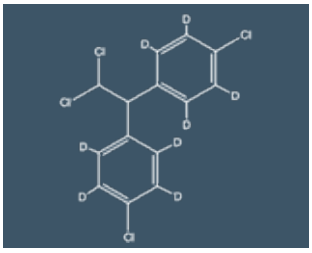
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1717-00-6	Methanol-P&T	S-1480



1,2-Dichloro-1,1-difluoroethane

Molecular Weight	134.935
Molecular Formula	$C_4H_6Cl_2F_2O$
Density	1.416 g/cm^3
Melting Point	-101 °C
Boiling Point	47 °C

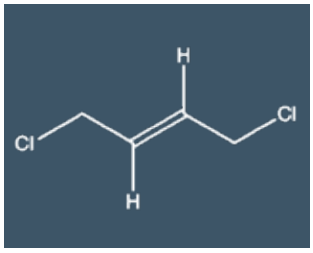
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1649-08-7	Methanol-P&T	S-1477



1,1-Dichloro-2,2-bis (4-chlorophenyl-d4)ethane

Molecular Weight	328.083
Molecular Formula	$C_{14}H_{10}Cl_4$
Density	0.689 g/cm^3
Melting Point	109 to 110 °C
Boiling Point	99 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93952-20-6	Isooctane	S-5620



1,4-Dichloro-2-butene (mix of cis & trans)

Molecular Weight	124.992
Molecular Formula	$C_4H_6Cl_2$
Density	1.186 g/cm^3
Melting Point	4 °C
Boiling Point	158 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	764-41-0	Methanol-P&T	S-1485

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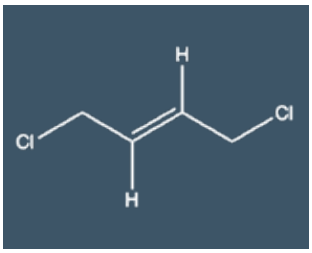
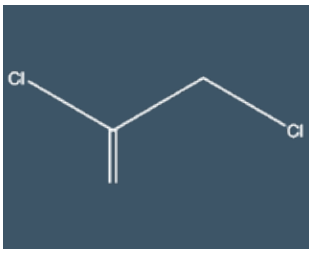
Volume for all Organic Singles is 1 mL



trans-1,4-Dichloro-2-butene

Molecular Weight	124.992
Molecular Formula	$ClCH_2CH$
Density	1.183 g/cm^3
Melting Point	2 °C
Boiling Point	75 °C

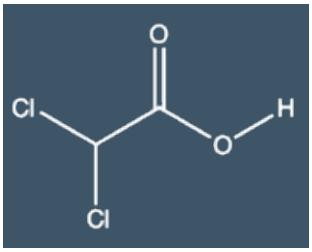
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-57-6	Methanol-P&T	S-1490



2,3-Dichloro-1-propene

Molecular Weight	110.965
Molecular Formula	$ClCH_2CCl$
Density	1.211 g/cm^3
Melting Point	10 °C
Boiling Point	94 °C

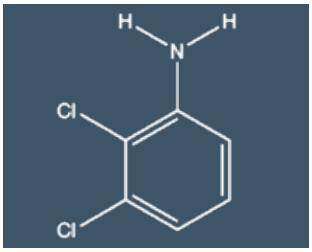
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-88-6	Methanol-P&T	S-1458



Dichloroacetic acid

Molecular Weight	128.936
Molecular Formula	$C_2H_2Cl_2O_2$
Density	1.563 g/cm^3
Melting Point	50 °C
Boiling Point	194 °C

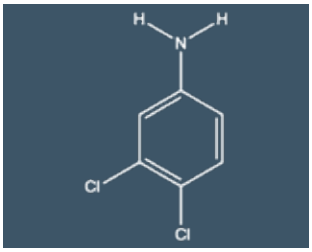
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-43-6	Methyl Tertiary Butyl Ether	S-1285



2,3-Dichloroaniline

Molecular Weight	162.013
Molecular Formula	$Cl_2C_6H_3NH_2$
Density	1.383 g/cm^3
Melting Point	24 °C
Boiling Point	252 °C

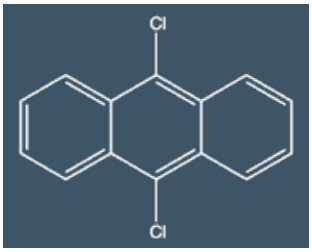
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	608-27-5	Methanol-P&T	S-1284



3,4-Dichloroaniline

Molecular Weight	162.013
Molecular Formula	$C_6H_5Cl_2N$
Density	1.33 g/cm^3
Melting Point	71 to 72 °C
Boiling Point	272 °C

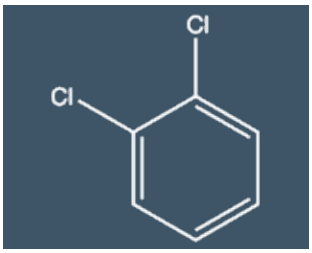
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-76-1	Methanol-P&T	S-3851



9,10-Dichloroanthracene

Molecular Weight	247.118
Molecular Formula	$C_{14}H_8Cl_2$

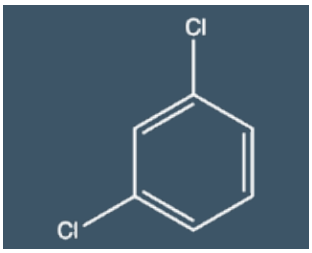
Concentration	CAS #	Matrix	Part #
500 µg/mL	605-48-1	Methanol: Methylene Chloride (50:50)	S-1288



1,2-Dichlorobenzene

Molecular Weight	146.998
Molecular Formula	$C_6H_4Cl_2$
Density	1.306 g/cm^3
Melting Point	-17 °C
Boiling Point	183 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-50-1	Methanol-P&T	S-1290

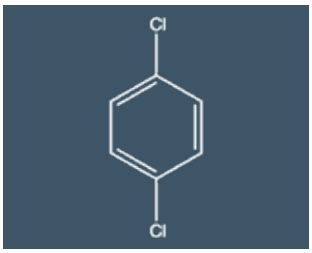


1,3-Dichlorobenzene

Molecular Weight	146.998
Molecular Formula	$C_6H_4Cl_2$
Density	1.288 g/cm^3
Melting Point	-25 °C
Boiling Point	173 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	541-73-1	Methanol-P&T	S-1295

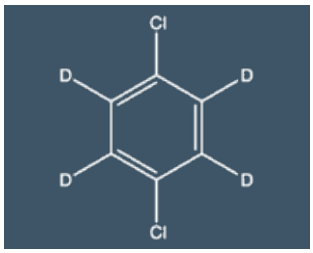
Volume for all Organic Singles is 1 mL



1,4-Dichlorobenzene

Molecular Weight	146.998
Molecular Formula	$C_6H_4Cl_2$
Density	1.248 g/cm^3
Melting Point	53 °C
Boiling Point	174 °C

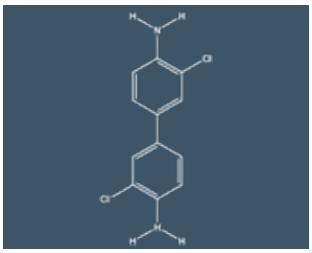
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-46-7	Methanol-P&T	S-1300



1,4-Dichlorobenzene-d$_4$

Molecular Weight	151.022
Molecular Formula	$C_6H_4Cl_2$
Melting Point	53 °C
Boiling Point	173 °C

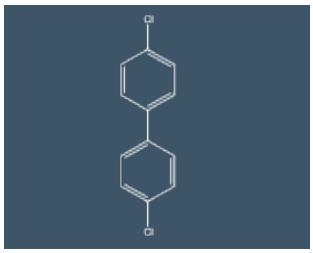
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3855-82-1	Methanol-P&T	S-1310



3,3′-Dichlorobenzidine

Molecular Weight	253.126
Molecular Formula	$C_{12}H_{10}Cl_2N_2$
Melting Point	133 °C
Boiling Point	402 °C

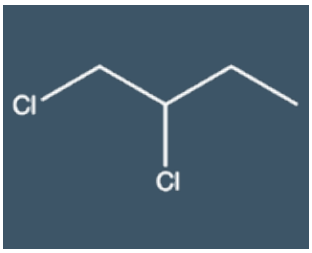
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91-94-1	Methanol-P&T	S-1315



4,4′-Dichlorobiphenyl

Molecular Weight	223.096
Molecular Formula	$C_{12}H_8Cl_2$
Melting Point	288 °C

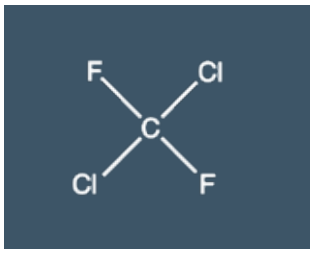
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2050-68-2	Methanol-P&T	S-1355



1,2-Dichlorobutane

Molecular Weight	127.008
Molecular Formula	$C_4H_8Cl_2$
Density	1.112 g/cm^3
Boiling Point	125 °C

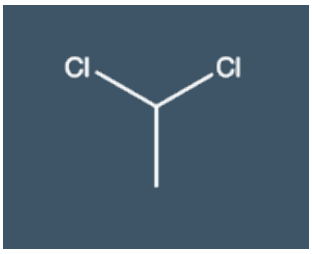
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	616-21-7	Methanol-P&T	S-1359



Dichlorodifluoromethane

Molecular Weight	120.908
Molecular Formula	CCl_2F_2
Density	1.49 g/cm^3
Melting Point	-158 °C
Boiling Point	-30 °C

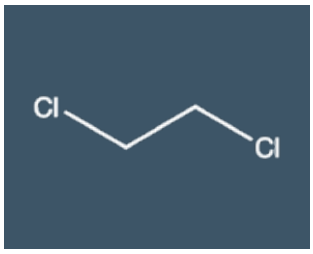
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-71-8	Methanol-P&T	S-1370



1,1-Dichloroethane

Molecular Weight	98.954
Molecular Formula	$C_2H_4Cl_2$
Density	1.2 g/cm^3
Melting Point	-97 °C
Boiling Point	57 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-34-3	Methanol-P&T	S-1375

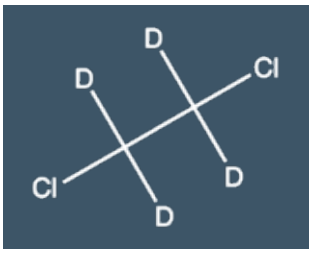


1,2-Dichloroethane

Molecular Weight	98.954
Molecular Formula	$C_2H_4Cl_2$
Density	1.25 g/cm^3
Melting Point	-35 °C
Boiling Point	84 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-06-2	Methanol-P&T	S-1380

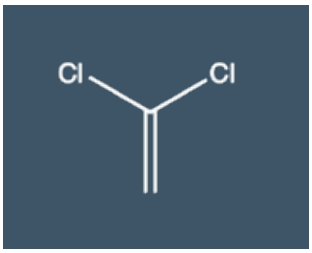
Volume for all Organic Singles is 1 mL



1,2-Dichloroethane-d_4

Molecular Weight	102.978
Molecular Formula	$ClCD_2CD_2Cl$
Density	1.307 g/cm^3
Melting Point	-35 °C
Boiling Point	83 °C

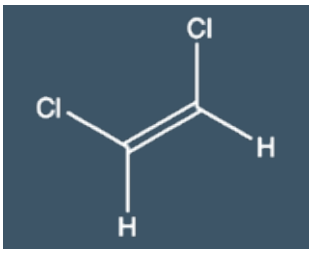
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	17060-07-0	Methanol-P&T	S-1385



1,1-Dichloroethene

Molecular Weight	96.938
Molecular Formula	$C_2H_2Cl_2$
Density	1.21 g/cm^3
Melting Point	-122 °C
Boiling Point	32 °C

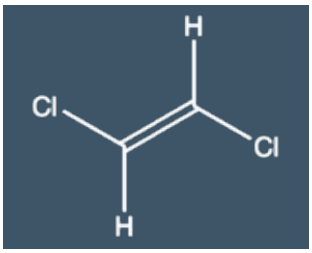
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-35-4	Methanol-P&T	S-1390



cis-1,2-Dichloroethene

Molecular Weight	96.938
Molecular Formula	$C_2H_2Cl_2$
Density	1.28 g/cm^3
Melting Point	-80 °C
Boiling Point	55 °C

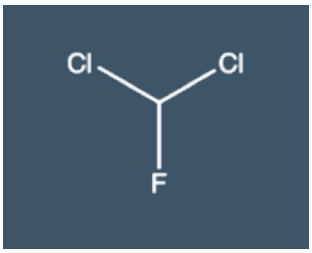
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	156-59-2	Methanol-P&T	S-1394



trans-1,2-Dichloroethene

Molecular Weight	96.938
Molecular Formula	$C_2H_2Cl_2$
Density	1.28 g/cm^3
Melting Point	-80 °C
Boiling Point	55 °C

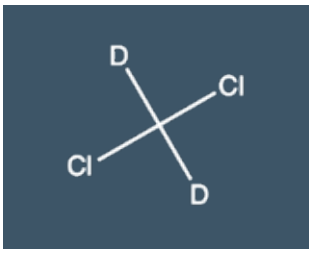
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	156-60-5	Methanol-P&T	S-1400



Dichlorofluoromethane

Molecular Weight	102.917
Molecular Formula	$CHCl_2F$
Density	1.405 g/cm^3
Melting Point	-135 °C
Boiling Point	9 °C

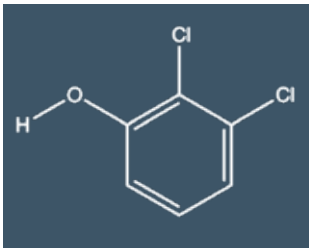
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-43-4	Methanol-P&T	S-1405



Dichloromethane-d_2

Molecular Weight	86.939
Molecular Formula	CH_2Cl_2
Density	1.362 g/cm^3
Boiling Point	40 °C

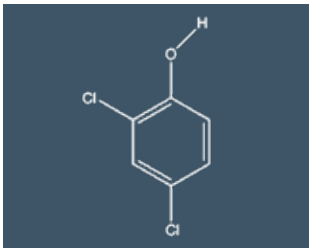
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1665-00-5	Methanol-P&T	S-4333



2,3-Dichlorophenol

Molecular Weight	162.997
Molecular Formula	$C_6H_4Cl_2O$
Melting Point	58 °C
Boiling Point	206 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	576-24-9	Methanol-P&T	S-1406

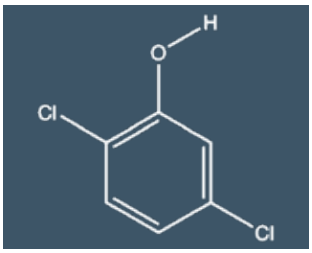


2,4-Dichlorophenol

Molecular Weight	162.997
Molecular Formula	$C_6H_4Cl_2O$
Density	1.38 g/cm^3
Melting Point	43 °C
Boiling Point	210 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-83-2	Methanol-P&T	S-1410

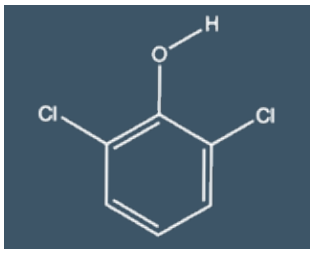
Volume for all Organic Singles is 1 mL



2,5-Dichlorophenol

Molecular Weight	162.997
Molecular Formula	$C_6H_4Cl_2O$
Melting Point	59 °C
Boiling Point	211 °C

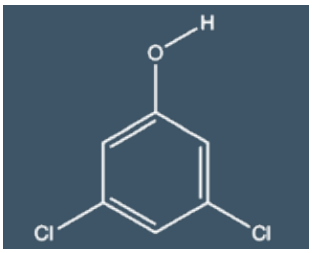
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	583-78-8	Methanol-P&T	S-1412



2,6-Dichlorophenol

Molecular Weight	162.997
Molecular Formula	$C_6H_4Cl_2O$
Density	1.653 g/cm^3
Melting Point	65 °C
Boiling Point	219 °C

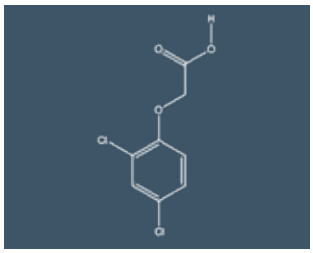
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87-65-0	Methanol	S-1415



3,5-Dichlorophenol

Molecular Weight	162.997
Molecular Formula	$C_6H_4Cl_2O$
Melting Point	68 °C
Boiling Point	233 °C

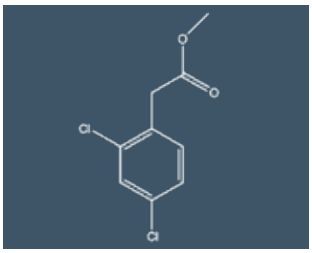
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	591-35-5	Methanol-P&T	S-1417



2,4-D (2,4-Dichloro-phenoxyacetic acid)

Molecular Weight	221.033
Molecular Formula	$C_8H_6Cl_2O_3$
Density	1.42 g/cm^3 @ 25 °C
Melting Point	138 to 141 °C
Boiling Point	Decomposes

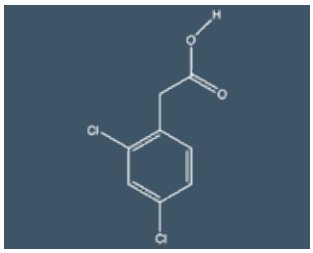
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	94-75-7	Methanol	S-1045



2,4-Dichlorophenyl acetic acid methyl ester

Molecular Weight	219.061
Molecular Formula	$C_9H_8Cl_2O_2$

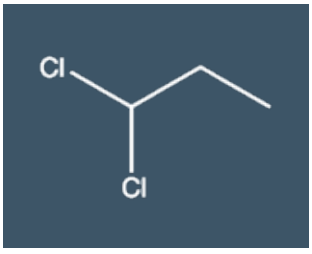
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	55954-23-9	Methanol	S-1421



2,4-Dichlorophenyl acetic acid

Molecular Weight	205.034
Molecular Formula	$C_8H_6Cl_2O_2$
Density	1.456 g/cm^3
Melting Point	132 to 133 °C
Boiling Point	316 °C

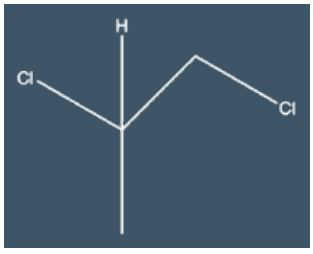
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	19719-28-9	Acetone	S-1420



1,1-Dichloropropane

Molecular Weight	112.981
Molecular Formula	$C_2H_5CHCl_2$
Density	1.13 g/cm^3
Boiling Point	88 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-99-9	Methanol-P&T	S-1429



1,2-Dichloropropane

Molecular Weight	112.981
Molecular Formula	$C_3H_6Cl_2$
Density	1.156 g/cm^3
Melting Point	-100 °C
Boiling Point	96 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-87-5	Methanol-P&T	S-1430

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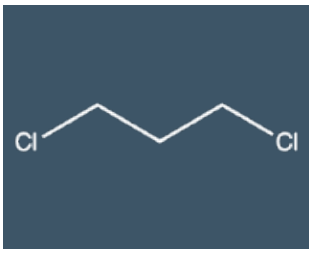
Volume for all Organic Singles is 1 mL



1,3-Dichloropropane

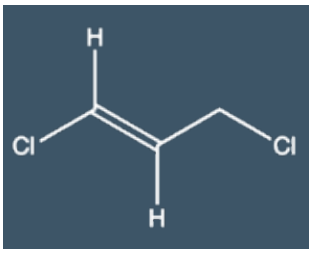
Molecular Weight	112.981
Molecular Formula	$C_3H_4Cl_2$
Density	1.22 g/cm^3
Melting Point	-85 °C
Boiling Point	104 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	142-28-9	Methanol-P&T	S-1435

2,2-Dichloropropane

Molecular Weight	112.981
Molecular Formula	$C_3H_6Cl_2$
Density	1.16 g/cm^3
Melting Point	-100 °C
Boiling Point	96 °C

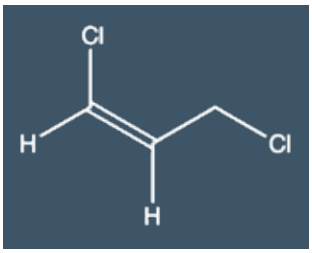
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	594-20-7	Methanol-P&T	S-1440



1,3-Dichloropropene (mix of isomers)

Molecular Weight	110.965
Molecular Formula	$C_3H_4Cl_2$
Density	1.225 g/cm^3
Melting Point	-50 °C
Boiling Point	108 °C

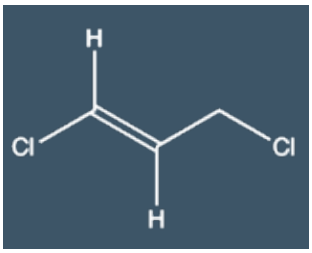
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	542-75-6	Methanol-P&T	S-1455



cis-1,3-Dichloropropene

Molecular Weight	110.965
Molecular Formula	$C_3H_4Cl_2$
Density	1.224 g/cm^3
Melting Point	-84 °C
Boiling Point	104 °C

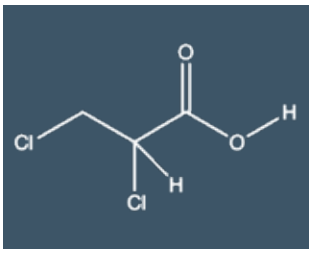
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	10061-01-5	Methanol-P&T	S-1460



trans-1,3-Dichloropropene

Molecular Weight	110.965
Molecular Formula	$C_3H_4Cl_2$
Density	1.22 g/cm^3
Melting Point	-50 °C
Boiling Point	108 °C

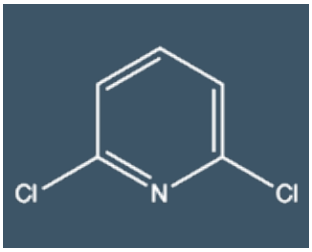
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	10061-02-6	Methanol-P&T	S-1465



2,3-Dichloropropionic acid

Molecular Weight	142.963
Molecular Formula	$C_3H_4Cl_2O_2$

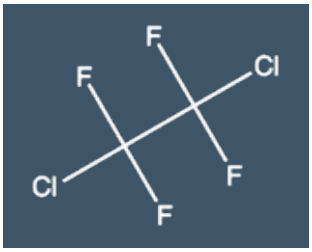
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	565-64-0	Methyl Tertiary Butyl Ether	S-4305-MTBE



2,6-Dichloropyridine

Molecular Weight	147.986
Molecular Formula	$C_5H_3Cl_2N$
Melting Point	85 °C
Boiling Point	211 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2402-78-0	Methanol-P&T	S-1469

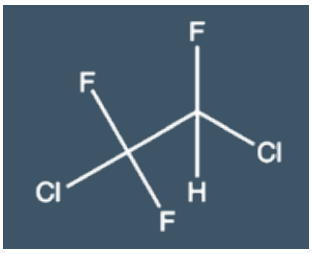


1,2-Dichlorotetra-fluoroethane

Molecular Weight	170.916
Molecular Formula	$C_2Cl_2F_4$
Density	1.455 g/cm^3
Melting Point	-94 °C
Boiling Point	4 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76-14-2	Methanol-P&T	S-1470

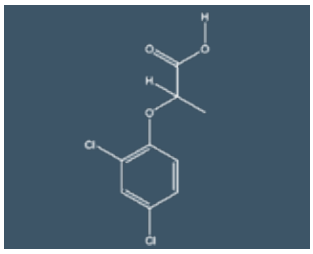
Volume for all Organic Singles is 1 mL



1,2-Dichlorotrifluoroethane

Molecular Weight	152.925
Molecular Formula	$C_2HCl_2F_3$
Density	1.5 g/cm^3
Melting Point	-78 °C
Boiling Point	30 °C

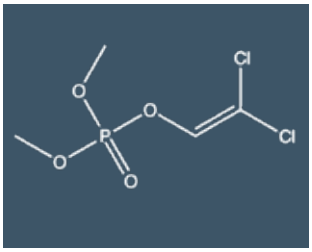
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	354-23-4	Methanol-P&T	S-1479



Dichlorprop

Molecular Weight	235.06
Molecular Formula	$C_9H_8Cl_2O_3$
Density	1.42 g/cm^3
Melting Point	117 to 118 °C
Boiling Point	215 °C

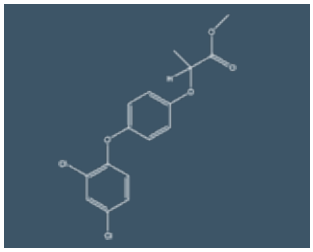
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-36-5	Methyl Tertiary Butyl Ether	S-1425



Dichlorvos

Molecular Weight	221.0
Molecular Formula	$C_4H_7C_{12}O_4P$
Density	1.42 g/cm^3
Boiling Point	Decomposes

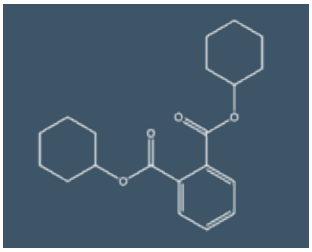
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	62-73-7	Methanol-P&T	S-1475



Diclofop methyl

Molecular Weight	341.184
Molecular Formula	$C_{16}H_{14}Cl_2O_4$
Melting Point	40 °C
Boiling Point	176 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51338-27-3	Methanol-P&T	S-1495



Dicyclohexyl phthalate

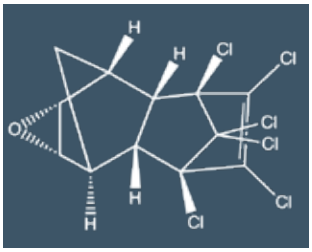
Molecular Weight	330.424
Molecular Formula	$C_{20}H_{26}O_4$
Density	1.4 g/cm^3
Melting Point	66 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84-61-7	Methanol-P&T	S-4151

Dicyclopentadiene

Molecular Weight	132.206
Molecular Formula	$C_{10}H_{12}$
Density	0.98 g/cm^3
Melting Point	33 °C
Boiling Point	170 °C

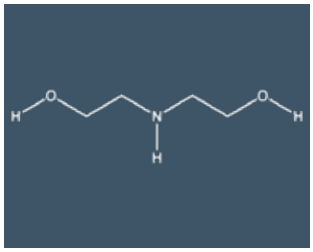
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	77-73-6	Methanol-P&T	S-1505



Dieldrin

Molecular Weight	380.895
Molecular Formula	$C_{12}H_8Cl_6O$
Density	1.75 g/cm^3
Melting Point	177 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	60-57-1	Methanol	S-1510

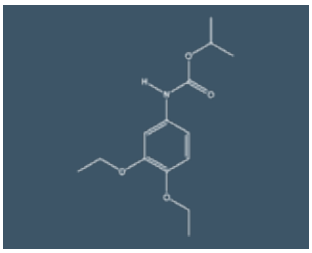


Diethanolamine

Molecular Weight	105.137
Molecular Formula	$C_4H_{11}NO_2$
Density	1.09 g/cm^3
Melting Point	28 °C
Boiling Point	269 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-42-2	Methanol-P&T	S-1528

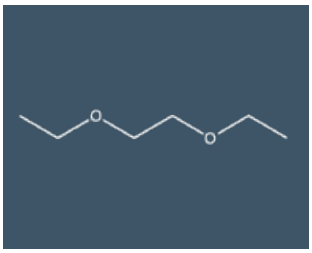
Volume for all Organic Singles is 1 mL



Diethofencarb

Molecular Weight	267.325
Molecular Formula	$C_{14}H_{21}NO_4$

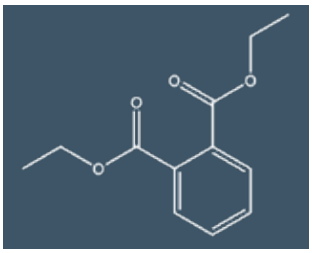
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87130-20-9	Methanol	S-4830



1,2-Diethoxyethane

Molecular Weight	118.176
Density	0.848 g/cm^3
Melting Point	-74 °C
Boiling Point	121 °C

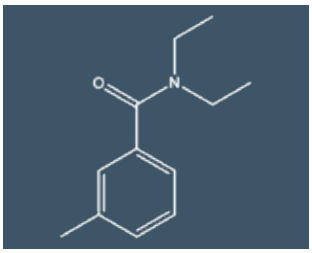
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	629-14-1	Methanol-P&T	S-1513



Diethyl phthalate

Molecular Weight	222.24
Molecular Formula	$C_{12}H_{14}O_4$
Density	1.12 g/cm^3
Melting Point	-4 °C
Boiling Point	302 °C

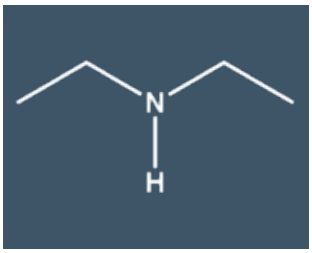
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84-66-2	Methanol-P&T	S-1515



N,N-Diethyl-m-toluamide

Molecular Weight	191.274
Molecular Formula	$C_{12}H_{17}NO$
Density	0.996 g/cm^3
Melting Point	-38 °C
Boiling Point	160 °C

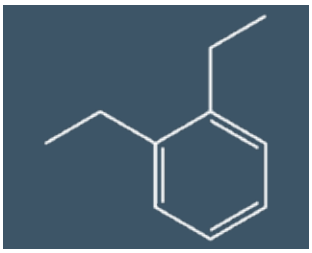
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	134-62-3	Methanol-P&T	S-1127



Diethylamine

Molecular Weight	73.139
Molecular Formula	$C_4H_{11}N$
Density	0.707 g/cm^3
Melting Point	-50 °C
Boiling Point	56 °C

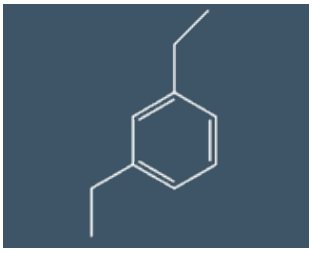
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-89-7	Methanol-P&T	S-1522



1,2-Diethylbenzene

Molecular Weight	134.222
Molecular Formula	$C_{10}H_{14}$
Density	0.88 g/cm^3
Melting Point	-31 °C
Boiling Point	184 °C

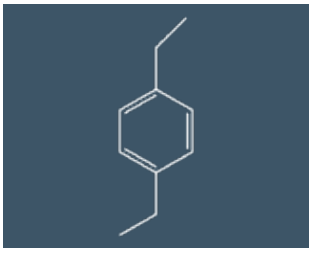
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	135-01-3	Methanol-P&T	S-1524



1,3-Diethylbenzene

Molecular Weight	134.222
Molecular Formula	$C_{10}H_{14}$
Density	0.864 g/cm^3
Melting Point	-84 °C
Boiling Point	182 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	141-93-5	Methanol-P&T	S-1523

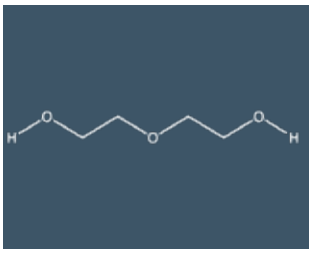


1,4-Diethylbenzene

Molecular Weight	134.222
Molecular Formula	$C_{10}H_{14}$
Density	0.862 g/cm^3
Melting Point	-43 °C
Boiling Point	184 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	105-05-5	Methanol-P&T	S-1525

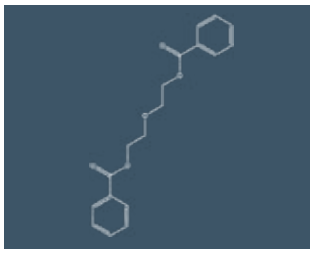
Volume for all Organic Singles is 1 mL



Diethylene glycol

Molecular Weight	106.121
Molecular Formula	$C_4H_{10}O_3$
Density	1.12 g/cm^3
Melting Point	-10 °C
Boiling Point	244 °C

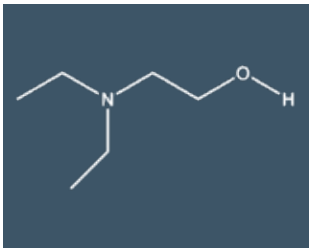
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-46-6	Methanol-P&T	S-3848



Diethylene glycol dibenzoate

Molecular Weight	314.337
Molecular Formula	$C_{18}H_{18}O_5$
Melting Point	28 °C

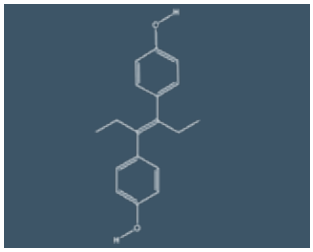
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-55-8	Methanol-P&T	S-4207



N,N-Diethylethanolamine

Molecular Weight	117.192
Molecular Formula	$C_6H_{15}NO$
Density	0.892 g/cm^3
Melting Point	-70 °C
Boiling Point	163 °C

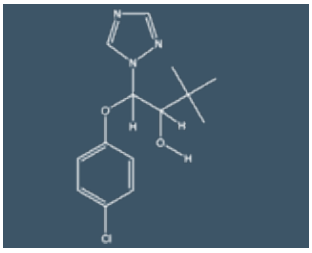
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-37-8	Methanol-P&T	S-1529



Diethylstilbestrol

Molecular Weight	268.356
Molecular Formula	$C_{18}H_{20}O_2$
Melting Point	170 °C

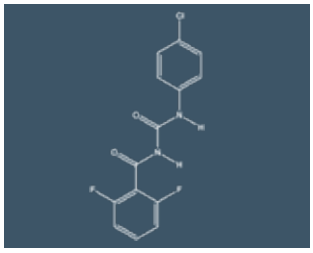
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-53-1	Methanol-P&T	S-1530



Difenoconazole

Molecular Weight	406.263
Molecular Formula	$C_{19}H_{17}Cl_2N_3O_3$
Melting Point	-79 °C
Boiling Point	101 °C

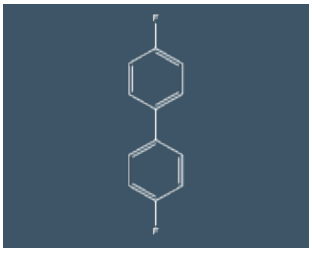
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119446-68-3	Methanol-P&T	S-3995



Diflubenzuron

Molecular Weight	310.685
Molecular Formula	$C_{14}H_9ClF_2N_2O_2$
Density	0.08 mg/L
Melting Point	231 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	35367-38-5	Methanol-P&T	S-1537



4,4'-Difluorobiphenyl

Molecular Weight	190.193
Molecular Formula	$FC_6H_4C_6H_4F$
Melting Point	89 °C
Boiling Point	254 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	398-23-2	Methanol-P&T	S-1541

2,3-Dihydrofuran

Molecular Weight	70.091
Molecular Formula	C_4H_6O
Density	0.927 g/cm^3
Boiling Point	55 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1191-99-7	Methanol-P&T	S-1545

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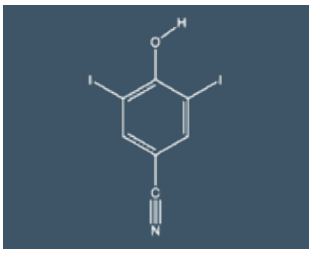
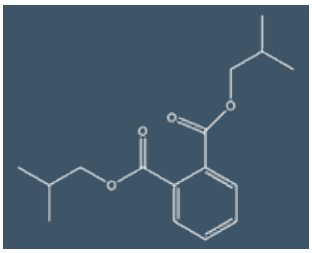
Volume for all Organic Singles is 1 mL



3,5-Diiodo-4-hydroxy-benzonitrile

Molecular Weight	370.916
Molecular Formula	$C_7H_3I_2NO$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1689-83-4	Methanol-P&T	S-1554



Diisobutyl phthalate

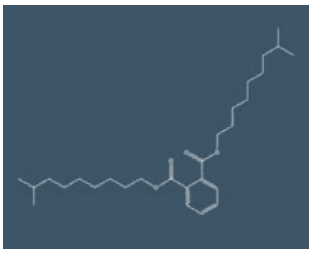
Molecular Weight	278.348
Molecular Formula	$C_{16}H_{22}O_4$
Density	1.038 g/cm^3
Melting Point	-37 °C
Boiling Point	320 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84-69-5	Methanol-P&T	S-4150

1,6-Diisocyanatohexane

Molecular Weight	168.196
Molecular Formula	$C_8H_{12}N_2O_2$
Density	1.04 g/cm^3
Melting Point	-67 °C
Boiling Point	255 °C

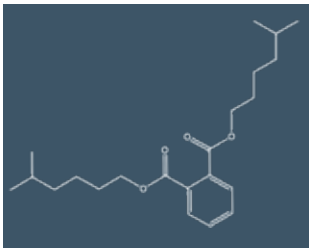
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	822-06-0	Methylene Chloride	S-1561



Diisodecyl phthalate

Molecular Weight	446.672
Molecular Formula	$C_{28}H_{46}O_4$
Density	0.967 g/cm^3
Melting Point	-50 °C

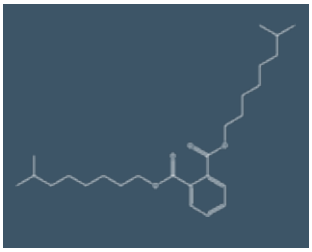
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	26761-40-0	Methanol-P&T	S-4464



Diisoheptyl phthalate

Molecular Weight	362.51
Molecular Formula	$C_{22}H_{34}O_4$
Density	0.995 g/cm^3
Melting Point	-40 °C
Boiling Point	210 °C

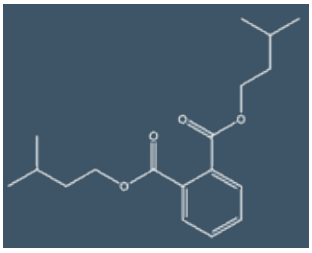
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	71888-89-6	Hexane	S-1553-H
		Methylene Chloride	S-1553



Diisononyl phthalate

Molecular Weight	418.618
Molecular Formula	$C_{26}H_{42}O_4$
Density	0.972 g/cm^3
Melting Point	-43 °C
Boiling Point	244 to 252 °C

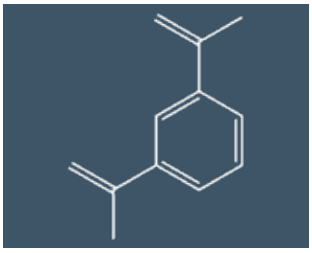
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	28553-12-0	Acetone	S-1559



Diisopentylphthalate (DIPP)

Molecular Weight	306.402
Molecular Formula	$C_{18}H_{26}O_4$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	605-50-5	Methanol	S-6148

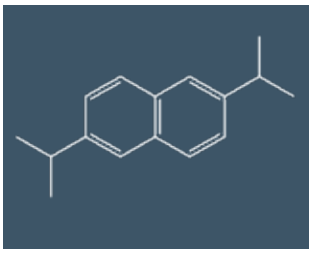


1,3-Diisopropenylbenzene

Molecular Weight	158.244
Molecular Formula	$C_{12}H_{14}$
Density	0.925 g/cm^3
Boiling Point	231 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3748-13-8	Methanol-P&T	S-1557

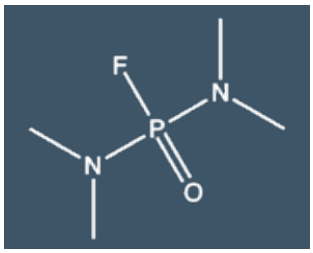
Volume for all Organic Singles is 1 mL



2,6-Diisopropylnaphthalene

Molecular Weight	212.336
Molecular Formula	$C_{16}H_{20}$

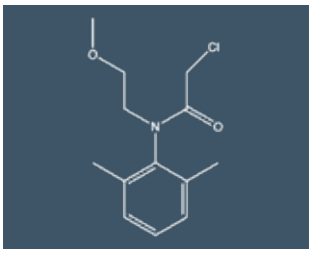
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	24157-81-1	Methanol-P&T	S-1556



Dimefox

Molecular Weight	154.125
Molecular Formula	$C_4H_{12}FN_2OP$
Density	1.11 g/cm^3

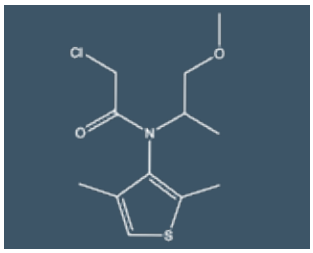
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-26-4	Acetonitrile	S-4681-ACN



Dimethachlor

Molecular Weight	255.742
Molecular Formula	$C_{13}H_{18}ClNO_2$

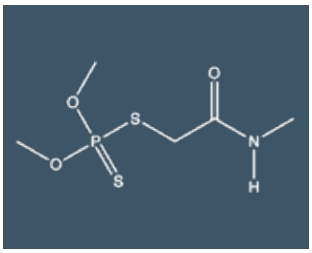
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	50563-36-5	Methanol-P&T	S-4282



Dimethenamid

Molecular Weight	275.791
Molecular Formula	$C_{12}H_{18}ClNO_2S$

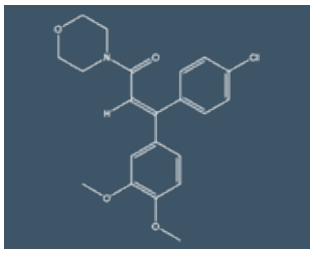
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87674-68-8	Acetone	S-3944



Dimethoate

Molecular Weight	229.2
Molecular Formula	$C_5H_{12}NO_3PS_2$
Density	1.31 g/cm^3
Melting Point	51 °C
Boiling Point	Decomposes

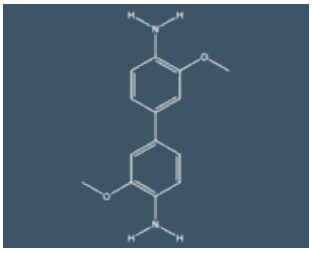
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	60-51-5	Methanol-P&T	S-1560



Dimethomorph

Molecular Weight	387.9
Molecular Formula	$C_{21}H_{22}ClNO_4$
Density	1.32 g/cm^3
Melting Point	137 °C

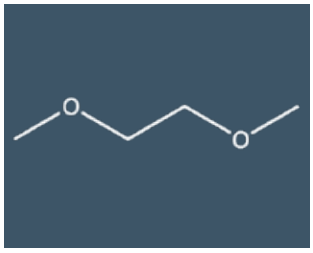
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110488-70-5	Acetone	S-3970



3,3′-Dimethoxybenzidine

Molecular Weight	244.294
Molecular Formula	$C_{14}H_{16}N_2O_2$
Melting Point	138 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119-90-4	Methanol-P&T	S-1565

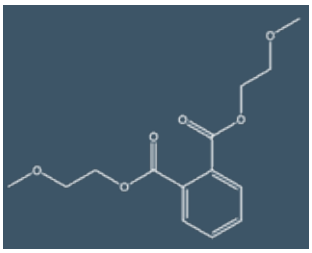


1,2-Dimethoxyethane

Molecular Weight	90.122
Molecular Formula	$C_4H_{10}O_2$
Density	0.868 g/cm^3
Melting Point	-58 °C
Boiling Point	85 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-71-4	Methanol-P&T	S-1572

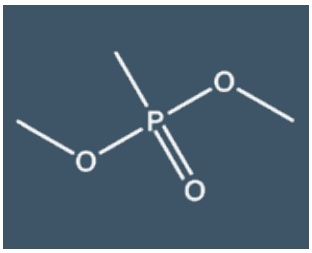
Volume for all Organic Singles is 1 mL



Dimethoxyethyl phthalate

Molecular Weight	282.292
Density	1.159 g/cm^3
Melting Point	-45 °C
Boiling Point	340 °C

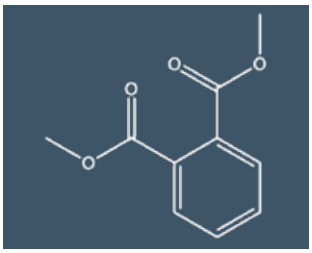
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	117-82-8	Methanol-P&T	S-1575



Dimethyl methylphosphonate

Molecular Weight	124.076
Molecular Formula	$C_3H_9O_3P$
Density	1.159 g/cm^3
Melting Point	50 °C
Boiling Point	181 °C

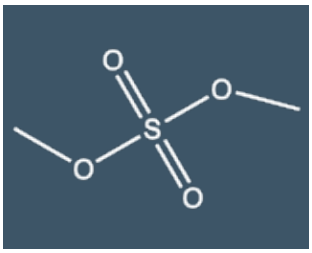
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	756-79-6	Methanol	S-4553



Dimethyl phthalate

Molecular Weight	194.186
Molecular Formula	$C_{10}H_{10}O_4$
Density	1.191 g/cm^3
Melting Point	6 °C
Boiling Point	284 °C

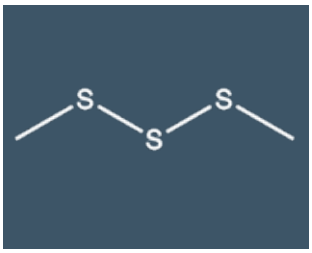
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	131-11-3	Methanol-P&T	S-1590



Dimethyl sulfate

Molecular Weight	126.126
Molecular Formula	$C_2H_6O_4S$
Density	1.332 g/cm^3
Melting Point	-32 °C
Boiling Point	188 °C w/ decomposition

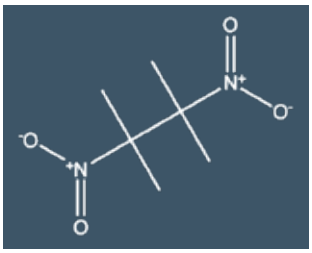
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	77-78-1	Methanol-P&T	S-1592



Dimethyl trisulfide

Molecular Weight	126.25
Molecular Formula	$C_2H_6S_3$
Melting Point	-85 °C
Boiling Point	170 °C

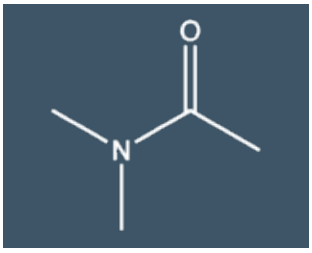
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3658-80-8	Methanol-P&T	S-4371



2,3-Dimethyl-2,3-dinitrobutane

Molecular Weight	176.172
Molecular Formula	$C_6H_{12}N_2O_4$
Melting Point	214 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3964-18-9	Methanol-P&T	S-4235

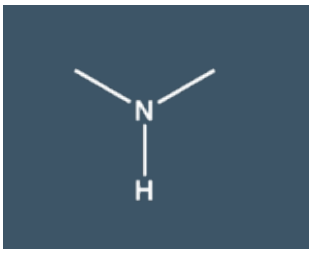


N,N-Dimethylacetamide

Molecular Weight	87.122
Molecular Formula	C_4H_9NO
Density	0.937 g/cm^3
Melting Point	-20 °C
Boiling Point	165 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	127-19-5	Methanol-P&T	S-1597

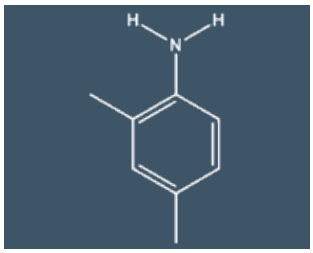
Volume for all Organic Singles is 1 mL



Dimethylamine

Molecular Weight	45.085
Molecular Formula	C_2H_7N
Density	0.67 g/cm^3
Melting Point	-92 °C
Boiling Point	7 °C

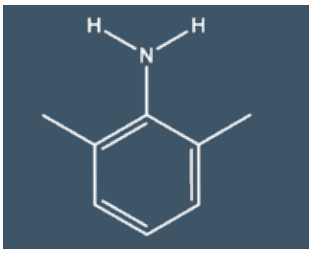
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	124-40-3	Methanol-P&T	S-1599



2,4-Dimethylaniline

Molecular Weight	121.183
Molecular Formula	$C_8H_{11}N$
Density	0.972 g/cm^3
Melting Point	-16 °C
Boiling Point	214 °C

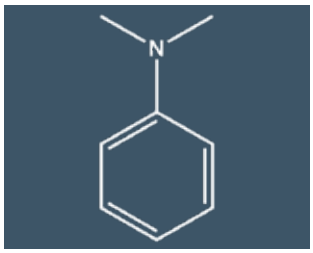
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-68-1	Methanol-P&T	S-2806



2,6-Dimethylaniline

Molecular Weight	121.183
Molecular Formula	$C_8H_{11}N$
Density	0.984 g/cm^3
Melting Point	11 °C
Boiling Point	215 °C

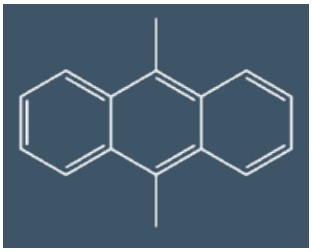
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87-62-7	Methanol	S-4510



N,N-Dimethylaniline

Molecular Weight	121.183
Molecular Formula	$C_8H_{11}N$
Density	0.956 g/cm^3
Melting Point	3 °C
Boiling Point	193 °C

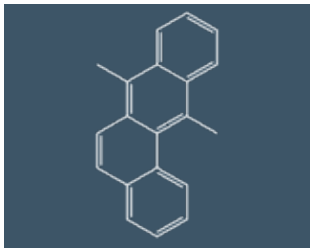
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	121-69-7	Methanol-P&T	S-2805



9,10-Dimethylanthracene

Molecular Weight	206.288
Molecular Formula	$C_{16}H_{14}$
Density	1.1 g/cm^3
Melting Point	182 °C
Boiling Point	360 °C

Concentration	CAS #	Matrix	Part #
2,000 µg/mL	781-43-1	Methylene Chloride	S-3924



7,12-Dimethylbenz(a) anthracene

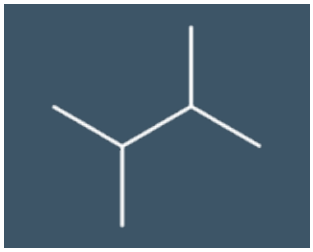
Molecular Weight	256.348
Molecular Formula	$C_{20}H_{16}$
Density	0.9 g/cm^3 @ 25 °C
Melting Point	123 °C
Boiling Point	183 to 184 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57-97-6	Methylene Chloride: Benzene (50:50)	S-1610

2,2-Dimethylbutane

Molecular Weight	86.178
Molecular Formula	C_6H_{14}
Density	0.644 g/cm^3
Melting Point	-99 °C
Boiling Point	50 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-83-2	Methanol-P&T	S-1614



2,3-Dimethylbutane

Molecular Weight	86.178
Molecular Formula	C_6H_{14}
Density	0.662 g/cm^3
Melting Point	129 °C
Boiling Point	58 °C

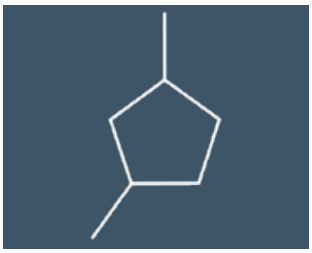
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-29-8	Methanol-P&T	S-1615

Volume for all Organic Singles is 1 mL

1,1-Dimethylcyclopentane

Molecular Weight	98.189
Molecular Formula	C_7H_{14}

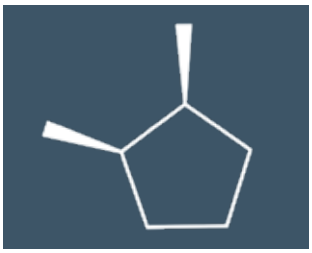
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1638-26-2	Methanol-P&T	S-1616



1,3-Dimethylcyclopentane

Molecular Weight	98.189
Molecular Formula	C_7H_{14}

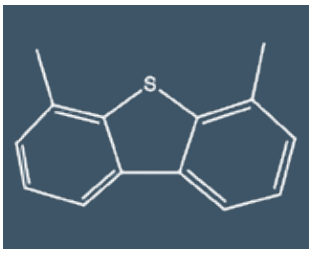
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2453-00-1	Methanol-P&T	S-1617



cis-1,2-Dimethyl-cyclopentane

Molecular Weight	98.189
Molecular Formula	C_7H_{14}

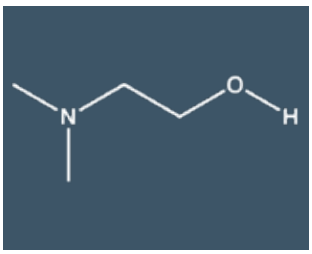
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1192-18-3	Methanol-P&T	S-3886



4,6-Dimethyldibenzo-thiophene

Molecular Weight	212.31
Molecular Formula	$C_{14}H_{12}S$

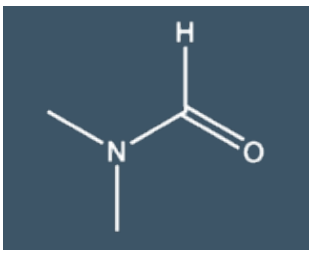
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1207-12-1	Methylene Chloride	S-6055



N,N-Dimethylethanolamine

Molecular Weight	89.138
Molecular Formula	$C_4H_{11}NO$
Density	0.887 g/cm^3
Melting Point	-59 °C
Boiling Point	135 °C

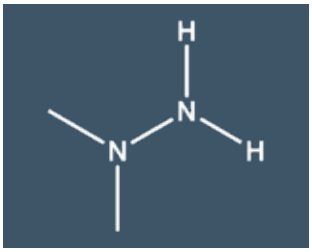
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-01-0	Methanol-P&T	S-2807



Dimethylformamide

Molecular Weight	73.095
Molecular Formula	C_3H_7NO
Density	0.945 g/cm^3
Melting Point	-61 °C
Boiling Point	153 °C

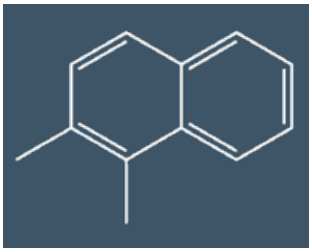
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	68-12-2	Methanol-P&T	S-1620



1,1-Dimethylhydrazine

Molecular Weight	60.1
Molecular Formula	$C_2H_8N_2$
Density	0.782 g/cm^3
Melting Point	-58 °C
Boiling Point	63 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57-14-7	Methanol-P&T	S-1627

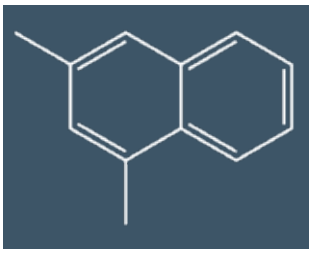


1,2-Dimethylnaphthalene

Molecular Weight	156.228
Molecular Formula	$C_{12}H_{12}$
Density	1.013 g/cm^3
Melting Point	-2 °C
Boiling Point	266 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	573-98-8	Methanol-P&T	S-1630

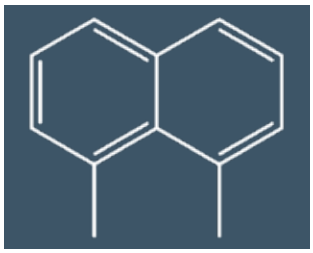
Volume for all Organic Singles is 1 mL



1,3-Dimethylnaphthalene

Molecular Weight	156.228
Molecular Formula	$C_{12}H_{12}$
Density	0.982 g/cm^3
Boiling Point	263 °C

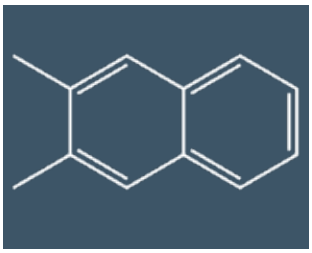
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	575-41-7	Methanol	S-1631



1,8-Dimethylnaphthalene

Molecular Weight	156.228
Molecular Formula	$C_{12}H_{12}$
Melting Point	60 °C
Boiling Point	270 °C

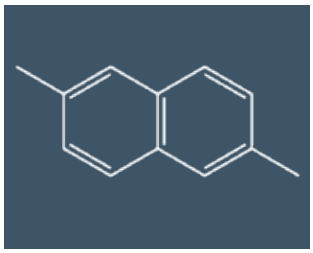
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	569-41-5	Methanol-P&T	S-1636



2,3-Dimethylnaphthalene

Molecular Weight	156.228
Molecular Formula	$C_{12}H_{12}$
Melting Point	103 °C
Boiling Point	269 °C

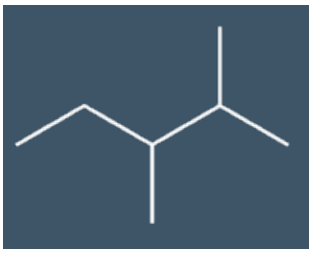
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	581-40-8	Methanol	S-1639



2,6-Dimethylnaphthalene

Molecular Weight	156.228
Molecular Formula	$C_{12}H_{12}$

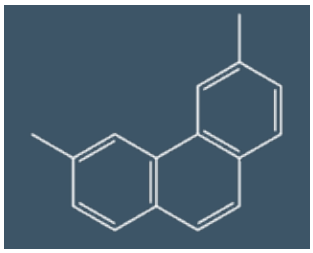
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	581-42-0	Methanol-P&T	S-1640



2,3-Dimethylpentane

Molecular Weight	100.205
Molecular Formula	C_6H_{14}
Density	0.66 g/cm^3
Melting Point	-124 °C
Boiling Point	58 °C

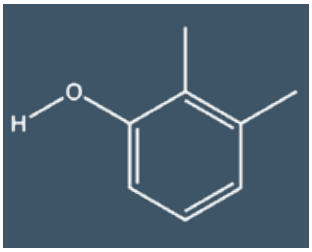
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	565-59-3	Methanol-P&T	S-1650



3,6-Dimethylphenanthrene

Molecular Weight	206.288
Molecular Formula	$C_{16}H_{14}$
Melting Point	141 °C
Boiling Point	145 °C

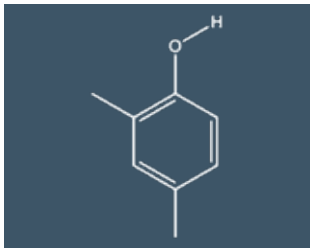
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1576-67-6	Methanol-P&T	S-4002



2,3-Dimethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	1.08 g/cm^3
Melting Point	75 °C
Boiling Point	218 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	526-75-0	Methanol-P&T	S-1659

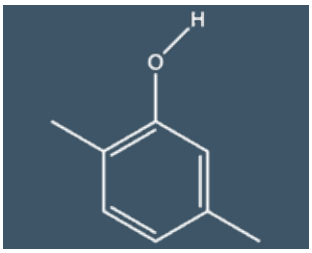


2,4-Dimethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	0.97 g/cm^3
Melting Point	26 °C
Boiling Point	212 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	105-67-9	Methanol-P&T	S-1660

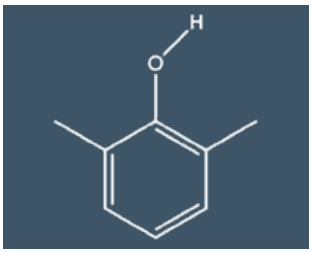
Volume for all Organic Singles is 1 mL



2,5-Dimethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	0.971 g/cm^3
Melting Point	71 to 73 °C
Boiling Point	212 °C

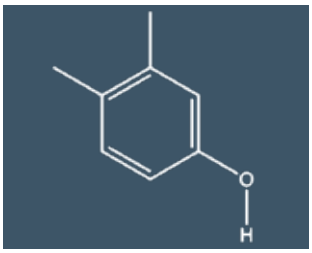
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-87-4	Acetone	S-1661



2,6-Dimethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	1.01 g/cm^3
Melting Point	49 °C
Boiling Point	203 °C

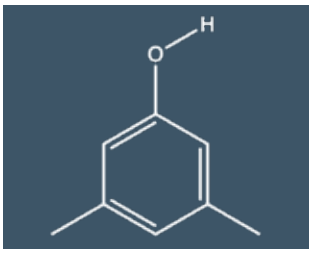
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	576-26-1	Methanol	S-1662



3,4-Dimethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	0.983 g/cm^3
Melting Point	63 °C
Boiling Point	225 °C

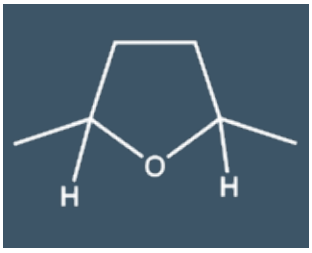
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-65-8	Methanol	S-1664



3,5-Dimethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	0.968 g/cm^3
Melting Point	64 °C
Boiling Point	219 °C

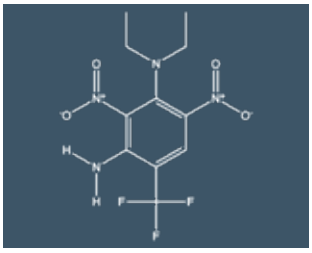
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-68-9	Methanol-P&T	S-1665



2,5-Dimethyltetrahydrofuran
(mix of cis & trans)

Molecular Weight	100.161
Molecular Formula	$C_6H_{12}O$
Density	0.833 g/cm^3
Boiling Point	91 °C

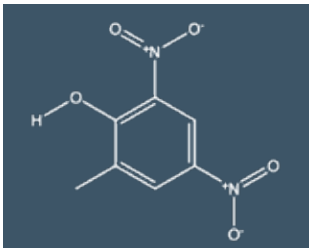
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1003-38-9	Methanol-P&T	S-1668



Dinitramine

Molecular Weight	322.244
Molecular Formula	$C_{11}H_{13}F_3N_4O_4$
Density	1.5 g/cm^3
Melting Point	98 to 99 °C

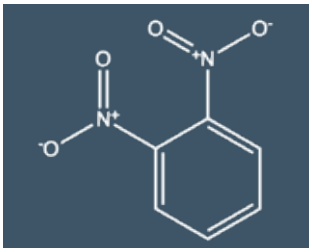
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	29091-05-2	Acetone	S-4052



4,6-Dinitro-2-methylphenol

Molecular Weight	198.134
Molecular Formula	$C_7H_6N_2O_5$
Density	1.58 g/cm^3
Melting Point	87 °C
Boiling Point	312 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	534-52-1	Methylene Chloride	S-1700

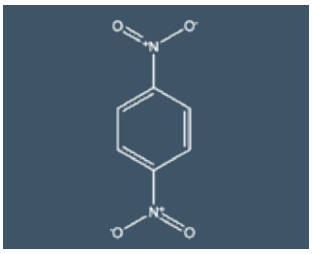


1,2-Dinitrobenzene

Molecular Weight	168.108
Molecular Formula	$C_6H_4(NO_2)_2$
Density	1.31 g/cm^3
Melting Point	118 °C
Boiling Point	319 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	528-29-0	Methanol	S-1670

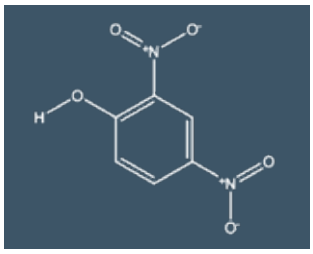
Volume for all Organic Singles is 1 mL



1,4-Dinitrobenzene

Molecular Weight	168.108
Molecular Formula	$C_6H_4(NO_2)_2$
Density	1.625 g/cm^3
Melting Point	173 °C
Boiling Point	299 °C

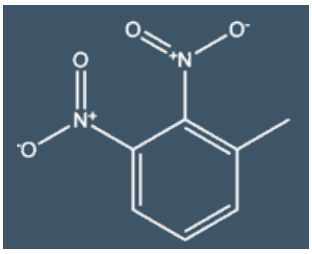
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-25-4	Methanol	S-1675



2,4-Dinitrophenol

Molecular Weight	184.107
Molecular Formula	$C_6H_4N_2O_5$
Density	1.683 g/cm^3
Melting Point	108 °C
Boiling Point	112 °C

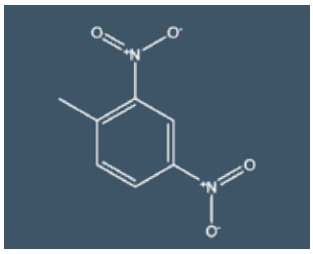
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51-28-5	Methanol-P&T	S-1680



2,3-Dinitrotoluene

Molecular Weight	182.135
Molecular Formula	$C_7H_6N_2O_4$
Density	1.32 g/cm^3
Melting Point	60 °C
Boiling Point	300 °C

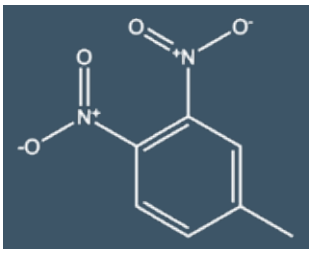
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	602-01-7	Methanol-P&T	S-1689



2,4-Dinitrotoluene

Molecular Weight	182.135
Molecular Formula	$C_7H_6N_2O_5$
Density	1.52 g/cm^3
Melting Point	71 °C
Boiling Point	300 °C

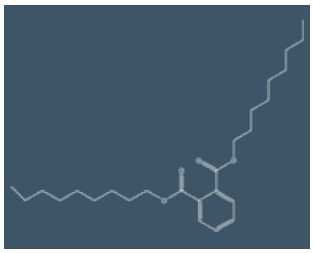
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	121-14-2	Methanol	S-1690



3,4-Dinitrotoluene

Molecular Weight	182.135
Molecular Formula	$C_7H_6N_2O_4$
Density	1.259 g/cm^3
Melting Point	58 °C
Boiling Point	337 °C

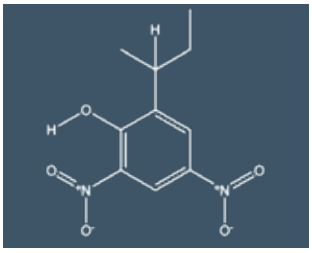
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	610-39-9	Acetonitrile	S-1696



Dinonyl phthalate

Molecular Weight	418.618
Molecular Formula	$C_{26}H_{42}O_4$
Density	0.97 g/cm^3
Boiling Point	413 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84-76-4	Methanol-P&T	S-4153



Dinoseb

Molecular Weight	240.215
Molecular Formula	$C_{10}H_{12}N_2O_5$
Density	0.052 g/cm^3
Melting Point	40 °C
Boiling Point	332 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	88-85-7	Methanol	S-1710

1,4-Dioxane

Molecular Weight	88.106
Molecular Formula	$C_4H_8O_2$
Density	1.036 g/cm^3
Melting Point	12 °C
Boiling Point	101 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-91-1	Ethanol	S-1715-ETOH
		Methanol-P&T	S-1715

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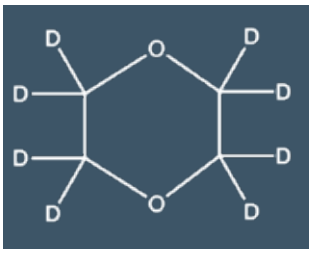
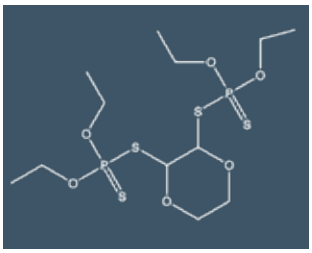
Volume for all Organic Singles is 1 mL



1,4-Dioxane-d8

Molecular Weight	96.155
Molecular Formula	$C_4H_8O_2$
Density	1.129 g/cm³
Boiling Point	99 °C

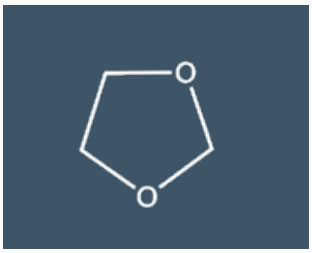
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	17647-74-4	Methanol-P&T	S-1716



Dioxathion

Molecular Weight	456.522
Molecular Formula	$C_{12}H_{26}O_6P_2S_4$
Density	1.257 g/cm³
Melting Point	-20 °C
Boiling Point	64 °C

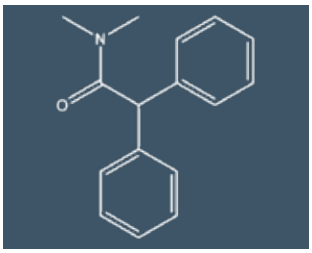
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-34-2	Methanol	S-1720



1,3-Dioxolane

Molecular Weight	74.079
Molecular Formula	$C_3H_6O_2$
Density	1.06 g/cm³
Melting Point	-95 °C
Boiling Point	78 °C

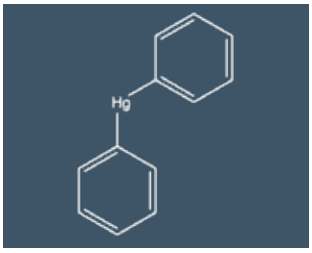
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	646-06-0	Methanol-P&T	S-1725



Diphenamid

Molecular Weight	239.318
Molecular Formula	$C_{16}H_{17}NO$
Density	1.2 g/cm³
Melting Point	135 °C

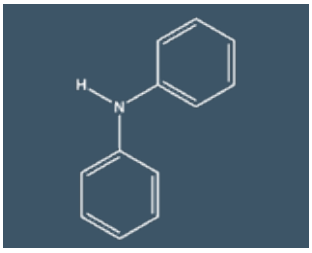
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	957-51-7	Acetone	S-1730



Diphenyl mercury

Molecular Weight	354.804
Molecular Formula	$C_{12}H_{10}Hg$
Density	2.32 g/cm³
Melting Point	122 °C
Boiling Point	204 °C

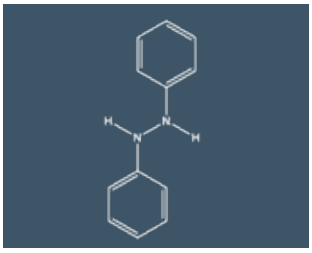
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	587-85-9	Methanol-P&T	S-1735



Diphenylamine

Molecular Weight	169.227
Molecular Formula	$C_{12}H_{11}N$
Density	1.2 g/cm³
Melting Point	53 °C
Boiling Point	302 °C

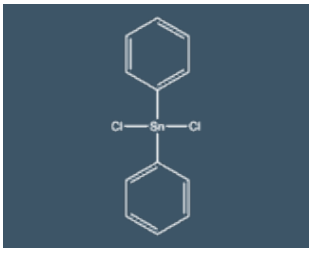
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	122-39-4	Methanol-P&T	S-1740



1,2-Diphenylhydrazine

Molecular Weight	184.242
Molecular Formula	$C_{12}H_{12}N_2$
Density	1.16 g/cm³
Melting Point	131 °C
Boiling Point	293 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	122-66-7	Methanol-P&T	S-1750

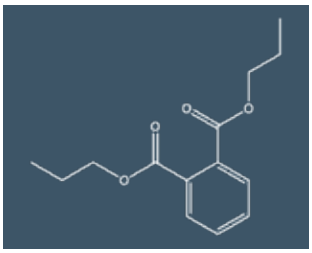


Diphenyltin dichloride

Molecular Weight	343.822
Molecular Formula	$C_{12}H_{10}Cl_2Sn$
Melting Point	42 °C
Boiling Point	335 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1135-99-5	Methanol	S-4979

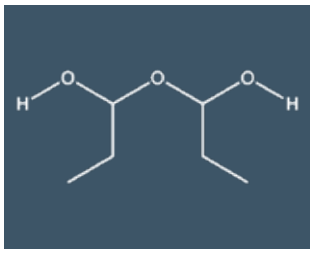
Volume for all Organic Singles is 1 mL



Dipropyl phthalate

Molecular Weight	250.294
Molecular Formula	$C_{14}H_{18}O_4$
Density	1.078 g/cm^3
Boiling Point	318 °C

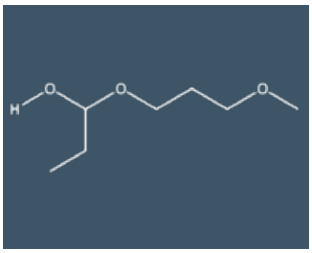
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	131-16-8	Methanol-P&T	S-4491



Dipropylene glycol

Molecular Weight	134.175
Molecular Formula	$C_6H_{14}O_3$
Density	1.02 g/cm^3
Boiling Point	231 °C

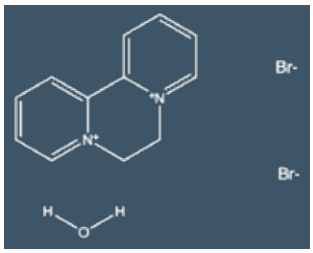
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25265-71-8	Methanol-P&T	S-1751



Dipropylene glycol methyl ether

Molecular Weight	148.2
Molecular Formula	$C_7H_{16}O_3$
Density	0.954 g/cm^3
Melting Point	-80 °C
Boiling Point	90 to 91 °C

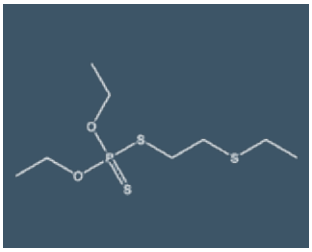
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	34590-94-8	Methanol-P&T	S-4174



Diquat dibromide monohydrate

Molecular Weight	362.065
Molecular Formula	$C_{12}H_{14}BrN_2O$

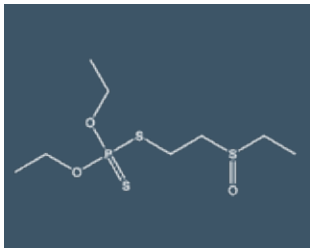
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6385-62-2	Methanol-P&T	S-1752



Disulfoton

Molecular Weight	274-4
Molecular Formula	$C_8H_{19}O_2PS_3$
Density	1.14 g/cm^3
Melting Point	-25 °C
Boiling Point	128 °C

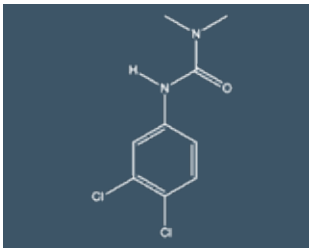
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	298-04-4	Methanol	S-1755



Disulfoton sulfoxide

Molecular Weight	290.391
Molecular Formula	$C_8H_{19}O_3PS_3$

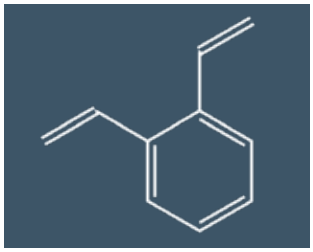
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2497-07-6	Acetone	S-1757



Diuron

Molecular Weight	233.1
Molecular Formula	$C_9H_{10}Cl_2N_2O$
Density	1.48 g/cm^3
Melting Point	157 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	330-54-1	Methanol	S-1760

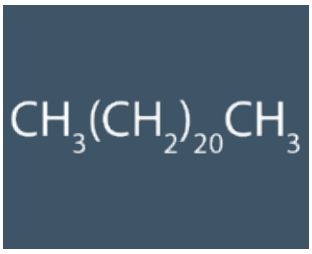


Divinylbenzene

Molecular Weight	130.19
Molecular Formula	$C_{10}H_{10}$
Density	0.914 g/cm^3
Melting Point	-52 °C
Boiling Point	195 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1321-74-0	Methanol-P&T	S-1765

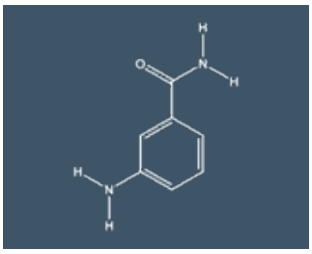
Volume for all Organic Singles is 1 mL



n-Docosane

Molecular Weight	310.61
Molecular Formula	$C_{22}H_{46}$
Density	0.794 g/cm³
Melting Point	44 °C
Boiling Point	369 °C

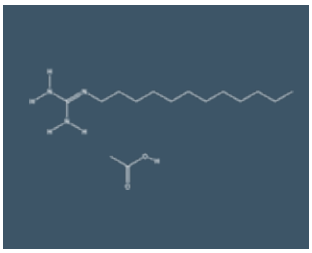
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	629-97-0	Methylene Chloride	S-1790



n-Dodecane

Molecular Weight	170.34
Molecular Formula	$C_{12}H_{26}$
Density	0.749 g/cm³
Melting Point	-10 °C
Boiling Point	216 °C

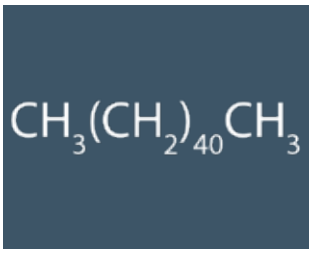
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112-40-3	Methanol	S-1795-MEOH
		Methylene Chloride	S-1795



Dodine

Molecular Weight	287.448
Molecular Formula	$C_{15}H_{33}N_3O_2$
Melting Point	136 °C

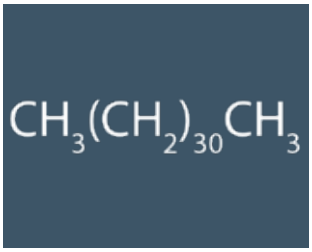
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2439-10-3	Methanol-P&T	S-1807



n-Dotetracontane

Molecular Weight	591.15
Molecular Formula	$C_{42}H_{86}$

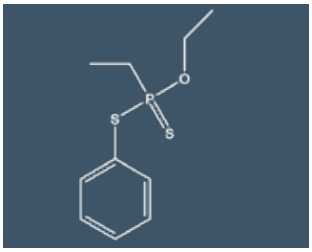
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7098-20-6	Carbon Disulfide	S-1809



n-Dotriacontane

Molecular Weight	450.88
Molecular Formula	$C_{32}H_{66}$
Density	0.812 g/cm³
Melting Point	70 °C
Boiling Point	470 °C

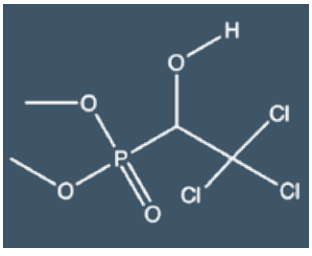
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	544-85-4	Methylene Chloride	S-1810



Dyfonate (Fonofos)

Molecular Weight	246.3
Molecular Formula	$C_{10}H_{15}OPS_2$
Density	1.16 g/cm³
Melting Point	30 °C
Boiling Point	130 °C

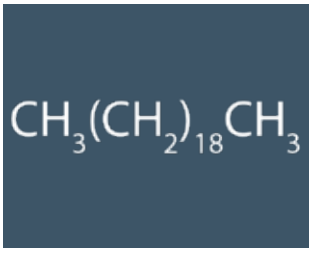
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	944-22-9	Methanol-P&T	S-1815



Dylox

Molecular Weight	257.428
Molecular Formula	$C_4H_8Cl_3O_4P$
Density	1.57 g/cm³
Melting Point	80 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	52-68-6	Acetone	S-1816

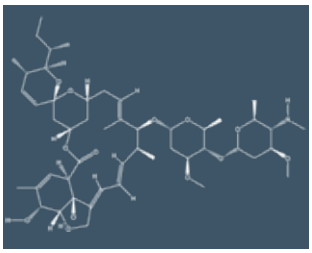


n-Eicosane

Molecular Weight	282.556
Molecular Formula	$C_{20}H_{42}$
Density	0.789 g/cm³
Melting Point	98 °C
Boiling Point	344 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112-95-8	Methylene Chloride	S-1820

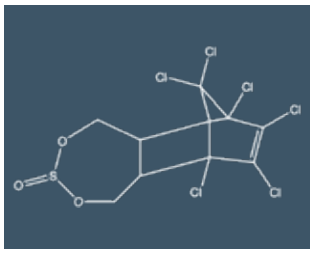
Volume for all Organic Singles is 1 mL



Emamectin

Molecular Weight	886.133
Molecular Formula	$C_{49}H_{75}NO_{13}$
Density	1.20 g/cm^3
Melting Point	141 to 146 °C

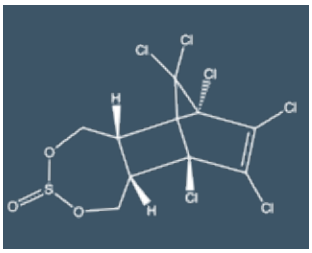
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119791-41-2	Acetonitrile	S-5507-ACN



Endosulfan

Molecular Weight	406.904
Molecular Formula	$C_9H_6Cl_6O_3S$
Density	1.745 g/cm^3
Melting Point	106 °C

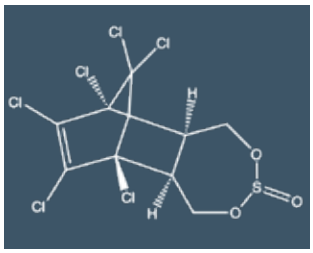
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-29-7	Methanol-P&T	S-1824



Endosulfan I

Molecular Weight	406.904
Molecular Formula	$C_9H_6Cl_6O_3S$
Density	1.94 g/cm^3
Melting Point	208 to 210 °C

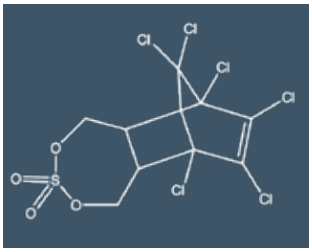
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	959-98-8	Acetone	S-1825-AC
		Methanol-P&T	S-1825



Endosulfan II

Molecular Weight	406.904
Molecular Formula	$C_9H_6Cl_6O_3S$
Melting Point	408 °C

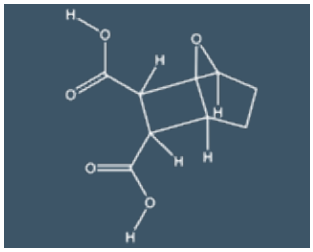
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	33213-65-9	Methanol-P&T	S-1830



Endosulfan sulfate

Molecular Weight	422.903
Molecular Formula	$C_9H_6Cl_6O_4S$
Melting Point	181 to 182 °C

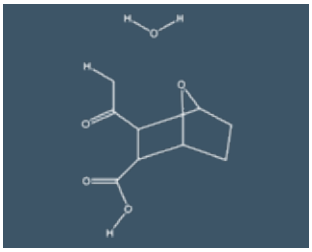
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1031-07-8	Methanol	S-1835



Endothall dimethyl ester

Molecular Weight	186.163
Molecular Formula	$C_8H_{10}O_5$

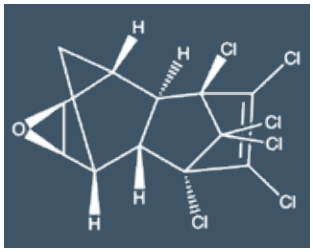
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	145-73-3	Methanol	S-1842



Endothal monohydrate

Molecular Weight	204.178
Molecular Formula	$C_8H_{10}O_5$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	62059-43-2	Methanol	S-1840

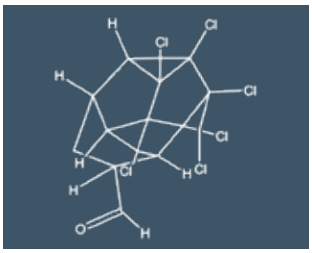


Endrin

Molecular Weight	380.9
Molecular Formula	$C_{12}H_8Cl_6O$
Density	1.84 g/cm^3
Melting Point	200 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	72-20-8	Methanol	S-1845

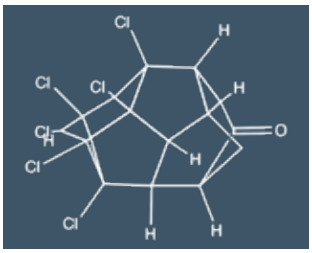
Volume for all Organic Singles is 1 mL



Endrin aldehyde

Molecular Weight	380.9
Molecular Formula	$C_{12}H_8Cl_6O$
Density	1.72 g/cm^3
Melting Point	152 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7421-93-4	Methanol	S-1850



Endrin ketone

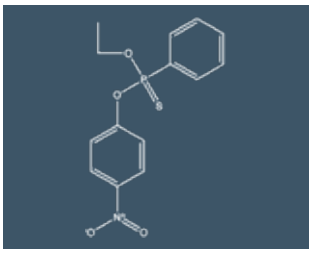
Molecular Weight	380.9
Molecular Formula	$C_{12}H_8Cl_6O$
Melting Point	285 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	53494-70-5	Methanol	S-1855

Epichlorohydrin

Molecular Weight	95.522
Molecular Formula	C_3H_5ClO
Density	1.175 g/cm^3
Melting Point	-26 °C
Boiling Point	117 °C

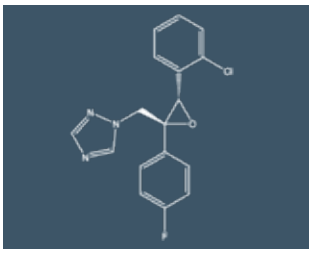
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-89-8	Methanol-P&T	S-1860



EPN

Molecular Weight	323.3
Molecular Formula	$C_{14}H_{14}NO_4PS$
Density	1.27 g/cm^3
Melting Point	35 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2104-64-5	Methanol	S-1865



Epoxiconazole

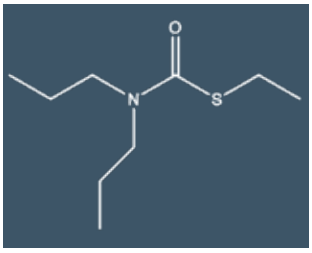
Molecular Weight	329.8
Molecular Formula	$C_{17}H_{13}ClFN_3O$
Density	1.38 g/cm^3
Melting Point	137 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	133855-98-8	Methanol	S-4923

1,2-Epoxybutane

Molecular Weight	72.107
Molecular Formula	C_4H_8O
Density	0.83 g/cm^3
Melting Point	-150 °C
Boiling Point	63 °C

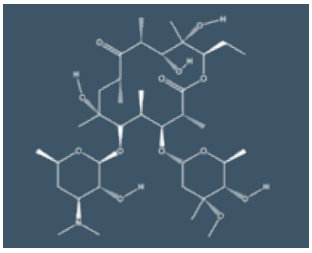
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-88-7	Methanol-P&T	S-1867



EPTC

Molecular Weight	189.137
Density	0.955 g/cm^3
Boiling Point	232 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	759-94-4	Methanol	S-1870

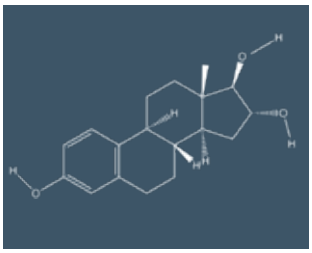


Erythromycin

Molecular Weight	733.937
Molecular Formula	$C_{37}H_{67}NO_{13}$
Melting Point	191 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	114-07-8	Methanol	S-1871

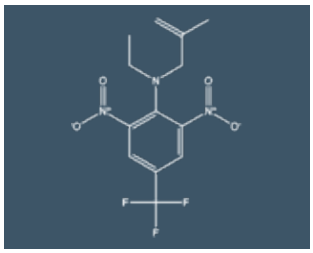
Volume for all Organic Singles is 1 mL



Estriol

Molecular Weight	288.387
Molecular Formula	$C_{18}H_{24}O_3$
Density	1.27 g/cm^3
Melting Point	282 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	50-27-1	Methanol	S-5541



Ethalfluralin

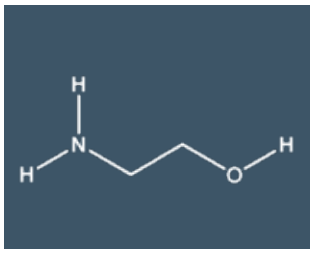
Molecular Weight	333.267
Molecular Formula	$C_{13}H_{14}F_3N_3O_4$
Melting Point	55 °C
Boiling Point	256 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	55283-68-6	Methanol-P&T	S-1875

Ethane

Molecular Weight	30.07
Molecular Formula	C_2H_6
Density	0.546 g/cm^3
Melting Point	-183 °C
Boiling Point	-89 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-84-0	Methanol-P&T	S-1880



Ethanolamine

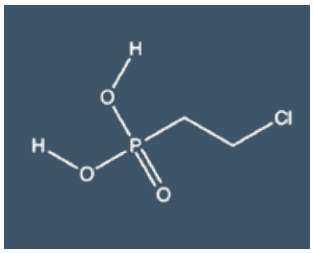
Molecular Weight	61.084
Molecular Formula	C_2H_7NO
Density	1.016 g/cm^3
Melting Point	10 °C
Boiling Point	171 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	141-43-5	Ethanol	S-1890

Ethene (Ethylene)

Molecular Weight	28.054
Molecular Formula	C_2H_4
Density	0.118 g/cm^3
Melting Point	-169 °C
Boiling Point	-104 °C

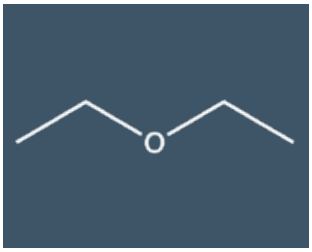
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-85-1	Methanol-P&T	S-1895



Ethephon

Molecular Weight	144.491
Molecular Formula	$C_2H_6ClO_3P$
Density	1.2 g/cm^3
Melting Point	74 to 75 °C
Boiling Point	265 °C

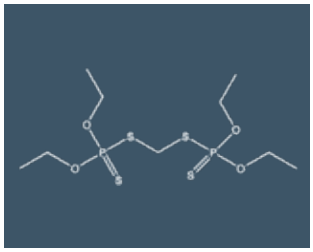
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	16672-87-0	Acetonitrile	S-4682-ACN
		Methanol	S-4682



Ether

Molecular Weight	74.123
Molecular Formula	$C_4H_{10}O$
Density	0.714 g/cm^3
Melting Point	-116 °C
Boiling Point	35 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	60-29-7	Methanol-P&T	S-1900



Ethion

Molecular Weight	384.5
Molecular Formula	$C_9H_{22}O_4P_2S_4$
Density	1.22 g/cm^3
Melting Point	-12 °C
Boiling Point	165 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	563-12-2	Acetone	S-1905-AC
		Methanol-P&T	S-1905

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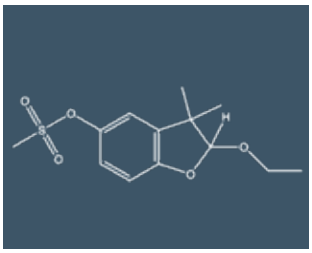
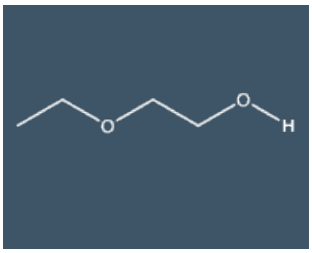
Volume for all Organic Singles is 1 mL



Ethofumesate

Molecular Weight	286.342
Molecular Formula	$C_{13}H_{18}O_5S$
Density	1.29 g/cm^3
Melting Point	71 °C

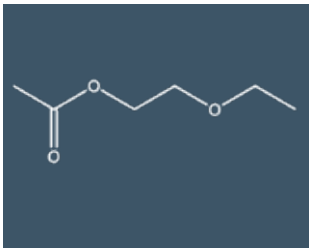
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	26225-79-6	Methanol-P&T	S-3959



2-Ethoxyethanol

Molecular Weight	90.122
Molecular Formula	$C_4H_{10}O_2$
Density	0.925 g/cm^3
Melting Point	-70 °C
Boiling Point	135 °C

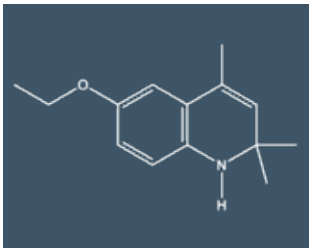
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-80-5	Methanol-P&T	S-1910



2-Ethoxyethyl acetate

Molecular Weight	132.159
Molecular Formula	$C_6H_{12}O_3$
Density	0.974 g/cm^3
Melting Point	-62 °C
Boiling Point	156 °C

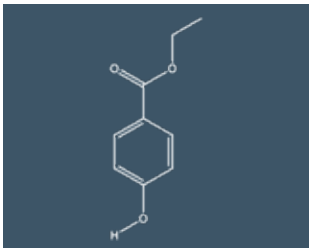
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-15-9	Methanol-P&T	S-1912



Ethoxyquin

Molecular Weight	217.312
Molecular Formula	$C_{14}H_{19}NO$
Density	1.029 g/cm^3
Melting Point	156 °C
Boiling Point	124 °C

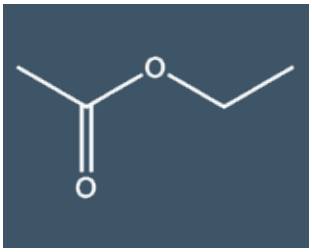
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91-53-2	Methanol-P&T	S-1913



Ethyl 4-hydroxybenzoate

Molecular Weight	166.176
Molecular Formula	$C_9H_{10}O_3$
Melting Point	116 °C
Boiling Point	297 °C

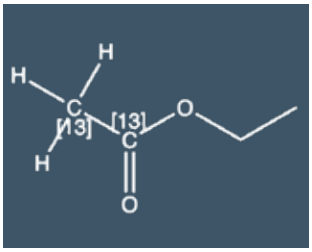
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-47-8	Methanol-P&T	S-1928



Ethyl acetate

Molecular Weight	88.106
Molecular Formula	$C_4H_8O_2$
Density	0.902 g/cm^3
Melting Point	-84 °C
Boiling Point	77 °C

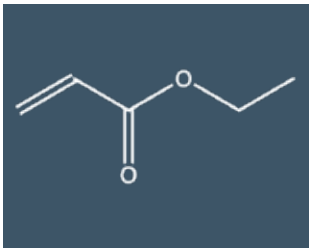
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	141-78-6	Methanol-P&T	S-1920



Ethyl acetate-1,2-13C2

Molecular Weight	90.091
Density	0.922 g/cm^3
Melting Point	-84 °C
Boiling Point	77 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84508-45-2	Methanol-P&T	S-1921

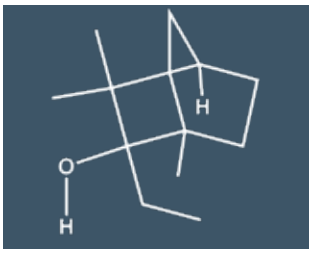


Ethyl acrylate

Molecular Weight	100.117
Molecular Formula	$C_5H_8O_2$
Density	0.923 g/cm^3
Melting Point	-71 °C
Boiling Point	99 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	140-88-5	Methanol	S-4541

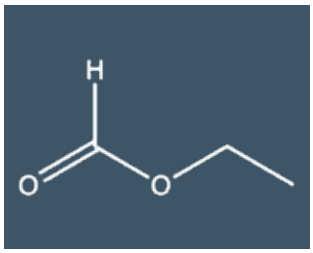
Volume for all Organic Singles is 1 mL



2-Ethyl-fenchol

Molecular Weight	182.307
Molecular Formula	$C_{12}H_{22}O$

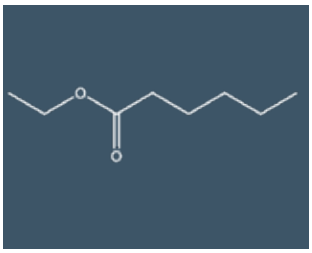
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	18368-91-7	Ethanol	S-4952



Ethyl formate

Molecular Weight	74.079
Molecular Formula	$C_3H_6O_2$
Density	0.92 g/cm^3
Melting Point	-80 °C
Boiling Point	53 °C

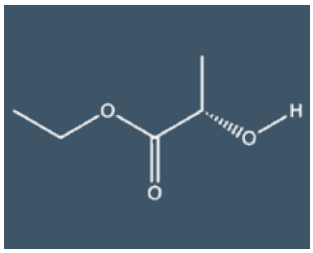
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-94-4	Methanol-P&T	S-4279



Ethyl hexanoate

Molecular Weight	144.214
Molecular Formula	$C_8H_{16}O_2$
Density	0.87 g/cm^3
Melting Point	-67 °C
Boiling Point	168 °C

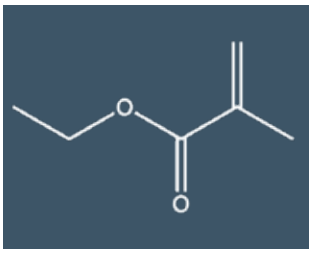
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-66-0	Methanol-P&T	S-5480



Ethyl lactate

Molecular Weight	118.132
Molecular Formula	$C_5H_{10}O_3$
Density	1.03 g/cm^3
Melting Point	-26 °C
Boiling Point	154 °C

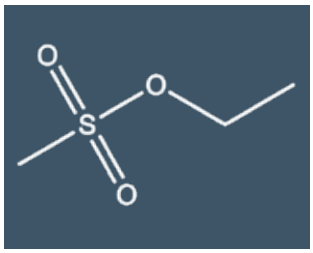
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	687-47-8	Methanol-P&T	S-1973



Ethyl methacrylate

Molecular Weight	114.144
Molecular Formula	$C_6H_{10}O_2$
Density	0.917 g/cm^3
Melting Point	-75 °C
Boiling Point	117 °C

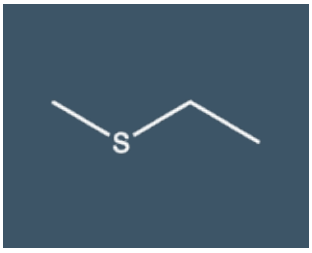
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	97-63-2	Methanol-P&T	S-1975



Ethyl methanesulfonate

Molecular Weight	124.154
Molecular Formula	$C_3H_8O_3S$
Density	1.145 g/cm^3
Boiling Point	213 °C

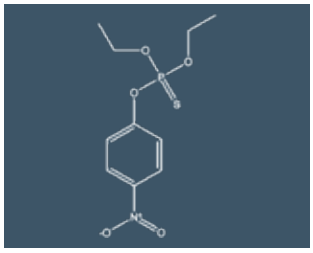
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	62-50-0	Methanol-P&T	S-1930



Ethyl methyl sulfide

Molecular Weight	76.157
Molecular Formula	C_3H_8S
Density	0.842 g/cm^3
Melting Point	-105 °C
Boiling Point	66 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	624-89-5	Methanol-P&T	S-1976



Ethyl parathion

Molecular Weight	291.258
Molecular Formula	$C_{10}H_{14}NO_5PS$
Density	1.26 g/cm^3
Melting Point	6 °C
Boiling Point	375 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-38-2	Methanol	S-1935

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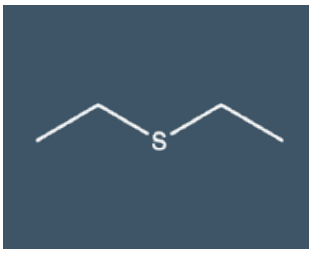
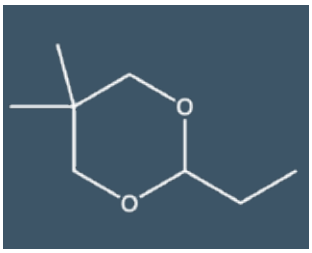
Volume for all Organic Singles is 1 mL



Ethyl sulfide

Molecular Weight	90.184
Molecular Formula	$C_4H_{10}S$
Density	0.837 g/cm^3
Melting Point	-104 °C
Boiling Point	92 °C

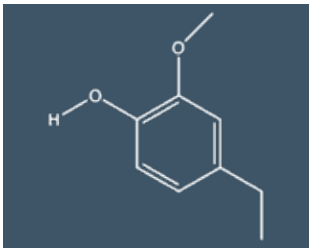
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	352-93-2	Methanol-P&T	S-1521



2-Ethyl-5,5-dimethyl-1,3-dioxane (2-EDD)

Molecular Weight	144.214
Molecular Formula	$C_8H_{16}O_2$
Boiling Point	154 °C

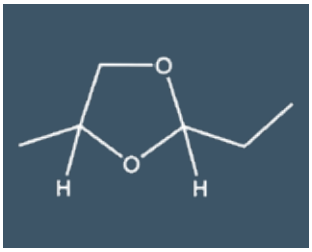
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	768-58-1	Methanol	S-5785



4-Ethyl-2-methoxyphenol

Molecular Weight	152.193
Molecular Formula	$C_9H_{12}O_2$
Melting Point	15 °C
Boiling Point	235 °C

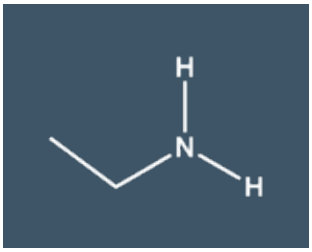
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2785-89-9	Methanol-P&T	S-4183



2-Ethyl-4-methyl-1,3-dioxolane (2-EMD) isomer

Molecular Weight	116.16
Molecular Formula	$C_6H_{12}O_2$

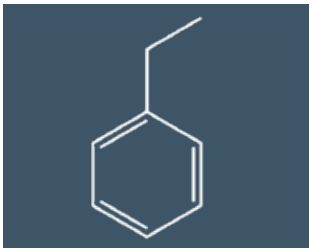
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4359-46-0	Methanol	S-5789



Ethylamine

Molecular Weight	45.085
Molecular Formula	C_2H_7N
Density	0.688 g/cm^3
Melting Point	17 °C
Boiling Point	81 °C

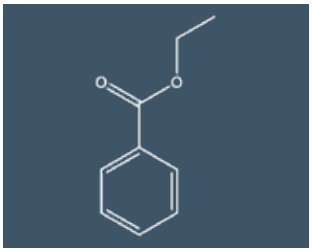
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-04-7	Methanol-P&T	S-1938



Ethylbenzene

Molecular Weight	106.168
Molecular Formula	C_8H_{10}
Density	0.863 g/cm^3
Melting Point	-95 °C
Boiling Point	136 °C

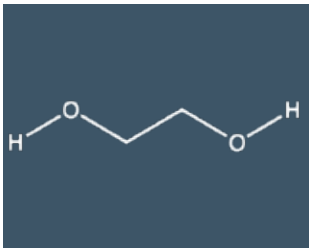
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-41-4	Methanol-P&T	S-1940



Ethylbenzoate

Molecular Weight	150.17
Molecular Formula	$C_9H_{10}O_2$
Density	1.05 g/cm^3
Melting Point	-34 °C
Boiling Point	213 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93-89-0	Methanol-P&T	S-1945

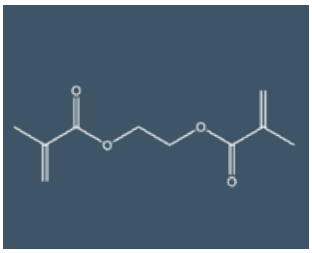


Ethylene glycol

Molecular Weight	62.068
Molecular Formula	$C_2H_6O_2$
Density	1.115 g/cm^3
Melting Point	-13 °C
Boiling Point	198 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-21-1	Methanol-P&T	S-1952

Volume for all Organic Singles is 1 mL



Ethylene glycol dimethacrylate

Molecular Weight	198.218
Molecular Formula	$C_{10}H_{14}O_4$
Density	1.05 g/cm^3
Melting Point	-40 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	97-90-5	Methanol-P&T	S-1954

Ethylene oxide

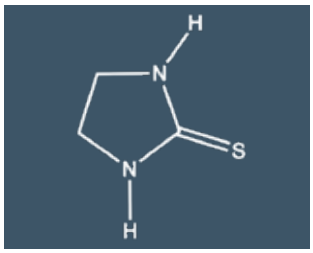
Molecular Weight	44.053
Molecular Formula	C_2H_4O
Density	0.822 g/cm^3
Melting Point	-111 °C
Boiling Point	11 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-21-8	Isopropanol	S-1960-IPA
		Methanol-P&T	S-1960

Ethyleneimine

Molecular Weight	43.069
Molecular Formula	C_2H_5N
Density	0.832 g/cm^3
Melting Point	-74 °C
Boiling Point	56 °C

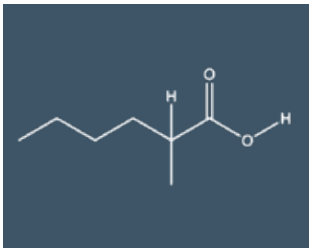
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	151-56-4	Methanol-P&T	S-1955



Ethylenethiourea

Molecular Weight	102.155
Molecular Formula	$C_3H_6N_2S$
Density	1.27 g/cm^3
Melting Point	203 °C
Boiling Point	347 °C

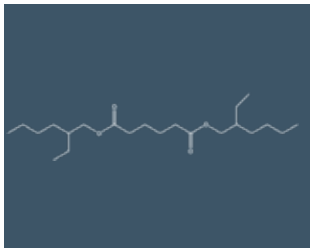
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	96-45-7	Methanol-P&T	S-1962



2-Ethylhexanoic acid

Molecular Weight	144.214
Density	0.903 g/cm^3
Melting Point	-59 °C
Boiling Point	227 °C

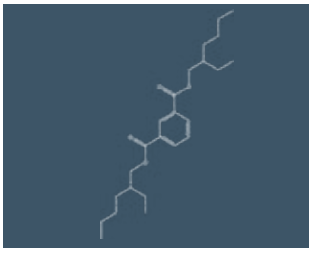
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	149-57-5	Methanol-P&T	S-1927



bis(2-Ethylhexyl)adipate

Molecular Weight	370.574
Molecular Formula	$C_{22}H_{42}O_4$
Density	0.93 g/cm^3
Melting Point	-68 °C
Boiling Point	417 °C

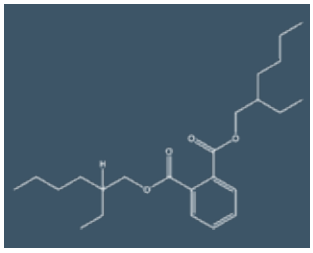
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	103-23-1	Methanol-P&T	S-1965



bis(2-Ethylhexyl) isophthalate

Molecular Weight	390.564
Molecular Formula	$C_{24}H_{38}O_4$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	137-89-3	Methanol-P&T	S-4928



bis(2-Ethylhexyl) phthalate

Molecular Weight	390.564
Molecular Formula	$C_{24}H_{38}O_4$
Density	0.981 g/cm^3
Melting Point	-50 °C
Boiling Point	385 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	117-81-7	Methanol	S-1970

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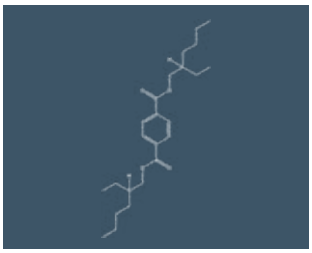
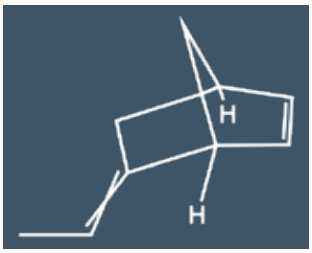
Volume for all Organic Singles is 1 mL



bis(2-Ethylhexyl) terephthalate

Molecular Weight	390.564
Molecular Formula	$C_{24}H_{38}O_4$
Density	0.983 g/cm^3
Melting Point	48 °C
Boiling Point	383 °C

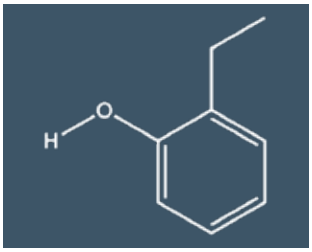
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6422-86-2	Methanol	S-5459



5-Ethylidene-2-norbornene

Molecular Weight	120.195
Molecular Formula	C_9H_{12}
Density	0.896 g/cm^3
Melting Point	-80 °C
Boiling Point	148 °C

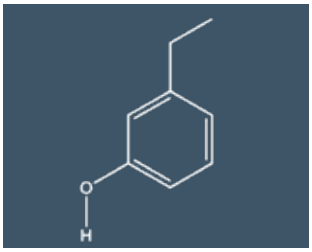
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	16219-75-3	Methanol-P&T	S-1972



2-Ethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	1.037 g/cm^3
Melting Point	-18 °C
Boiling Point	205 °C

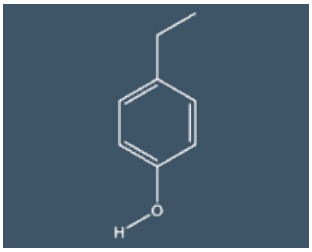
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90-00-6	Methanol-P&T	S-1983



3-Ethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	1.028 g/cm^3

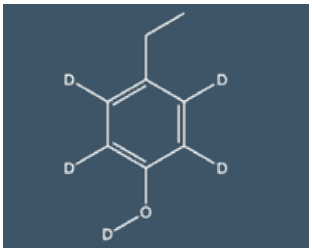
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	620-17-7	Methanol-P&T	S-4300



4-Ethylphenol

Molecular Weight	122.167
Molecular Formula	$C_8H_{10}O$
Density	1.011 g/cm^3
Melting Point	43 °C
Boiling Point	218 °C

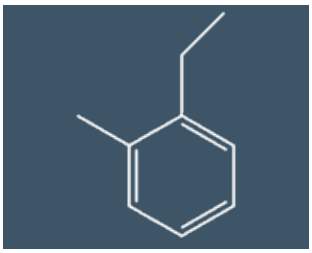
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-07-9	Methanol-P&T	S-1985



4-Ethylphenol-2,3,5,6-d$_4$, OD

Molecular Weight	127.198
Molecular Formula	$C_8H_{10}O$

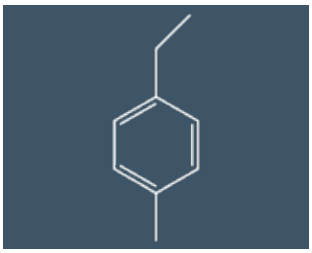
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	340256-40-8	Methanol	S-6156



2-Ethyltoluene

Molecular Weight	120.195
Molecular Formula	C_9H_{12}
Density	0.881 g/cm^3
Melting Point	-80 °C
Boiling Point	165 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	611-14-3	Methanol-P&T	S-1984

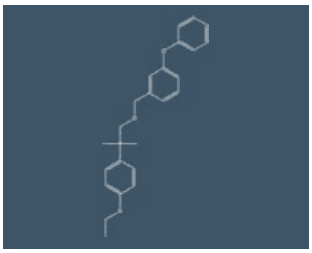


4-Ethyltoluene

Molecular Weight	120.195
Molecular Formula	C_9H_{12}
Density	0.861 g/cm^3
Boiling Point	162 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	622-96-8	Methanol-P&T	S-1990

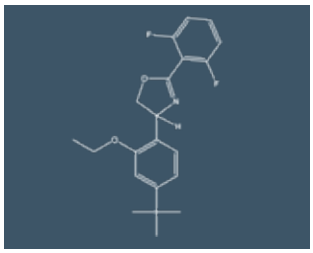
Volume for all Organic Singles is 1 mL



Etofenprox

Molecular Weight	376.5
Molecular Formula	$C_{25}H_{28}O_3$
Density	1.17 g/cm^3
Melting Point	37 °C
Boiling Point	Decomposes

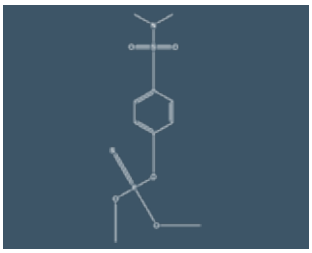
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	80844-07-1	Acetonitrile	S-6104



Etoxazole

Molecular Weight	359.4
Molecular Formula	$C_{21}H_{23}F_2NO_2$
Density	1.24 g/cm^3
Melting Point	102 °C

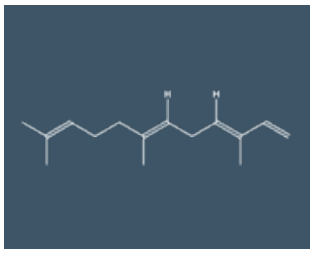
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	153233-91-1	Acetonitrile	S-5670



Famphur

Molecular Weight	325.334
Molecular Formula	$C_{10}H_{16}NO_5PS_2$

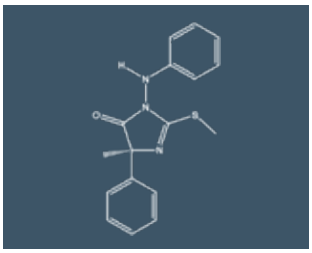
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	52-85-7	Methanol	S-1995



Farnesene (mix of isomers)

Molecular Weight	204.357
Molecular Formula	$C_{15}H_{24}$
Density	0.813 g/cm^3
Boiling Point	124 °C

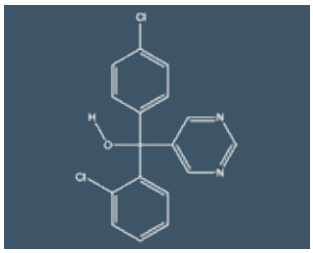
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	502-61-4	Methanol-P&T	S-1989



Fenamidone

Molecular Weight	311.403
Molecular Formula	$C_{17}H_{17}N_3OS$

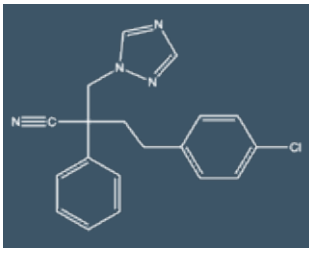
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	161326-34-7	Acetonitrile	S-4966-ACN



Fenarimol

Molecular Weight	331.196
Molecular Formula	$C_{17}H_{12}Cl_2N_2O$
Melting Point	118 °C
Boiling Point	240 °C

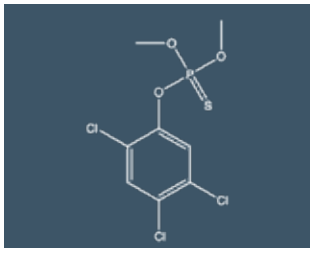
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	60168-88-9	Methanol-P&T	S-1997



Fenbuconazole

Molecular Weight	336.823
Molecular Formula	$C_{19}H_{17}ClN_4$
Melting Point	125 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	114369-43-6	Methanol-P&T	S-3985

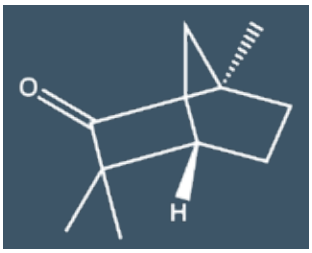


Fenchlorphos (Ronnel)

Molecular Weight	321.533
Molecular Formula	$C_8H_8Cl_3O_3PS$
Density	1.49 g/cm^3
Melting Point	41 °C
Boiling Point	97 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	299-84-3	Methanol	S-2000

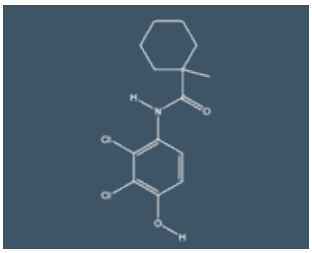
Volume for all Organic Singles is 1 mL



L(-)Fenchone

Molecular Weight	152.237
Molecular Formula	$C_{10}H_{16}O$
Density	0.948 g/cm^3
Melting Point	6 °C
Boiling Point	194 °C

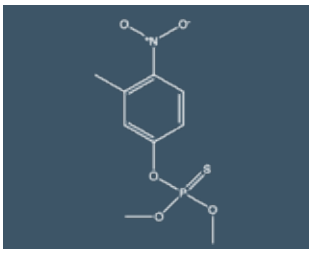
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7787-20-4	Methanol-P&T	S-5091



Fenhexamid

Molecular Weight	302.2
Molecular Formula	$C_{14}H_{17}Cl_2NO_2$
Density	1.34 g/cm^3
Melting Point	154 °C
Boiling Point	230 °C

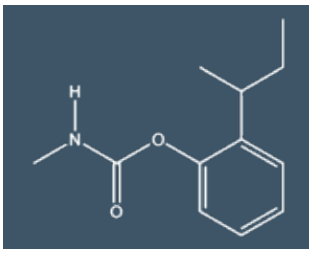
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126833-17-8	Acetonitrile	S-4962-ACN



Fenitrothion

Molecular Weight	277.2
Molecular Formula	$C_9H_{12}NO_5PS$
Density	1.33 g/cm^3
Melting Point	3 °C
Boiling Point	Decomposes

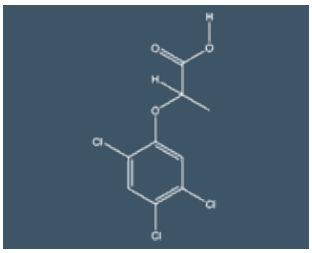
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	122-14-5	Acetone	S-2001



Fenobucarb

Molecular Weight	207.3
Molecular Formula	$C_{12}H_{17}NO_2$
Density	1.04 g/cm^3
Melting Point	31 °C
Boiling Point	Decomposes

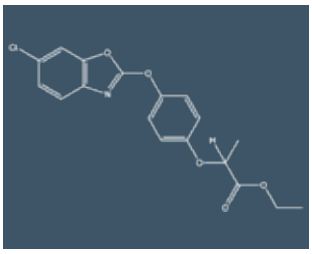
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3766-81-2	Acetone	S-4610-AC



Fenoprop (Silvex)

Molecular Weight	269.5
Molecular Formula	$C_9H_7Cl_3O_3$
Density	1.21 g/cm^3
Melting Point	180 °C

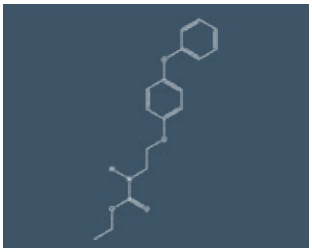
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93-72-1	Methyl Tertiary Butyl Ether	S-3660



Fenoxaprop-ethyl

Molecular Weight	361.778
Molecular Formula	$C_{18}H_{16}ClNO_5$
Density	1.31 g/cm^3
Melting Point	85 °C
Boiling Point	200 °C

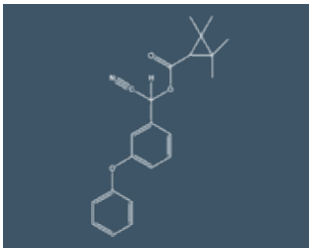
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	66441-23-4	Methanol	S-2002



Fenoxycarb

Molecular Weight	301.3
Molecular Formula	$C_{17}H_{19}NO_4$
Density	1.23 g/cm^3
Melting Point	54 °C
Boiling Point	100 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79127-80-3	Methanol	S-5463

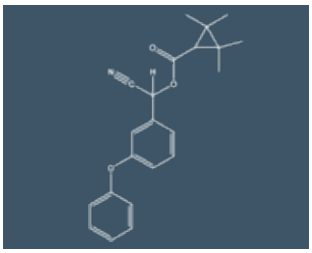


Fenpropathrin

Molecular Weight	349.4
Molecular Formula	$C_{22}H_{23}NO_3$
Density	1.15 g/cm^3
Melting Point	47 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	39515-41-8	Acetone	S-5781

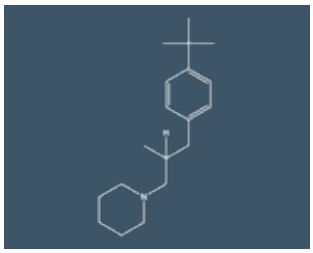
Volume for all Organic Singles is 1 mL



Fenpropathrin

Molecular Weight	349.43
Molecular Formula	$C_{22}H_{23}NO_3$
Melting Point	47 °C

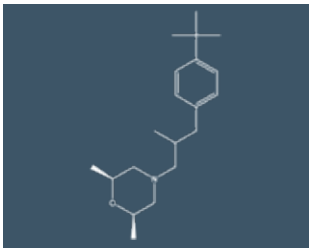
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	64257-84-7	Methanol-P&T	S-4246



Fenpropidin

Molecular Weight	273.464
Molecular Formula	$C_{19}H_{31}N$
Density	0.92 g/cm^3
Melting Point	-64 °C
Boiling Point	100 °C

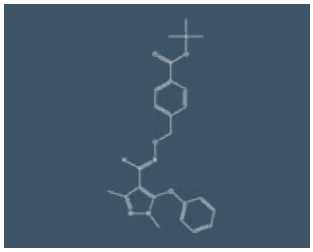
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67306-00-7	Methanol-P&T	S-2004



Fenpropimorph

Molecular Weight	303.49
Molecular Formula	$C_{20}H_{33}NO$
Density	0.43 g/cm^3
Boiling Point	120 °C

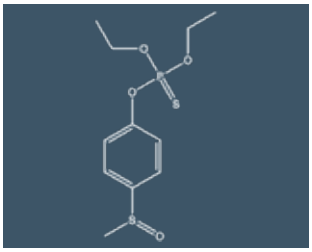
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67564-91-4	Methanol-P&T	S-2003



(E)-Fenpyroximate

Molecular Weight	421.497
Molecular Formula	$C_{24}H_{27}N_3O_4$
Density	1.25 g/cm^3
Melting Point	101 to 102 °C

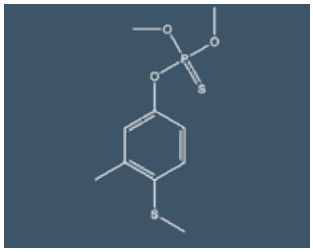
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	134098-61-6	Acetonitrile	S-6179



Fensulfothion

Molecular Weight	308.347
Molecular Formula	$C_{11}H_{17}O_4PS_2$
Density	1.202 g/cm^3
Boiling Point	138 to 141 °C @ 0.01 mm Hg

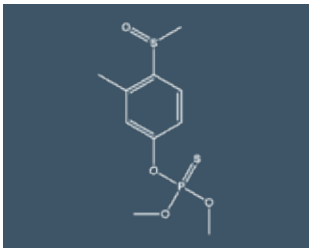
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-90-2	Acetone	S-2005



Fenthion

Molecular Weight	278.3
Molecular Formula	$C_{10}H_{15}O_3PS_2$
Density	1.25 g/cm^3
Melting Point	7 °C
Boiling Point	90 °C

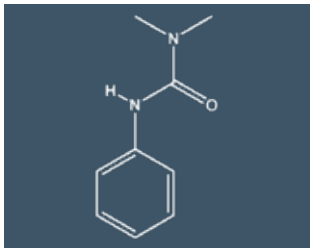
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	55-38-9	Acetone	S-2010



Fenthion sulfoxide

Molecular Weight	294.32
Molecular Formula	$C_{10}H_{15}O_4PS_2$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3761-41-9	Acetonitrile	S-4316-ACN



Fenuron

Molecular Weight	164.208
Molecular Formula	$C_9H_{12}N_2O$
Density	1.08 g/cm^3
Boiling Point	133 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	101-42-8	Methanol	S-2011

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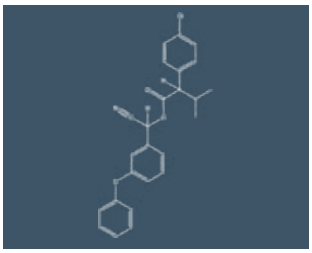
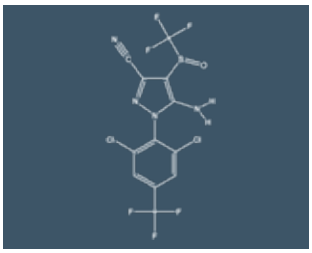
Volume for all Organic Singles is 1 mL



Fenvalerate (Sanmarton)

Molecular Weight	419.9
Molecular Formula	$C_{25}H_{22}ClNO_3$
Density	1.18 g/cm^3
Melting Point	39 °C
Boiling Point	Decomposes

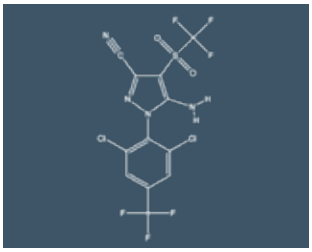
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51630-58-1	Acetone	S-3261



Fipronil

Molecular Weight	437.1
Molecular Formula	$C_{12}H_4Cl_2F_6N_4OS$
Density	1.71 g/cm^3
Melting Point	203 °C
Boiling Point	Decomposes

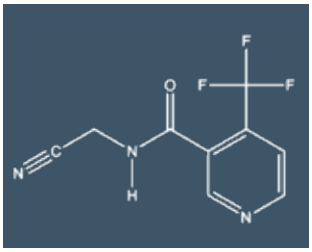
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120068-37-3	Acetone	S-4004-AC
		Methanol-P&T	S-4004



Fipronil sulfone

Molecular Weight	453.14
Molecular Formula	$C_{12}H_4Cl_2F_6N_4O_2S$

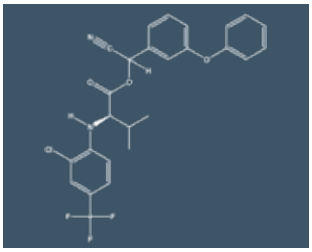
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120068-36-2	Methanol	S-4699



Flonicamid

Molecular Weight	229.2
Molecular Formula	$C_9H_6F_3N_3O$
Density	1.54 g/cm^3
Melting Point	157 °C
Boiling Point	Decomposes

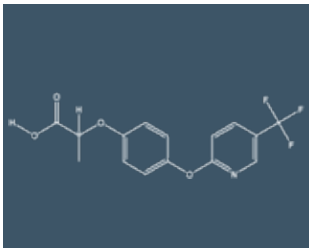
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	158062-67-0	Acetonitrile	S-6084



tau-Fluvalinate

Molecular Weight	502.9
Molecular Formula	$C_{26}H_{22}ClF_3N_2O_3$
Density	1.27 g/cm^3
Melting Point	-14 °C
Boiling Point	Decomposes

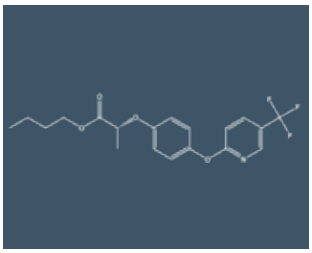
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	102851-06-9	Acetone	S-4161



Fluazifop

Molecular Weight	327.259
Molecular Formula	$C_{19}H_{20}F_3NO_4$
Density	1.22 g/cm^3
Melting Point	5 °C

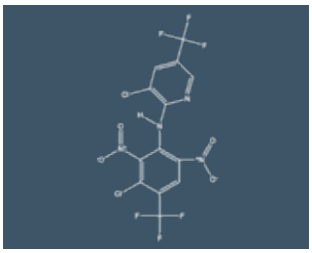
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	69335-91-7	Methanol-P&T	S-2015



Fluazifop-p-butyl

Molecular Weight	383.367
Molecular Formula	$C_{19}H_{20}F_3NO_4$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79241-46-6	Acetone	S-2020

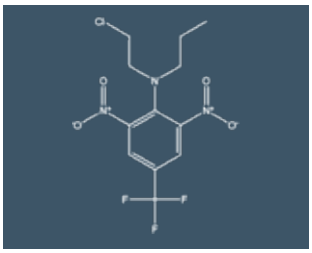


Fluazinam

Molecular Weight	465.089
Molecular Formula	$C_{13}H_4Cl_2F_6N_4O_4$
Density	1.259 g/cm^3
Melting Point	115 to 117 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79622-59-6	Acetone	S-2021

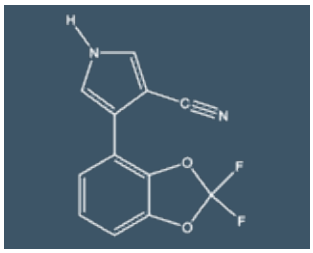
Volume for all Organic Singles is 1 mL



Fluchloralin

Molecular Weight	355.698
Molecular Formula	$C_{12}H_{13}ClF_3N_3O_4$
Melting Point	42 °C

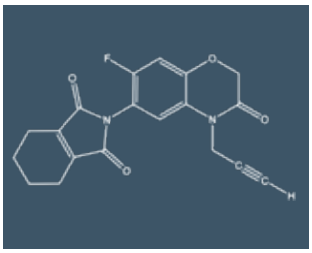
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	33245-39-5	Methanol-P&T	S-2025



Fludioxonil

Molecular Weight	248.2
Molecular Formula	$C_{12}H_6F_2N_2O_2$
Density	1.54 g/cm³
Melting Point	200 °C
Boiling Point	Decomposes

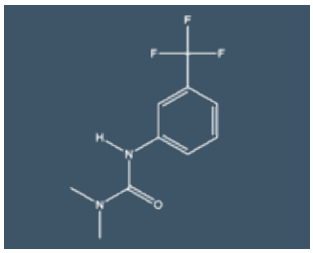
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	131341-86-1	Methanol-P&T	S-2061



Flumioxazin

Molecular Weight	354.337
Molecular Formula	$C_{19}H_{15}FN_2O_4$
Density	1.514 g/cm³
Melting Point	201 to 204 °C
Boiling Point	644 °C

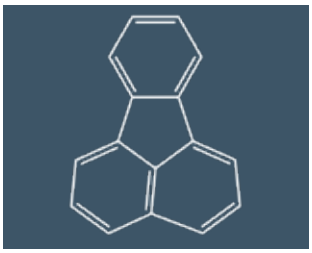
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	103361-09-7	Acetonitrile	S-5193



Fluometuron

Molecular Weight	232.2
Molecular Formula	$C_{10}H_{11}F_3N_2O$
Density	1.39 g/cm³
Melting Point	152 °C

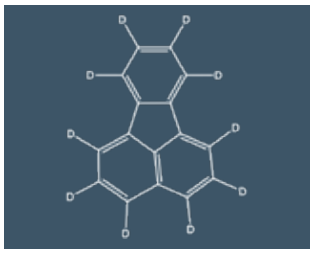
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2164-17-2	Methanol	S-2026



Fluoranthene

Molecular Weight	202.256
Molecular Formula	$C_{16}H_{10}$
Density	1.252 g/cm³
Melting Point	110 °C
Boiling Point	384 °C

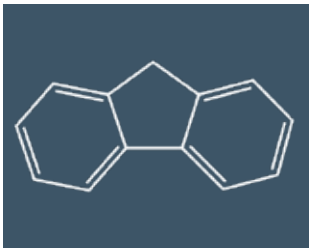
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	206-44-0	Methylene Chloride	S-2030



Fluoranthene-d_{10}

Molecular Weight	212.317
Molecular Formula	$C_{16}H_{10}$
Melting Point	112 °C
Boiling Point	384 °C

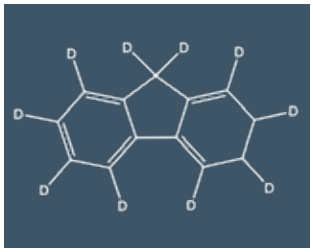
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93951-69-0	Methanol	S-4111



Fluorene

Molecular Weight	166.223
Molecular Formula	$C_{13}H_{10}$
Density	1.203 g/cm³
Melting Point	115 °C
Boiling Point	294 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	86-73-7	Methylene Chloride	S-2035



Fluorene-d_{10}

Molecular Weight	176.284
Molecular Formula	$C_{13}D_{10}$
Melting Point	116 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	81103-79-9	Methanol-P&T	S-2036

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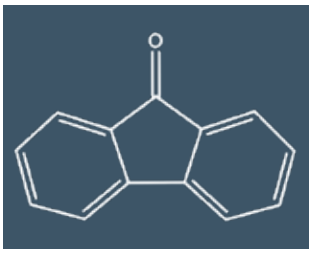
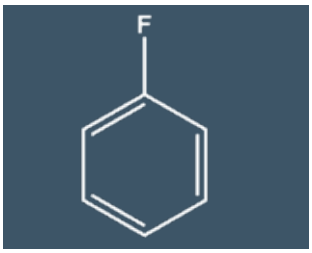
Volume for all Organic Singles is 1 mL



Fluorenone

Molecular Weight	180.206
Molecular Formula	$C_{13}H_8O$
Density	1.130 g/cm³ @ 99 °C
Melting Point	84 °C
Boiling Point	342 °C

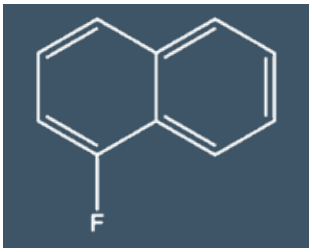
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	486-25-9	Methanol	S-4332



Fluorobenzene

Molecular Weight	96.104
Molecular Formula	C_6H_5F
Density	1.023 g/cm³
Melting Point	-41 °C
Boiling Point	85 °C

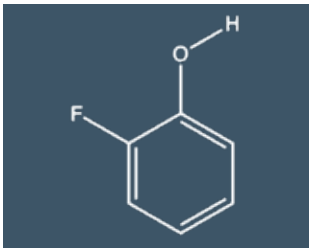
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	462-06-6	Isooctane	S-2040-ISO



1-Fluoronaphthalene

Molecular Weight	146.164
Molecular Formula	$C_{10}H_7F$
Density	1.132 g/cm³
Melting Point	-9 °C
Boiling Point	215 °C

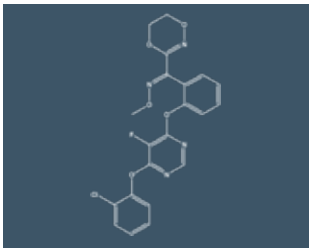
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	321-38-0	Methanol-P&T	S-2047



2-Fluorophenol

Molecular Weight	112.103
Molecular Formula	$C_{12}H_8Cl_6$
Density	1.6 g/cm³
Melting Point	16 °C
Boiling Point	305 °C

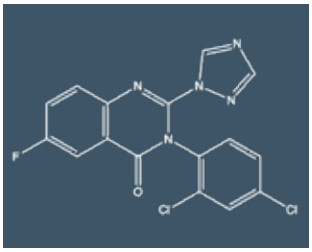
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	367-12-4	Methanol	S-2050



Fluoxastrobin

Molecular Weight	458.83
Molecular Formula	$C_{21}H_{16}ClFN_4O_5$
Density	1.422 g/cm³
Melting Point	103 to 108 °C

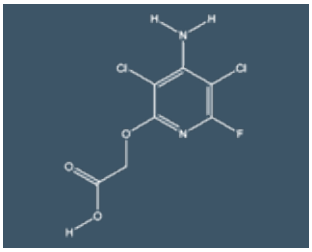
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	361377-29-9	Acetonitrile	S-6020



Fluquinconazole

Molecular Weight	376.172
Molecular Formula	$C_{16}H_8Cl_2FN_5O$

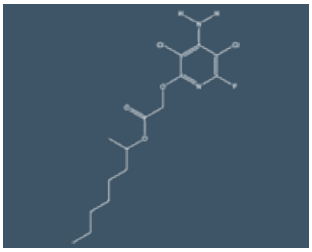
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	136426-54-5	Acetonitrile	S-6103-ACN



Fluroxypyr

Molecular Weight	255.026
Molecular Formula	$C_7H_5Cl_2FN_2O_3$
Density	1.09 g/cm³
Melting Point	232 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	69377-81-7	Methanol-P&T	S-3954

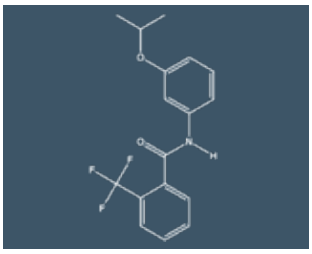


Fluroxypyr-1-methylheptylester

Molecular Weight	367.242
Molecular Formula	$C_{15}H_{21}Cl_2FN_2O_3$
Density	1.09 g/cm³
Melting Point	232 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	81406-37-3	Methanol-P&T	S-3955

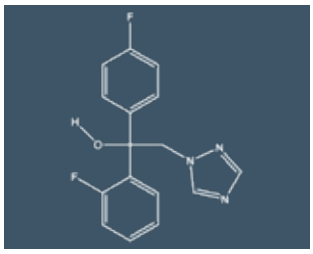
Volume for all Organic Singles is 1 mL



Flutolanil

Molecular Weight	323.315
Molecular Formula	$C_{17}H_{16}F_3NO_2$
Density	1.3 g/cm^3
Melting Point	104 °C
Boiling Point	300 °C

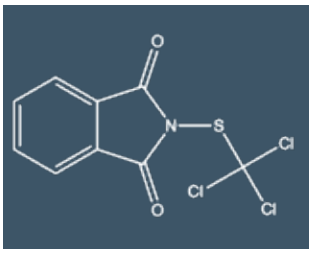
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	66332-96-5	Methanol-P&T	S-2059



Flutriafol

Molecular Weight	301.297
Molecular Formula	$C_{16}H_{13}F_2N_3O$
Density	1.41 g/cm^3
Melting Point	130 °C

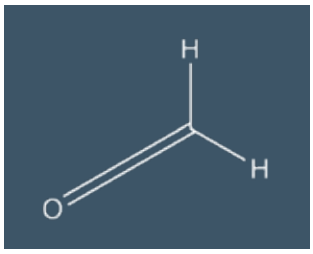
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76674-21-0	Methanol-P&T	S-2058



Folpet

Molecular Weight	296.546
Molecular Formula	$C_9H_4Cl_3NO_2S$
Density	1.75 g/cm^3
Melting Point	177 °C

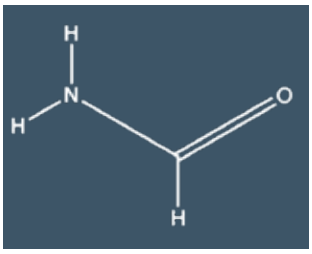
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	133-07-3	Methanol	S-2057



Formaldehyde

Molecular Weight	30.026
Molecular Formula	H_2CO
Density	0.815 g/cm^3
Melting Point	-92 °C
Boiling Point	-19 °C

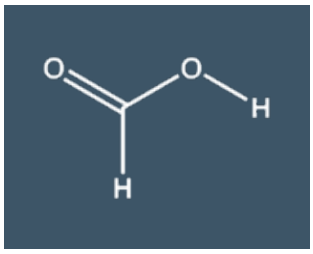
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	50-00-0	DI Water	S-2060



Formamide

Molecular Weight	45.041
Molecular Formula	CH_3NO
Density	1.13 g/cm^3
Melting Point	3 °C
Boiling Point	210 °C

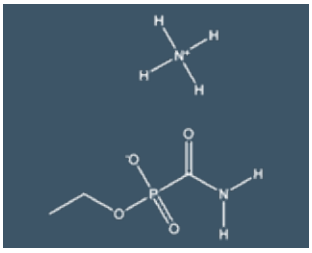
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-12-7	Methanol-P&T	S-2062



Formic acid

Molecular Weight	46.025
Molecular Formula	CH_2O_2
Density	1.22 g/cm^3
Melting Point	8 °C

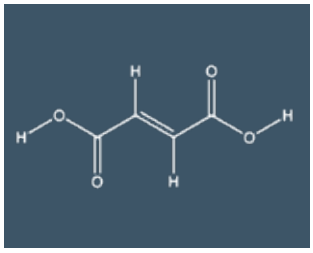
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	64-18-6	DI Water	S-2067



Fosamine ammonium

Molecular Weight	170.105
Molecular Formula	$C_3H_{11}N_2O_4P$
Density	1.33 g/cm^3
Melting Point	175 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25954-13-6	Methanol-P&T	S-2070



Fumaric acid

Molecular Weight	116.072
Molecular Formula	$C_4H_4O_4$
Density	1.635 g/cm^3
Melting Point	287 °C
Boiling Point	522 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-17-8	Methanol-P&T	S-2074

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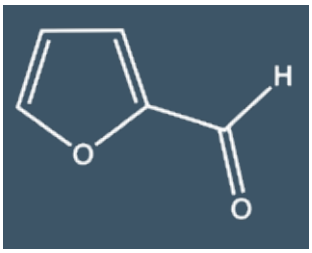
Volume for all Organic Singles is 1 mL



2-Furaldehyde

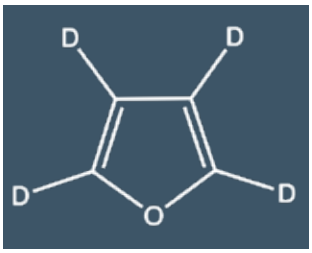
Molecular Weight	96.085
Molecular Formula	$C_5H_4O_2$
Density	1.159 g/cm^3
Melting Point	-37 °C
Boiling Point	162 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-01-1	DI Water: Acetonitrile (80:20)	S-2075-ACNDI
		Methanol-P&T	S-2075

Furan

Molecular Weight	68.075
Molecular Formula	C_4H_4O
Density	0.937 g/cm^3
Melting Point	-86 °C
Boiling Point	31 °C

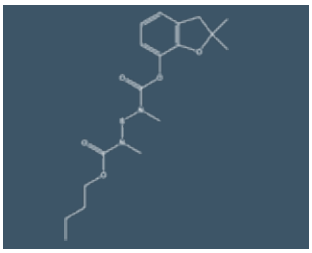
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-00-9	Methanol-P&T	S-2080



Furan-d$_4$

Molecular Weight	72.099
Molecular Formula	C_4H_4O
Density	0.991 g/cm^3

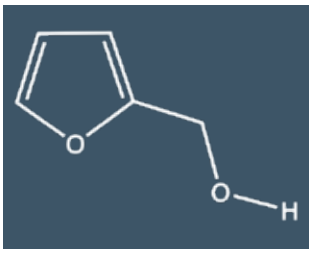
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6142-90-1	Methanol-P&T	S-4960



Furathiocarb

Molecular Weight	382.475
Molecular Formula	$C_{18}H_{26}N_2O_5S$
Density	1.148 g/cm^3

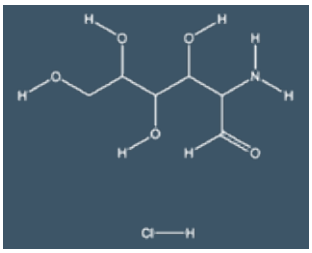
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	65907-30-4	Methanol	S-5464



Furfuryl alcohol

Molecular Weight	98.101
Molecular Formula	$C_5H_6O_2$
Density	1.129 g/cm^3
Melting Point	-31 °C
Boiling Point	170 °C

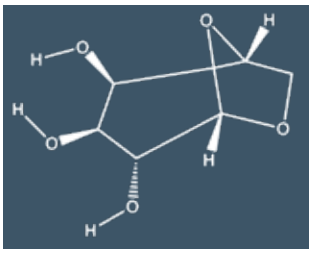
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-00-0	Methanol-P&T	S-2079



D-Galactosamine hydrochloride

Molecular Weight	215.63
Molecular Formula	$C_6H_{14}ClNO_5$

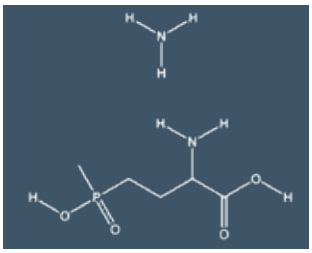
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1772-03-8	Methanol	S-2081



Galactosan

Molecular Weight	162.141
Molecular Formula	$C_6H_{10}O_5$
Boiling Point	384 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	644-76-8	Methanol	S-5522

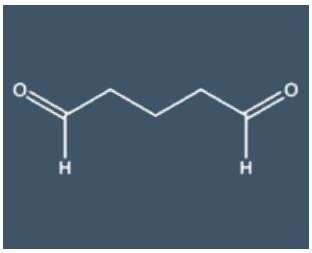


Glufosinate ammonium

Molecular Weight	198.159
Molecular Formula	$C_5H_{15}N_2O_4P$
Density	1.4 g/cm^3
Melting Point	215 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	77182-82-2	Methanol-P&T	S-2083

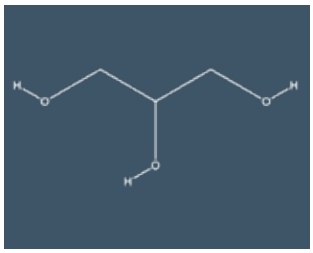
Volume for all Organic Singles is 1 mL



Glutaric dialdehyde

Molecular Weight	100.117
Molecular Formula	$C_5H_8O_2$
Density	0.72 g/cm^3
Melting Point	-14 °C
Boiling Point	101 °C

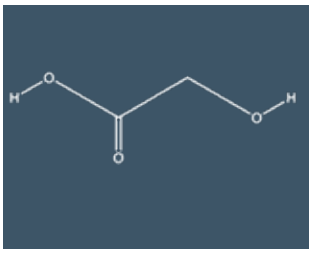
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-30-8	DI Water	S-3854



Glycerol

Molecular Weight	92.094
Molecular Formula	$C_3H_8O_3$
Density	1.261 g/cm^3
Melting Point	19 °C
Boiling Point	290 °C

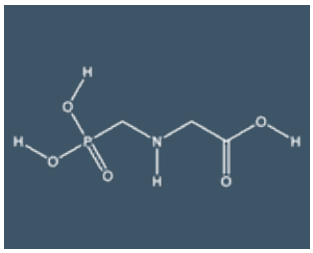
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-81-5	Methanol-P&T	S-4192



Glycolic acid

Molecular Weight	76.051
Molecular Formula	$C_2H_4O_3$
Density	1.49 g/cm^3
Melting Point	75 °C

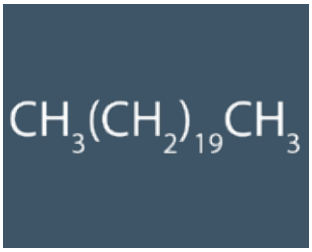
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-14-1	Methanol-P&T	S-2088



Glyphosate

Molecular Weight	169.073
Molecular Formula	$C_3H_8NO_5P$
Density	1.74 g/cm^3
Melting Point	190 °C

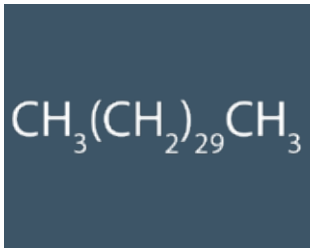
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1071-83-6	DI Water:Methanol (90:10)	S-3092



n-Heneicosane

Molecular Weight	296.583
Molecular Formula	$C_{21}H_{44}$
Density	0.792 g/cm^3
Melting Point	40 °C
Boiling Point	359 °C

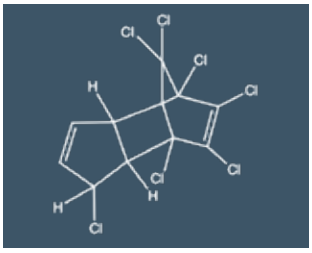
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	629-94-7	Methanol-P&T	S-2090



n-Hentriacontane

Molecular Weight	436.853
Molecular Formula	$C_{31}H_{64}$
Melting Point	68 °C
Boiling Point	438 °C

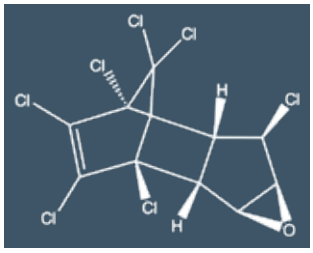
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	630-04-6	Methylene Chloride	S-2095



Heptachlor

Molecular Weight	373.3
Molecular Formula	$C_{10}H_5Cl_7$
Density	1.6 g/cm^3
Melting Point	95 to 96 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76-44-8	Acetone	S-2100-AC
		Methanol	S-2100

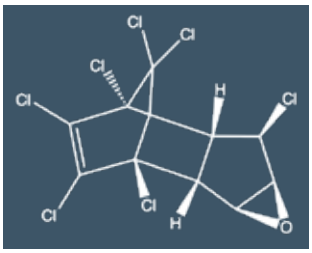


Heptachlor epoxide (Isomer B)

Molecular Weight	389.299
Molecular Formula	$C_{10}H_5Cl_7O$
Melting Point	160 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1024-57-3	Acetone	S-2105-AC
		Methanol-P&T	S-2105

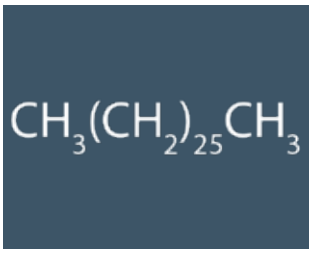
Volume for all Organic Singles is 1 mL



Heptachlor-2,3-exo-epoxide

Molecular Weight	389.299
Molecular Formula	$C_{10}H_5Cl_7O$
Melting Point	160 °C

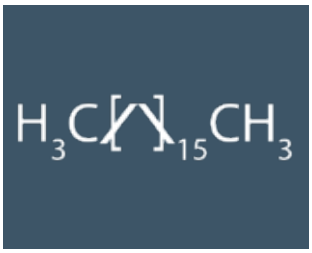
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1024-57-3	Methanol-P&T	S-2110



n-Heptacosane

Molecular Weight	380.745
Molecular Formula	$C_{27}H_{56}$
Density	0.802 g/cm^3
Melting Point	59 °C
Boiling Point	442 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	593-49-7	Methylene Chloride	S-2115



n-Heptadecane

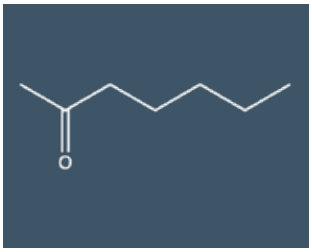
Molecular Weight	240.475
Molecular Formula	$C_{17}H_{36}$
Density	0.778 g/cm^3
Melting Point	22 °C
Boiling Point	303 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	629-78-7	Methanol-P&T	S-2120

n-Heptane

Molecular Weight	100.205
Molecular Formula	C_7H_{16}
Density	0.684 g/cm^3
Melting Point	-91 °C
Boiling Point	98 °C

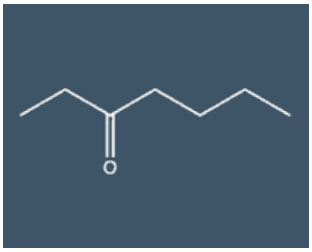
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	142-82-5	Methanol-P&T	S-2125



2-Heptanone

Molecular Weight	114.188
Molecular Formula	$C_7H_{14}O$
Density	0.81 g/cm^3
Melting Point	-35 °C
Boiling Point	151 °C

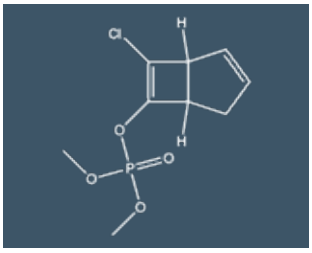
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-43-0	Methanol-P&T	S-2131



3-Heptanone

Molecular Weight	114.188
Molecular Formula	$C_7H_{14}O$
Density	0.82 g/cm^3
Melting Point	-39 °C
Boiling Point	147 °C

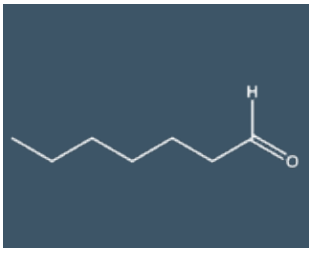
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-35-4	Methanol-P&T	S-4233



Heptenophos

Molecular Weight	250.615
Molecular Formula	$C_9H_{12}ClO_4P$
Density	1.28 g/cm^3
Melting Point	25 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	23560-59-0	Methanol-P&T	S-4261

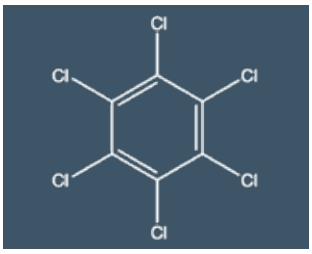


Heptyl aldehyde

Molecular Weight	114.188
Molecular Formula	$C_7H_{14}O$
Density	0.809 g/cm^3
Melting Point	-43 °C
Boiling Point	153 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-71-7	Methanol-P&T	S-2121

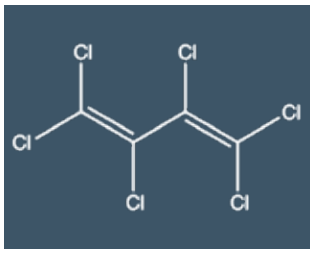
Volume for all Organic Singles is 1 mL



Hexachlorobenzene

Molecular Weight	284.766
Molecular Formula	C_6Cl_6
Density	1.21 g/cm^3
Melting Point	226 °C
Boiling Point	325 °C

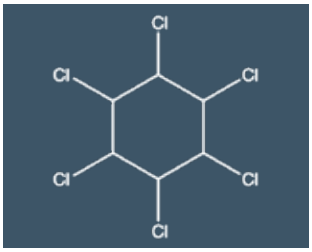
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	118-74-1	Acetone	S-2140-A
		Benzene	S-2140



Hexachlorobutadiene

Molecular Weight	260.744
Molecular Formula	C_4Cl_6
Density	1.556 g/cm^3
Melting Point	-18 °C
Boiling Point	112 °C

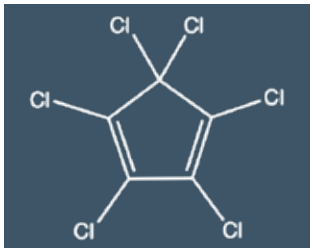
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87-68-3	Methanol-P&T	S-2145



1,2,3,4,5,6-Hexachloro-cyclohexane(a)

Molecular Weight	290.814
Molecular Formula	$C_6H_6Cl_6$
Melting Point	158 °C

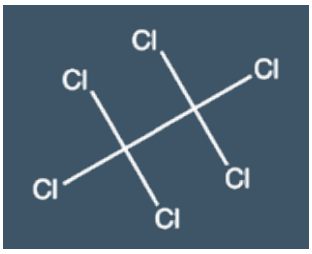
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	319-84-6	Methanol-P&T	S-2147



Hexachlorocyclo-pentadiene

Molecular Weight	272.755
Molecular Formula	C_5Cl_6
Density	1.702 g/cm^3
Melting Point	-9 °C
Boiling Point	239 °C

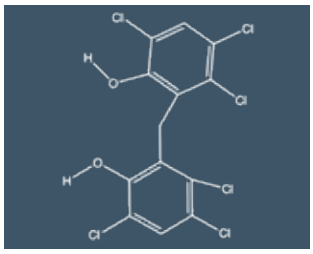
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	77-47-4	Methanol-P&T	S-2150



Hexachloroethane

Molecular Weight	236.722
Molecular Formula	C_2Cl_6
Density	2.09 g/cm^3
Melting Point	183 °C
Boiling Point	187 °C

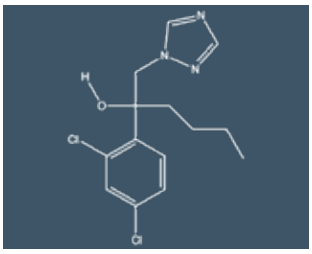
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67-72-1	Methanol-P&T	S-2155



Hexachlorophene

Molecular Weight	406.889
Molecular Formula	$C_{13}H_6Cl_6O_2$
Melting Point	166 °C
Boiling Point	167 °C

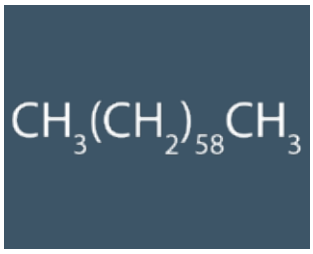
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	70-30-4	Methylene Chloride	S-2160



Hexaconazole

Molecular Weight	314.2
Molecular Formula	$C_{14}H_{17}Cl_2N_3O$
Density	1.29 g/cm^3
Melting Point	111 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79983-71-4	Methanol	S-5465



n-Hexacontane

Molecular Weight	843.636
Molecular Formula	$C_{60}H_{122}$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7667-80-3	p-Xylene	S-2166

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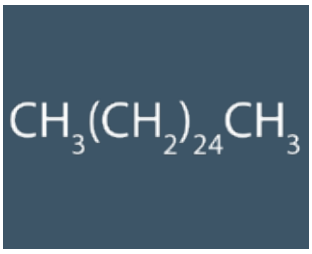
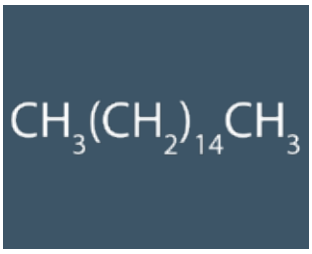
Volume for all Organic Singles is 1 mL



n-Hexacosane

Molecular Weight	366.718
Molecular Formula	$C_{26}H_{54}$
Density	0.803 g/cm^3
Melting Point	56 °C
Boiling Point	415 °C

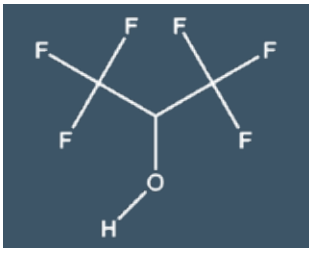
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	630-01-3	Methylene Chloride	S-2170



n-Hexadecane

Molecular Weight	226.448
Molecular Formula	$C_{16}H_{34}$
Density	0.77 g/cm^3
Melting Point	18 °C
Boiling Point	287 °C

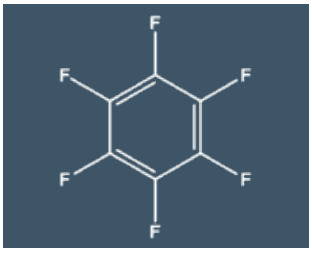
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	544-76-3	Methylene Chloride	S-2175



1,1,1,3,3,3-Hexafluoro-2-propanol

Molecular Weight	168.038
Molecular Formula	$C_3H_2F_6O$
Density	1.596 g/cm^3
Melting Point	-4 °C
Boiling Point	59 °C

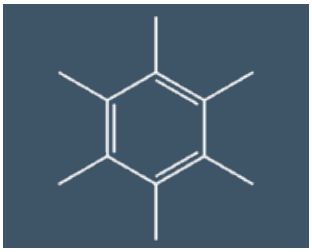
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	920-66-1	Methanol-P&T	S-2207



Hexafluorobenzene

Molecular Weight	186.056
Molecular Formula	C_6F_6
Density	1.61 g/cm^3
Melting Point	5 °C
Boiling Point	80 °C

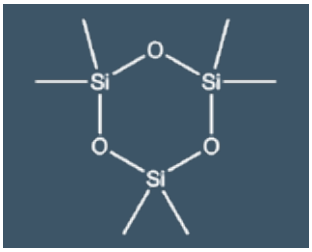
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	392-56-3	Methanol-P&T	S-2182



Hexamethylbenzene

Molecular Weight	162.276
Molecular Formula	$C_{12}H_{18}$
Density	1.063 g/cm^3
Melting Point	165 °C
Boiling Point	263 °C

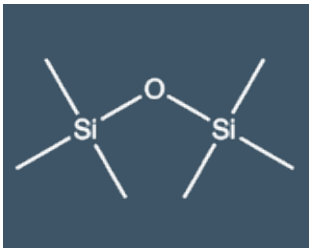
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87-85-4	Methanol-P&T	S-2181



Hexamethylcyclotrisiloxane

Molecular Weight	222.462
Molecular Formula	$C_6H_{18}O_3Si_3$
Melting Point	64 to 66 °C
Boiling Point	134 °C

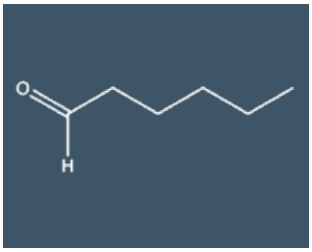
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	541-05-9	Hexane	S-4334



Hexamethyldisiloxane

Molecular Weight	162.379
Molecular Formula	$C_6H_{18}OSi_2$
Density	0.764 g/cm^3
Melting Point	-66 °C
Boiling Point	99 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-46-0	Methanol-P&T	S-4456

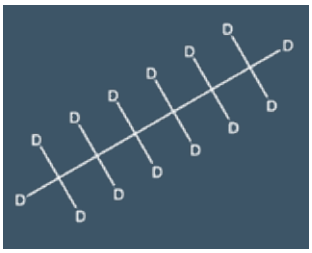


Hexanal

Molecular Weight	100.161
Molecular Formula	$C_6H_{12}O$
Density	0.834 g/cm^3
Melting Point	-56 °C
Boiling Point	129 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	66-25-1	Methanol-P&T	S-2187

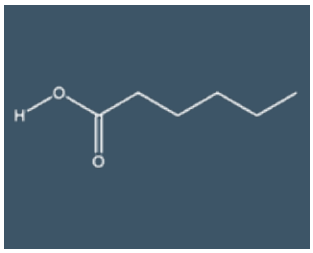
Volume for all Organic Singles is 1 mL



n-Hexane-d_{14}

Molecular Weight	100.263
Molecular Formula	C_6H_{14}

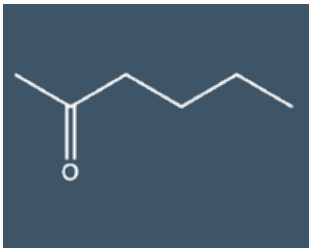
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	21666-38-6	Methanol-P&T	S-2191



Hexanoic acid

Molecular Weight	116.16
Molecular Formula	$C_6H_{12}O_2$
Density	0.927 g/cm^3
Melting Point	-3 °C
Boiling Point	206 °C

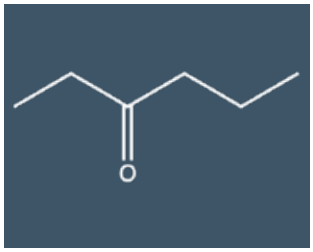
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	142-62-1	DI Water	S-2197



2-Hexanone

Molecular Weight	100.161
Molecular Formula	$C_6H_{12}O$
Density	0.81 g/cm^3
Melting Point	-57 °C
Boiling Point	127 °C

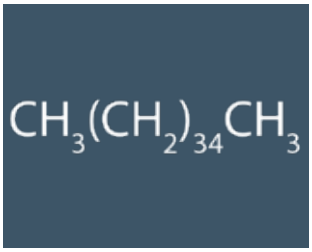
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	591-78-6	Methanol-P&T	S-2200



3-Hexanone

Molecular Weight	100.161
Molecular Formula	$C_6H_{12}O$
Density	0.82 g/cm^3
Boiling Point	123 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	589-38-8	Methanol-P&T	S-4236



n-Hexatriacontane

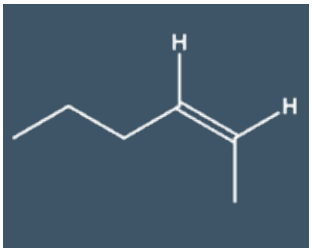
Molecular Weight	506.988
Molecular Formula	$C_{36}H_{74}$
Melting Point	75 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	630-06-8	p-Xylene	S-2210

1-Hexene

Molecular Weight	84.162
Molecular Formula	C_6H_{12}
Density	0.673 g/cm^3
Melting Point	-140 °C
Boiling Point	63 °C

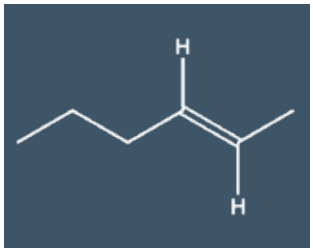
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	592-41-6	Methanol-P&T	S-2225



cis-2-Hexene

Molecular Weight	84.162
Molecular Formula	C_6H_{12}
Density	0.669 g/cm^3
Boiling Point	69 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7688-21-3	Methanol-P&T	S-2215



trans-2-Hexene

Molecular Weight	84.162
Molecular Formula	C_6H_{12}
Boiling Point	69 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4050-45-7	Methanol-P&T	S-2220

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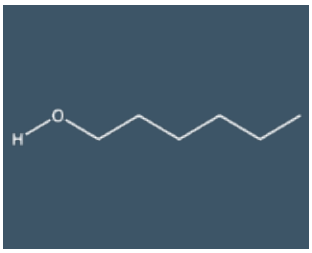
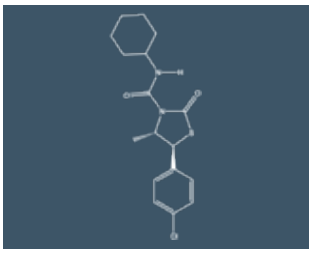
Volume for all Organic Singles is 1 mL



Hexyl alcohol

Molecular Weight	102.177
Molecular Formula	$C_6H_{14}O$
Density	0.82 g/cm^3
Melting Point	-45 °C
Boiling Point	157 °C

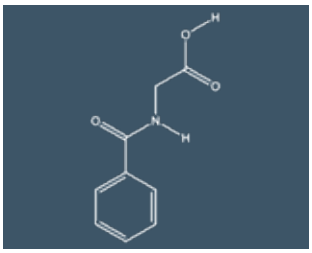
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-27-3	Methanol-P&T	S-2230



Hexythiazox

Molecular Weight	352.9
Molecular Formula	$C_{17}H_{21}ClN_2O_2S$
Density	1.31 g/cm^3
Melting Point	105 °C
Boiling Point	222 °C

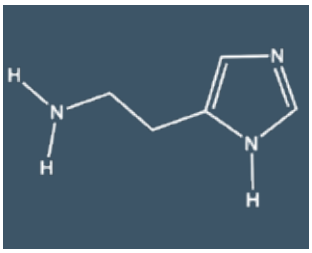
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78587-05-0	Acetone	S-5270



Hippuric acid

Molecular Weight	179.175
Molecular Formula	$C_9H_9NO_3$
Melting Point	187 to 191 °C

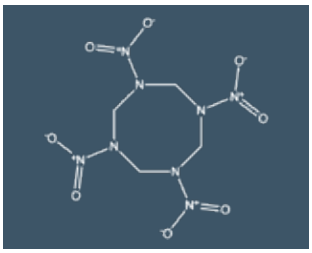
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	495-69-2	HPLC Acetonitrile	S-5217



Histamine

Molecular Weight	111.148
Molecular Formula	$C_5H_9N_3$
Melting Point	84 °C
Boiling Point	210 °C

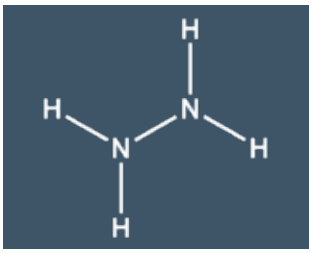
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51-45-6	Methanol	S-4765



HMX

Molecular Weight	296.156
Molecular Formula	$C_4H_8N_8O_8$
Density	1.9 g/cm^3
Melting Point	281 °C
Boiling Point	Decomposes

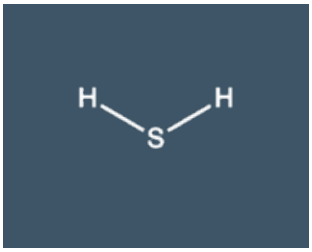
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2691-41-0	Acetonitrile: Methanol	S-2229



Hydrazine

Molecular Weight	32.046
Molecular Formula	N_2H_4
Density	1.01 g/cm^3
Melting Point	2 °C
Boiling Point	114 °C

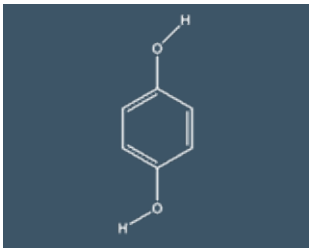
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	302-01-2	DI Water	S-2231



Hydrogen sulfide

Molecular Weight	34.076
Molecular Formula	H_2S
Density	0.92 g/cm^3
Melting Point	-85 °C
Boiling Point	-60 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7783-06-4	Methanol	S-3987

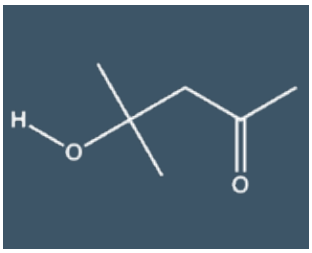


Hydroquinone

Molecular Weight	110.122
Molecular Formula	$C_6H_6O_2$
Density	1.33 g/cm^3
Melting Point	172 °C
Boiling Point	287 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-31-9	Methanol-P&T	S-2235

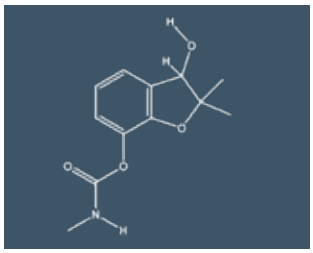
Volume for all Organic Singles is 1 mL



4-Hydroxy-4-methyl-2-pentanone

Molecular Weight	116.16
Molecular Formula	$C_6H_{12}O_2$
Density	0.931 g/cm^3
Melting Point	-45 °C
Boiling Point	170 °C

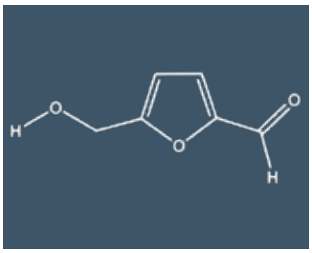
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-42-2	Methanol-P&T	S-2241



3-Hydroxycarbofuran

Molecular Weight	237.255
Molecular Formula	$C_{12}H_{15}NO_4$
Density	1.24 g/cm^3
Melting Point	138 to 140 °C

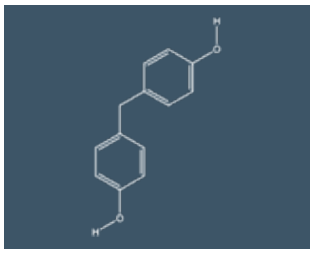
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	16655-82-6	Acetonitrile	S-2240



5-(Hydroxymethyl) furfural

Molecular Weight	126.111
Molecular Formula	$C_6H_6O_3$
Density	1.206 g/cm^3
Melting Point	32 °C
Boiling Point	15 °C

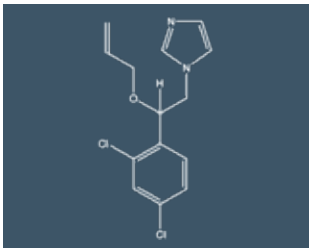
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67-47-0	Methanol-P&T	S-2227



bis(4-Hydroxyphenyl)-methane

Molecular Weight	200.237
Molecular Formula	$C_{13}H_{12}O_2$
Melting Point	163 °C

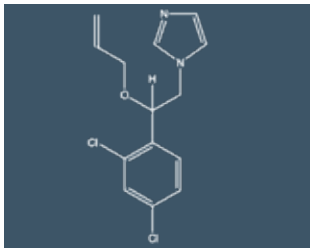
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	620-92-8	Methanol-P&T	S-512



Imazalil

Molecular Weight	297.179
Molecular Formula	$C_{14}H_{14}Cl_2N_2O$
Density	1.35 g/cm^3
Melting Point	50 °C
Boiling Point	347 °C

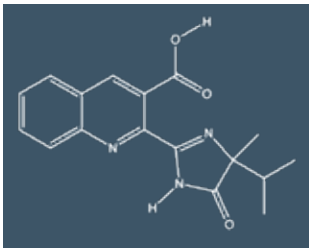
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	35554-44-0	Acetonitrile	S-2346-ACN
		Methanol-P&T	S-2346



Imazalil

Molecular Weight	297.179
Molecular Formula	$C_{14}H_{14}Cl_2N_2O$
Density	1.23 g/cm^3
Melting Point	50 °C
Boiling Point	347 °C

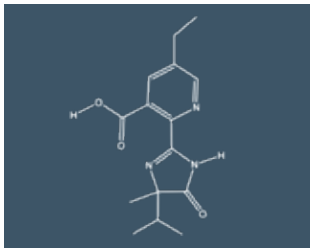
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	73790-28-0	Methanol-P&T	S-2246



Imazaquin

Molecular Weight	311.341
Molecular Formula	$C_{17}H_{17}N_3O_3$
Density	1.35 g/cm^3
Melting Point	220 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	81335-37-7	Methanol-P&T	S-2243

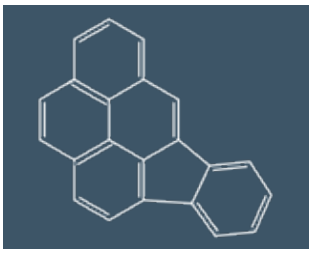


Imazethapyr

Molecular Weight	289.335
Molecular Formula	$C_{15}H_{19}N_3O_3$
Density	1.11g/cm^3
Melting Point	173 °C
Boiling Point	180 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	81335-77-5	Methanol	S-2244

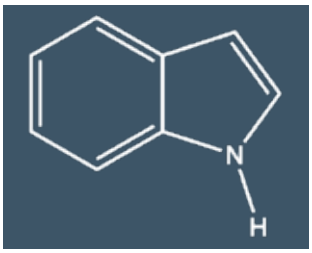
Volume for all Organic Singles is 1 mL



Indeno(1,2,3-c,d)pyrene

Molecular Weight	276.338
Molecular Formula	$C_{22}H_{12}$
Density	1.379 g/cm^3
Melting Point	164 °C
Boiling Point	536 °C

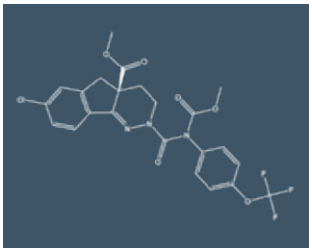
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	193-39-5	Methylene Chloride: Benzene (50:50)	S-2255



Indole

Molecular Weight	117.151
Molecular Formula	C_8H_7N
Density	1.22 g/cm^3
Melting Point	52 °C
Boiling Point	254 °C

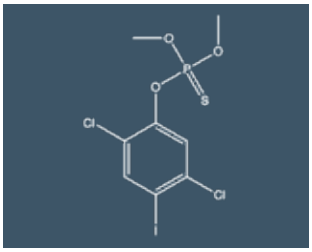
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-72-9	Methanol-P&T	S-2260



Indoxacarb

Molecular Weight	527.837
Molecular Formula	$C_{22}H_{17}ClF_3N_3O_7$
Density	1.44 g/cm^3
Melting Point	88 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	173584-44-6	Acetone	S-4963



Iodofenphos

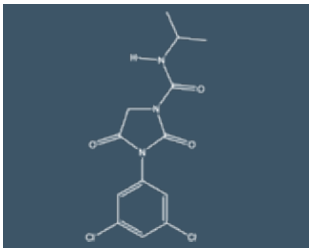
Molecular Weight	412.987
Molecular Formula	$C_8H_8Cl_2IO_3PS$
Density	2.0 g/cm^3
Melting Point	72 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	18181-70-9	Methanol-P&T	S-2265

Iodomethane

Molecular Weight	141.939
Molecular Formula	CH_3I
Density	2.28 g/cm^3
Melting Point	-67 °C
Boiling Point	43 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-88-4	Methanol-P&T	S-2270



Iprodione

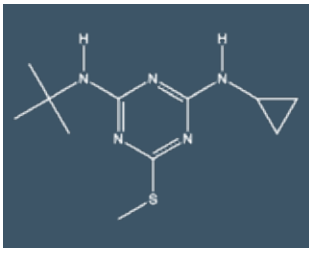
Molecular Weight	330.165
Molecular Formula	$C_{13}H_{13}Cl_2N_3O_3$
Density	1.51 g/cm^3
Melting Point	134 °C
Boiling Point	164 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	36734-19-7	Acetonitrile	S-2272-ACN
		Isooctane	S-2272

Irganox 565

Molecular Weight	588.958
Molecular Formula	$C_{33}H_{56}N_4OS_2$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	991-84-4	Methanol-P&T	S-3901

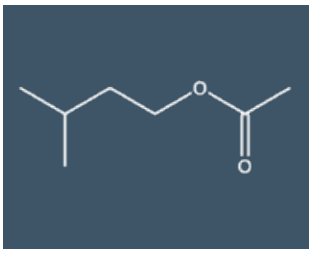


Irgarol 1051

Molecular Weight	253.368
Molecular Formula	$C_{11}H_{19}N_5S$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	28159-98-0	Methanol	S-4910

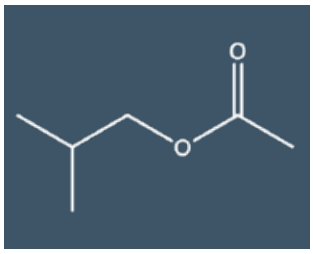
Volume for all Organic Singles is 1 mL



Isoamyl acetate

Molecular Weight	130.187
Molecular Formula	$C_7H_{14}O_2$
Density	0.87 g/cm^3
Melting Point	-79 °C
Boiling Point	142 °C

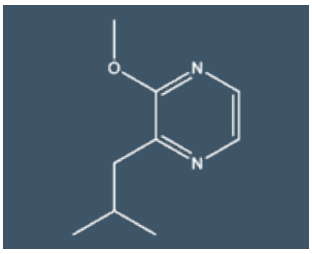
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-92-2	Methanol-P&T	S-4036



Isobutyl acetate

Molecular Weight	116.16
Molecular Formula	$C_6H_{12}O_2$
Density	0.875 g/cm^3
Melting Point	-99 °C
Boiling Point	118 °C

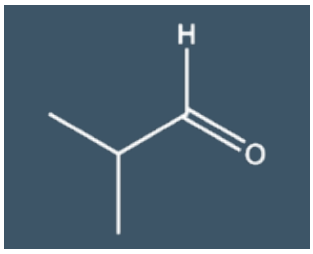
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-19-0	Methanol-P&T	S-2274



2-Isobutyl-3-methoxypyrazine

Molecular Weight	166.224
Molecular Formula	$C_9H_{14}N_2O$

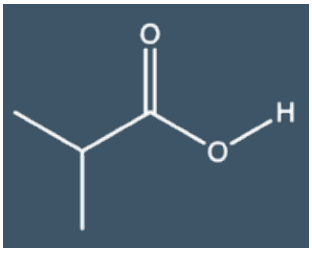
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	24683-00-9	Methanol	S-6051



Isobutyraldehyde

Molecular Weight	72.107
Molecular Formula	C_4H_8O
Density	0.8 g/cm^3
Melting Point	-66 °C
Boiling Point	64 °C

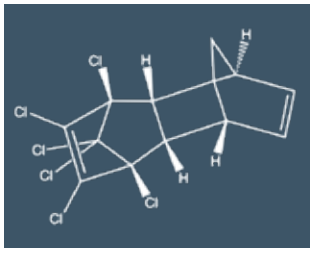
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-84-2	Methanol-P&T	S-2280



Isobutyric acid

Molecular Weight	88.106
Molecular Formula	$C_4H_8O_2$
Density	0.950 g/cm^3
Melting Point	-46 °C
Boiling Point	152 to 155 °C

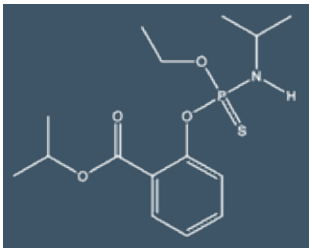
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-31-2	DI Water	S-2282



Isodrin

Molecular Weight	364.9
Molecular Formula	$C_{12}H_8Cl_6$
Melting Point	241 °C
Boiling Point	Decomposes

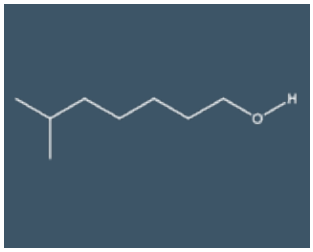
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	465-73-6	Methanol	S-2285



Isofenphos

Molecular Weight	345.394
Molecular Formula	$C_{15}H_{24}NO_4PS$
Density	1.131 g/cm^3
Melting Point	-12 °C
Boiling Point	120 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25311-71-1	Methanol-P&T	S-2290



Isooctyl alcohol

Molecular Weight	130.231
Molecular Formula	$C_8H_{18}O$
Density	0.83 g/cm^3
Melting Point	-106 °C
Boiling Point	87 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	26952-21-6	Methanol-P&T	S-2292

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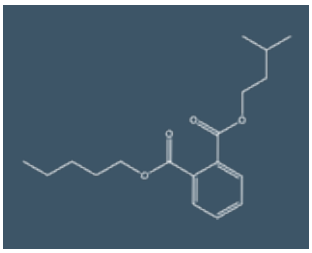
Volume for all Organic Singles is 1 mL



Isopentyl pentyl phthalate

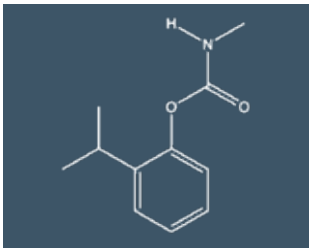
Molecular Weight	306.402
Molecular Formula	$C_{18}H_{26}O_4$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	776297-69-9	Hexane	S-6109-H
		Methylene Chloride	S-6109

Isoprene

Molecular Weight	68.119
Molecular Formula	C_5H_8
Density	0.679 g/cm^3
Melting Point	-146 °C
Boiling Point	34 °C

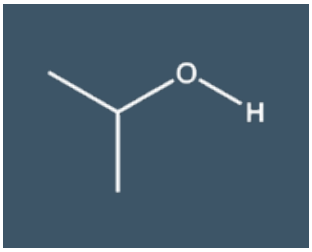
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-79-5	Methanol-P&T	S-2300



Isoprocarb

Molecular Weight	193.2
Molecular Formula	$C_{11}H_{15}NO_2$
Density	1.04 g/cm^3
Melting Point	92 °C

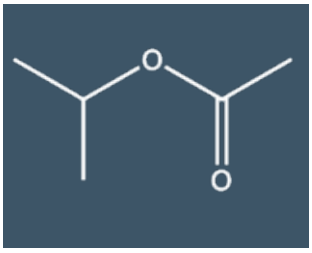
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2631-40-5	Methanol	S-4253



Isopropanol (2-propanol, isopropyl alcohol)

Molecular Weight	60.096
Molecular Formula	C_3H_8O
Density	0.79 g/cm^3
Melting Point	-90 °C
Boiling Point	83 °C

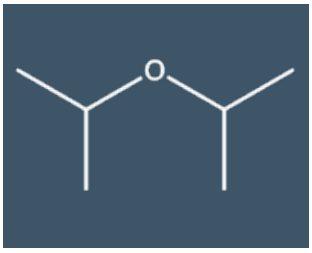
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67-63-0	Methanol	S-2585B



Isopropyl acetate

Molecular Weight	102.133
Molecular Formula	$C_5H_{10}O_2$
Density	0.87 g/cm^3
Melting Point	-73 °C
Boiling Point	89 °C

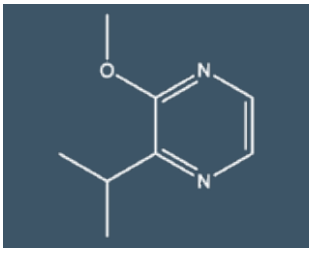
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-21-4	Methanol-P&T	S-2305



Isopropyl ether

Molecular Weight	102.177
Molecular Formula	$C_6H_{14}O$
Density	0.724 g/cm^3
Melting Point	-60 °C
Boiling Point	69 °C

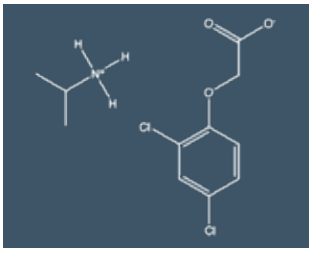
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-20-3	Methanol-P&T	S-2310



2-Isopropyl-3-methoxypyrazine

Molecular Weight	152.197
Molecular Formula	$C_8H_{12}N_2O$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25773-40-4	Methanol	S-6050

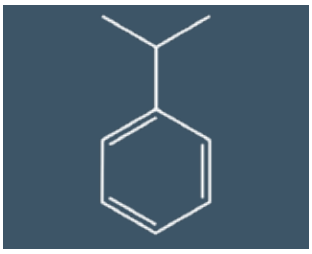


2,4-D Isopropylamine salt

Molecular Weight	280.145
Molecular Formula	$C_{11}H_{15}Cl_2NO_3$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5742-17-6	Methanol	S-1047

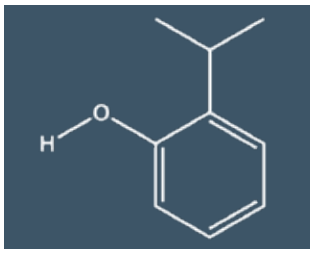
Volume for all Organic Singles is 1 mL



Isopropylbenzene

Molecular Weight	120.195
Molecular Formula	C_9H_{12}
Density	0.866 g/cm^3
Melting Point	-96 °C
Boiling Point	152 °C

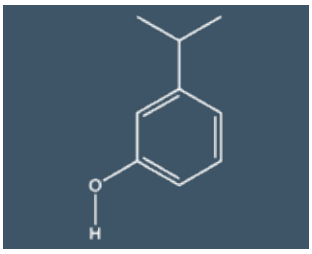
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-82-8	Methanol-P&T	S-2315



2-Isopropylphenol

Molecular Weight	136.194
Molecular Formula	$C_9H_{12}O$
Density	0.995 g/cm^3
Melting Point	14 °C
Boiling Point	212 °C

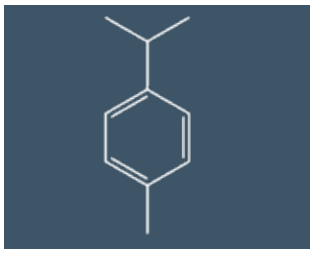
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	88-69-7	Methanol-P&T	S-4293



3-Isopropylphenol

Molecular Weight	136.194
Molecular Formula	$C_9H_{12}O$
Density	0.994 g/cm^3
Melting Point	25 °C
Boiling Point	228 °C

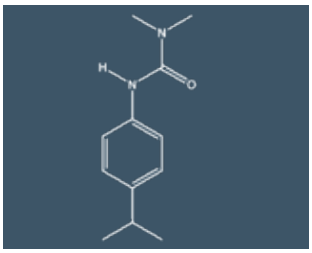
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	618-45-1	Methanol-P&T	S-2317



p-Isopropyltoluene

Molecular Weight	134.222
Molecular Formula	$C_{10}H_{14}$
Density	0.857 g/cm^3
Melting Point	-68 °C
Boiling Point	177 °C

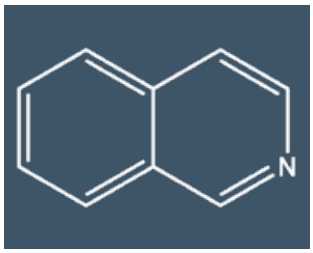
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-87-6	Methanol-P&T	S-2320



Isoproturon

Molecular Weight	206.3
Molecular Formula	$C_{12}H_{18}N_2O$
Density	1.17 g/cm^3
Melting Point	157 °C
Boiling Point	Decomposes

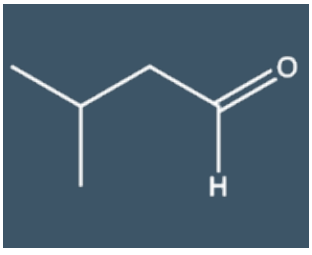
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	34123-59-6	Methanol	S-3945



Isoquinoline

Molecular Weight	129.162
Molecular Formula	C_9H_7N
Density	1.1 g/cm^3
Melting Point	27 °C
Boiling Point	243 °C

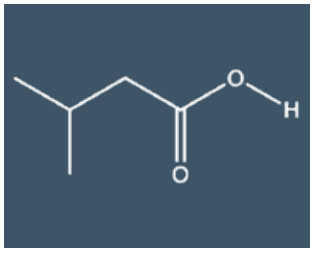
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119-65-3	Methanol-P&T	S-2325



Isovaleraldehyde

Molecular Weight	86.134
Molecular Formula	$C_5H_{10}O$
Density	0.785 g/cm^3
Melting Point	-51 °C
Boiling Point	90 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	590-86-3	Methanol-P&T	S-2331



Isovaleric acid

Molecular Weight	102.133
Molecular Formula	$C_4H_8O_2$
Density	0.931 g/cm^3
Melting Point	-29 °C
Boiling Point	177 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	503-74-2	DI Water	S-2332

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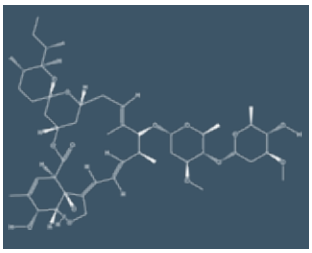
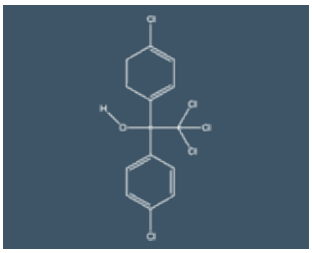
Volume for all Organic Singles is 1 mL



Ivermectin

Molecular Weight	875.106
Molecular Formula	$C_{48}H_{74}O_{14}$
Melting Point	155 °C

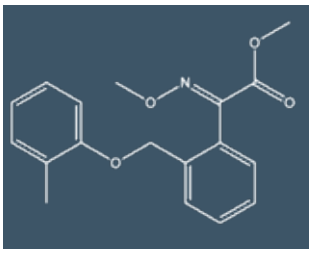
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	70288-86-7	Acetone	S-5457



Kelthane 1.5% o,p'-95% p,p'

Molecular Weight	370.475
Molecular Formula	$C_{14}H_9Cl_5O$
Density	1.13 g/cm^3
Melting Point	77 to 78 °C
Boiling Point	180 °C

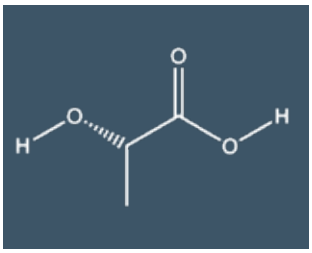
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-32-2	Methanol	S-2335



Kresoxim-methyl

Molecular Weight	313.3
Molecular Formula	$C_{18}H_{19}NO_4$
Density	1.26 g/cm^3
Melting Point	102 °C
Boiling Point	Decomposes

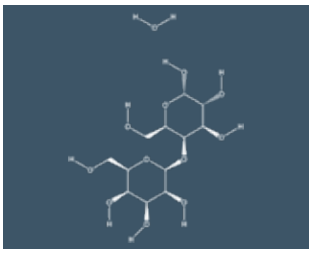
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	143390-89-0	Methanol	S-4833



L(+)-Lactic acid

Molecular Weight	90.078
Molecular Formula	$C_3H_6O_3$
Melting Point	17 °C

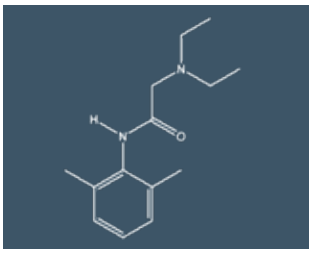
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-33-4	DI Water	S-2342



Lactose

Molecular Weight	360.312
Molecular Formula	$C_{12}H_{24}O_{12}$

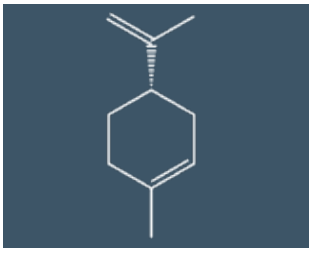
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	64044-51-5	HPLC Grade Water	S-4516



Lidocaine

Molecular Weight	234.343
Molecular Formula	$C_{14}H_{22}N_2O$
Melting Point	68 °C
Boiling Point	181 °C

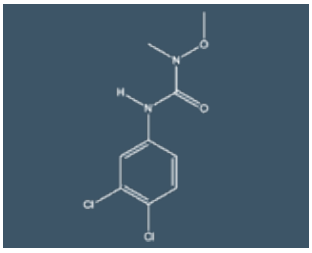
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	137-58-6	Methanol	S-2347



(S)-(-)-Limonene

Molecular Weight	136.238
Molecular Formula	$C_{10}H_{16}$
Melting Point	-90 °C
Boiling Point	177 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5989-54-8	Ethanol	S-6409

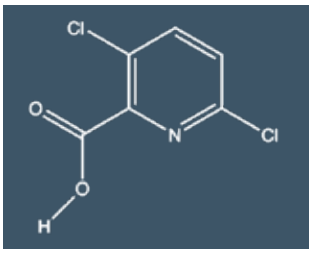


Linuron

Molecular Weight	249.1
Molecular Formula	$C_9H_{10}Cl_2N_2O_2$
Density	1.49 g/cm^3
Melting Point	93 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	330-55-2	Acetone	S-2350

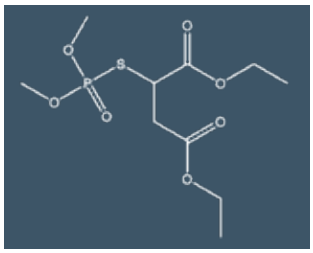
Volume for all Organic Singles is 1 mL



Lontrel (Clopyralid)

Molecular Weight	191.995
Molecular Formula	$C_6H_3Cl_2NO_2$
Melting Point	151 °C

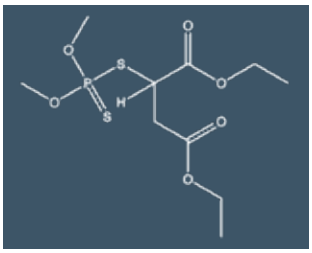
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1702-17-6	Methanol-P&T	S-2354



Malaoxon

Molecular Weight	314.289
Molecular Formula	$C_{10}H_{19}O_7PS$
Density	1.235 g/cm^3
Melting Point	68 °C
Boiling Point	237 °C

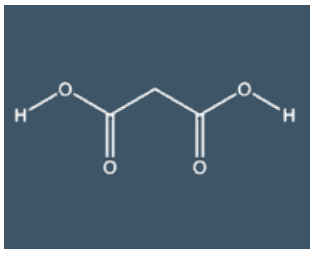
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1634-78-2	Methanol	S-2356



Malathion

Molecular Weight	330.4
Molecular Formula	$C_{10}H_{19}O_6PS_2$
Density	1.207 g/cm^3
Melting Point	-20 °C
Boiling Point	Decomposes

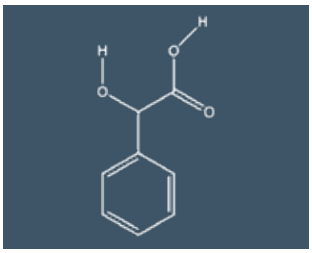
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	121-75-5	Acetone	S-2355-AC
		Methanol	S-2355



Malonic acid

Molecular Weight	104.061
Molecular Formula	$C_3H_4O_4$
Density	1.6 g/cm^3
Melting Point	135 °C
Boiling Point	140 °C

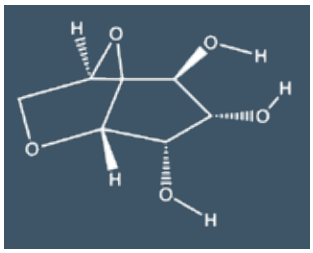
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	141-82-2	Methanol-P&T	S-2361



Mandelic acid

Molecular Weight	152.149
Molecular Formula	$C_8H_8O_3$

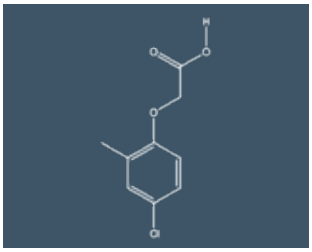
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90-64-2	HPLC Acetonitrile	S-5221



Mannosan

Molecular Weight	162.141
Molecular Formula	$C_6H_{10}O_5$
Melting Point	182 °C
Boiling Point	384 °C

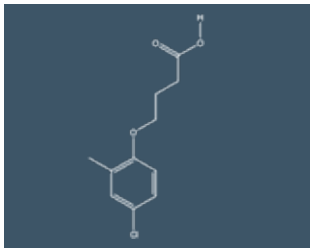
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	14168-65-1	Methanol	S-5521



MCPA

Molecular Weight	200.618
Molecular Formula	$C_9H_9ClO_3$
Density	1.2 g/cm^3
Melting Point	118 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	94-74-6	Methanol	S-4565



MCPB

Molecular Weight	228.672
Molecular Formula	$C_{11}H_{13}ClO_3$
Melting Point	100 °C
Boiling Point	280 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	94-81-5	Methanol-P&T	S-2364

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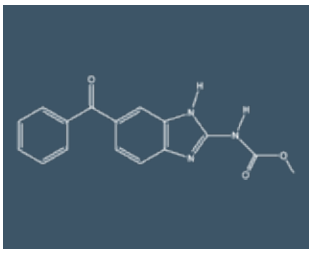
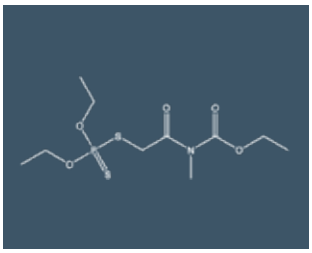
Volume for all Organic Singles is 1 mL



Mebendazole

Molecular Weight	295.298
Molecular Formula	$C_{16}H_{13}N_3O_3$
Density	1.8 g/cm^3
Melting Point	289 °C

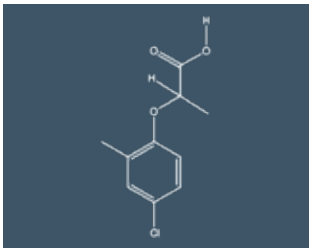
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	31431-39-7	Dimethyl Formamide	S-4603



Mecarbam

Molecular Weight	329.366
Molecular Formula	$C_{10}H_{20}NO_5PS_2$
Density	1.2 g/cm^3
Melting Point	9 °C
Boiling Point	144 °C

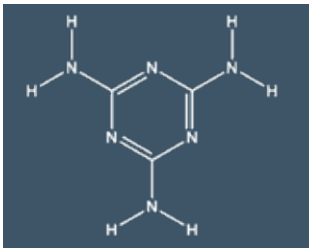
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2595-54-2	Methanol	S-4847



Mecoprop

Molecular Weight	214.645
Molecular Formula	$C_{10}H_{11}ClO_3$
Density	1.28 g/cm^3
Melting Point	94 °C

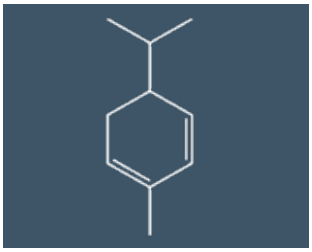
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7085-19-0	Methanol	S-2365



Melamine

Molecular Weight	126.123
Molecular Formula	$C_3H_6N_6$
Density	1.573 g/cm^3
Melting Point	345 °C
Boiling Point	Sublimes

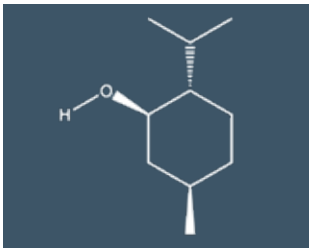
Concentration	CAS #	Matrix	Part #
500 µg/mL	108-78-1	Methanol:Acetone (50:50)	S-4806



p-Mentha-1,5-diene

Molecular Weight	136.238
Molecular Formula	$C_{10}H_{16}$
Density	0.85 g/cm^3

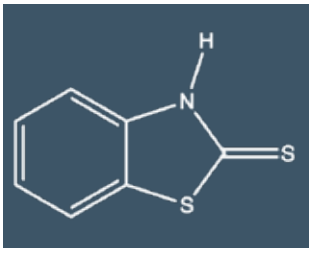
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-83-2	Methanol	S-4173



Menthol

Molecular Weight	156.269
Molecular Formula	$C_{10}H_{20}O$
Density	0.904 g/cm^3
Melting Point	43 °C
Boiling Point	212 °C

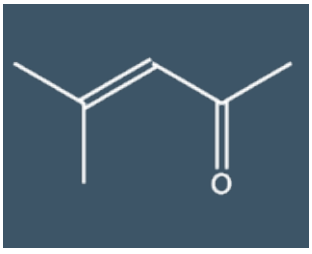
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2216-51-5	Methanol-P&T	S-4669



2-Mercaptobenzothiazole

Molecular Weight	167.244
Molecular Formula	$C_7H_5NS_2$
Density	1.42 g/cm^3
Melting Point	177 to 179 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	149-30-4	Methanol-P&T	S-2366

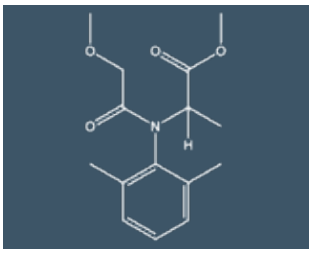


Mesityl oxide

Molecular Weight	98.145
Molecular Formula	$C_6H_{10}O$
Density	0.87 g/cm^3
Melting Point	-42 °C
Boiling Point	130 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	141-79-7	Methanol-P&T	S-2368

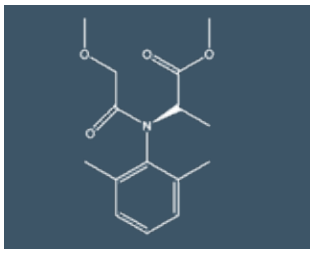
Volume for all Organic Singles is 1 mL



Metalaxyl

Molecular Weight	279.3
Molecular Formula	$C_{15}H_{21}NO_4$
Density	1.20 g/cm³
Melting Point	72 °C
Boiling Point	296 °C

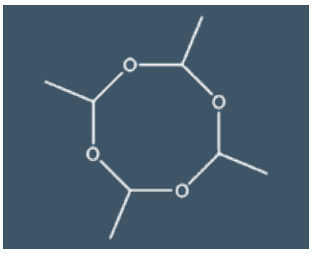
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57837-19-1	Acetone	S-2369A



Metalaxyl-M

Molecular Weight	279.336
Molecular Formula	$C_{15}H_{21}NO_4$

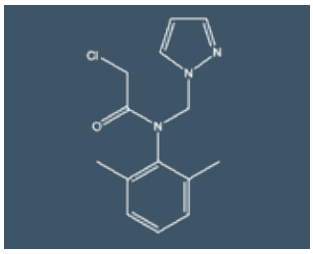
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	70630-17-0	Acetonitrile	S-5511



Metaldehyde

Molecular Weight	176.212
Molecular Formula	$C_8H_{16}O_4$
Density	1.27 g/cm³
Melting Point	246 °C
Boiling Point	115 °C

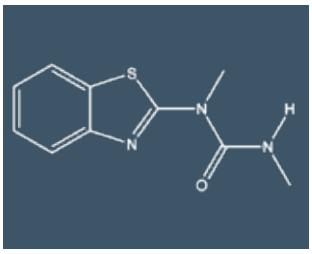
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-62-3	Methanol	S-5027



Metazachlor

Molecular Weight	277.752
Molecular Formula	$C_{14}H_{16}ClN_3O$

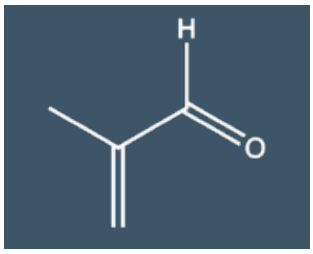
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67129-08-2	Methanol-P&T	S-2372



Methabenzthiazuron

Molecular Weight	221.278
Molecular Formula	$C_{10}H_{11}N_3OS$

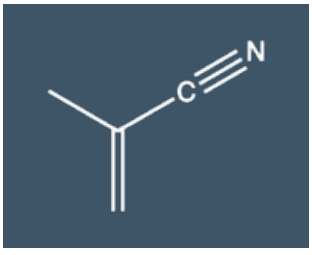
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	18691-97-9	Acetone	S-3948



Methacrolein

Molecular Weight	79.091
Molecular Formula	C_4H_6O
Density	2.4 g/cm³
Melting Point	-81 °C
Boiling Point	68 °C

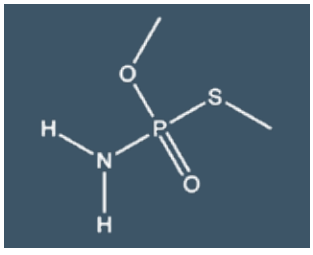
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-85-3	Methanol-P&T	S-2370



Methacrylonitrile

Molecular Weight	67.091
Molecular Formula	C_4H_5N
Density	0.8 g/cm³
Melting Point	-35 °C
Boiling Point	90 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126-98-7	Methanol-P&T	S-2375



Methamidophos

Molecular Weight	141.125
Molecular Formula	$C_2H_8NO_2PS$
Density	1.27 g/cm³
Melting Point	45 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	10265-92-6	Acetone	S-2377

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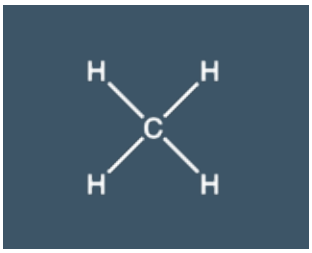
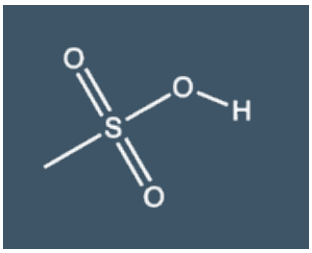
Volume for all Organic Singles is 1 mL



Methane

Molecular Weight	16.043
Molecular Formula	CH_4
Density	0.422 g/cm³
Melting Point	-183 °C
Boiling Point	-161 °C

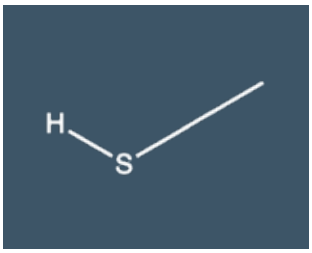
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-82-8	Methanol-P&T	S-2379



Methanesulfonic acid

Molecular Weight	96.1
Molecular Formula	CH_4O_3S
Density	1.481 g/cm³
Melting Point	20 °C
Boiling Point	167 °C

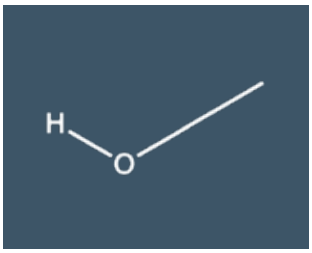
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-75-2	Methanol-P&T	S-2378



Methanethiol

Molecular Weight	48.103
Molecular Formula	CH_4S
Density	0.96 g/cm³ @ 25 °C
Melting Point	-123 °C
Boiling Point	6 °C

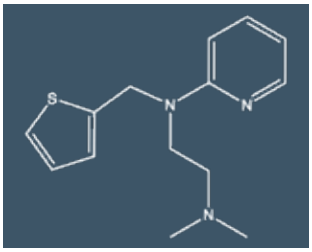
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-93-1	DI Water	S-2433-W
		Methanol-P&T	S-2433



Methanol

Molecular Weight	32.042
Molecular Formula	CH_4O
Density	0.81 g/cm³
Melting Point	-98 °C
Boiling Point	65 °C

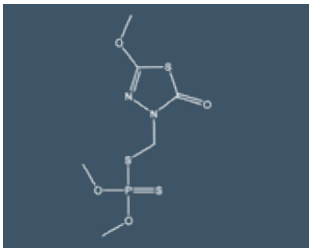
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67-56-1	DI Water	S-2380



Methapyrilene HCl

Molecular Weight	297.845
Molecular Formula	$C_{14}H_{20}ClN_3S$
Melting Point	162 °C
Boiling Point	174 °C

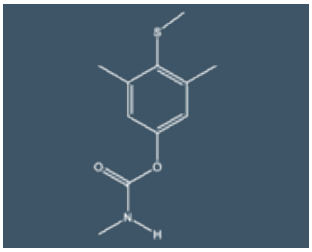
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	135-23-9	Methanol-P&T	S-2450



Methidathion

Molecular Weight	302.3
Molecular Formula	$C_6H_{11}N_2O_4PS_3$
Density	1.51 g/cm³
Melting Point	40 °C

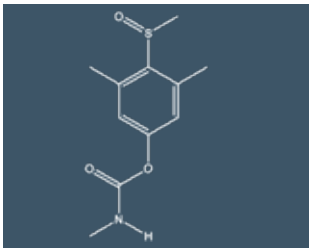
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	950-37-8	Methanol	S-2384



Methiocarb

Molecular Weight	225.3
Molecular Formula	$C_{11}H_{15}NO_2S$
Density	1.25 g/cm³
Melting Point	118 °C
Boiling Point	311 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2032-65-7	Acetonitrile	S-2385

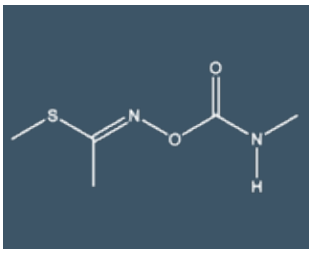


Methiocarb sulfoxide

Molecular Weight	241.305
Molecular Formula	$C_{11}H_{15}NO_3S$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2635-10-1	Methanol	S-4791

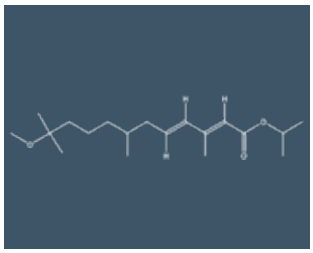
Volume for all Organic Singles is 1 mL



Methomyl

Molecular Weight	162.207
Molecular Formula	$C_5H_{10}N_2O_2S$
Density	1.32 g/cm^3
Melting Point	80 °C
Boiling Point	Decomposes

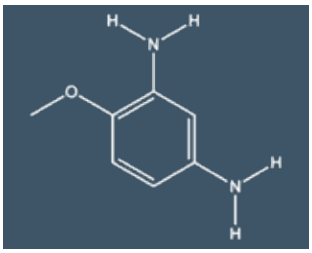
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	16752-77-5	Acetonitrile	S-2395



Methoprene

Molecular Weight	310.478
Molecular Formula	$C_{19}H_{34}O_3$
Boiling Point	100 °C

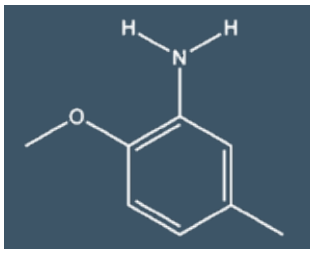
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	40596-69-8	Methanol	S-2396



4-Methoxy-m-phenylenediamine

Molecular Weight	138.17
Molecular Formula	$C_7H_{10}N_2O$
Melting Point	68 °C

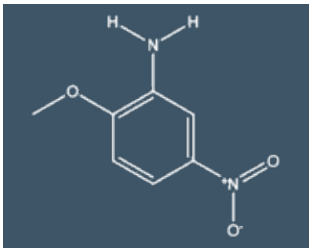
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	615-05-4	Methanol	S-4473



2-Methoxy-5-methylaniline

Molecular Weight	137.182
Molecular Formula	$C_8H_{11}NO$
Melting Point	52 °C
Boiling Point	235 °C

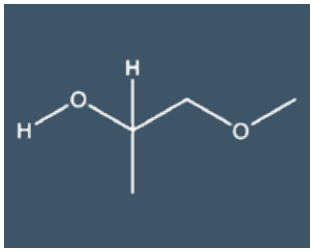
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-71-8	Methanol-P&T	S-2415



2-Methoxy-5-nitroaniline

Molecular Weight	168.152
Molecular Formula	$C_7H_8N_2O_3$
Density	1.207 g/cm^3
Melting Point	118 °C

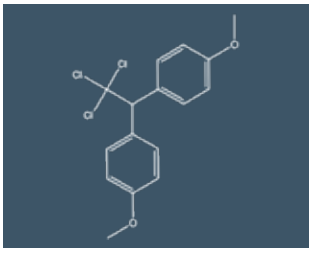
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-59-2	Methanol-P&T	S-2420



1-Methoxy-2-propanol

Molecular Weight	90.122
Molecular Formula	$C_4H_{10}O_2$
Density	0.96 g/cm^3
Melting Point	96 °C
Boiling Point	120 °C

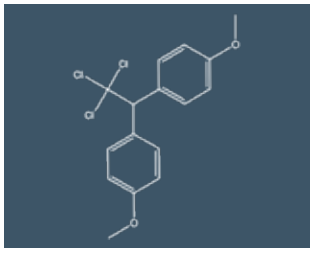
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-98-2	Methanol-P&T	S-2412



Methoxychlor

Molecular Weight	345.644
Molecular Formula	$C_{16}H_{15}Cl_3O_2$
Density	1.4 g/cm^3
Melting Point	89 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	72-43-5	Methanol	S-2397

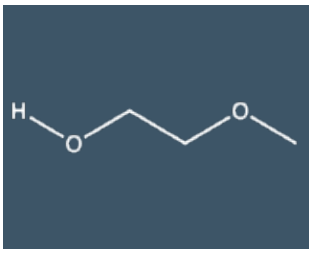


p,p'-Methoxychlor

Molecular Weight	345.644
Molecular Formula	$C_{16}H_{15}Cl_3O_2$
Density	1.4 g/cm^3
Melting Point	89 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	72-43-5	Methanol-P&T	S-2405

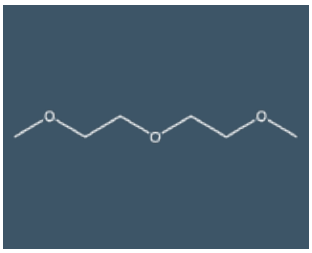
Volume for all Organic Singles is 1 mL



2-Methoxyethanol

Molecular Weight	76.095
Molecular Formula	$C_3H_8O_2$
Density	0.96 g/cm^3
Melting Point	-85 °C
Boiling Point	125 °C

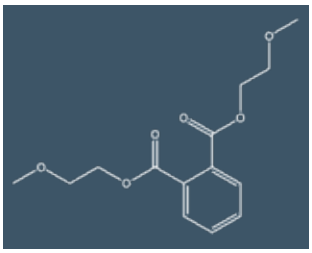
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-86-4	Methanol-P&T	S-2407



2-Methoxyethyl ether

Molecular Weight	134.175
Molecular Formula	$C_6H_{14}O_3$
Density	0.95 g/cm^3
Melting Point	68 °C
Boiling Point	162 °C

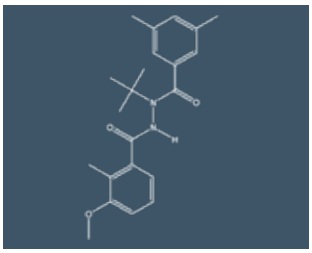
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-96-6	Methanol-P&T	S-3908



bis(2-methoxyethyl) phthalate

Molecular Weight	282.292
Molecular Formula	$C_{14}H_{18}O_6$
Density	1.159 g/cm^3
Melting Point	-45 °C
Boiling Point	340 °C

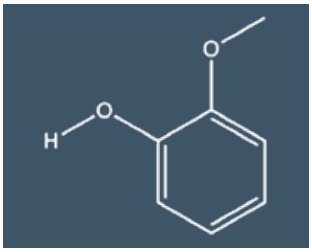
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	117-82-8	Hexane	S-4156-H



Methoxyfenozide

Molecular Weight	368.477
Molecular Formula	$C_{22}H_{28}N_2O_3$
Melting Point	207 °C

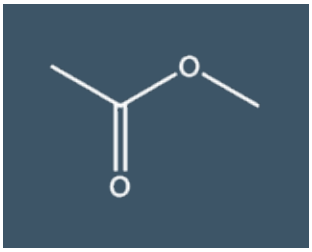
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	161050-58-4	Methanol	S-6033-MEOH



2-Methoxyphenol

Molecular Weight	124.139
Molecular Formula	$C_7H_8O_2$
Density	1.129 g/cm^3
Melting Point	28 °C
Boiling Point	204 to 206 °C

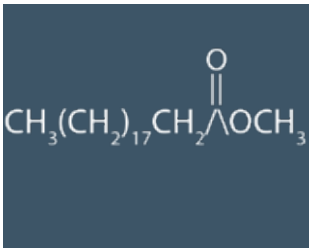
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90-05-1	Methanol-P&T	S-986



Methyl acetate

Molecular Weight	74.079
Molecular Formula	$C_3H_6O_2$
Density	0.93 g/cm^3
Melting Point	-98 °C
Boiling Point	57 °C

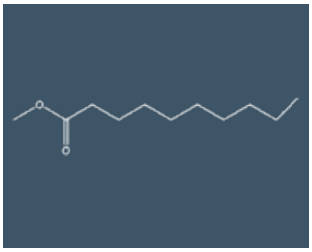
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-20-9	Methanol-P&T	S-3893



Methyl arachidate

Molecular Weight	326.565
Molecular Formula	$C_{21}H_{42}O_2$
Melting Point	47 °C
Boiling Point	215 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1120-28-1	Methanol-P&T	S-4215

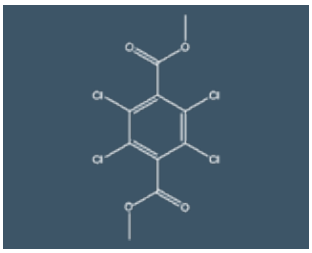


Methyl caprate

Molecular Weight	186.295
Molecular Formula	$C_{11}H_{22}O_2$
Density	0.873 g/cm^3

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-42-9	Methanol-P&T	S-4217

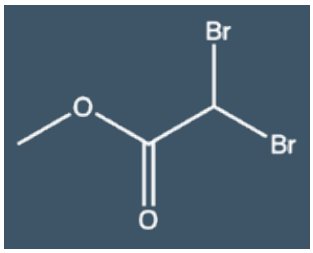
Volume for all Organic Singles is 1 mL



Methyl dacthal

Molecular Weight	331.954
Molecular Formula	$C_{10}H_6Cl_4O_4$
Density	0.05 g/cm³
Melting Point	155 °C

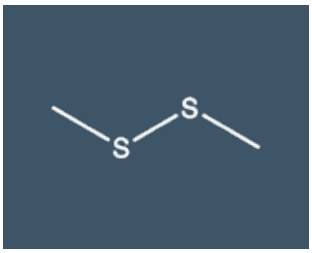
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1861-32-1	Methanol	S-1065



Methyl dibromoacetate

Molecular Weight	231.871
Molecular Formula	$C_3H_4Br_2O_2$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6482-26-4	Methanol-P&T	S-1221



Methyl disulfide

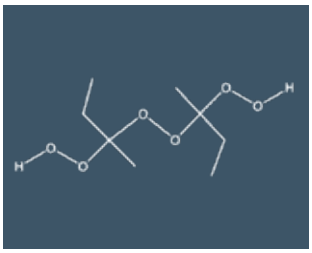
Molecular Weight	94.19
Molecular Formula	$C_2H_6S_2$
Density	1.065 g/cm³
Melting Point	-85 °C
Boiling Point	110 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	624-92-0	Methanol-P&T	S-2599

Methyl ether

Molecular Weight	46.069
Molecular Formula	C_2H_6O
Melting Point	-142 °C
Boiling Point	-24 °C

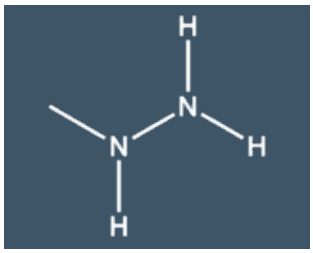
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-10-6	Methanol-P&T	S-2428



Methyl ethyl ketone peroxide

Molecular Weight	210.226
Molecular Formula	$C_8H_{18}O_6$
Density	1.17 g/cm³
Boiling Point	19 °C

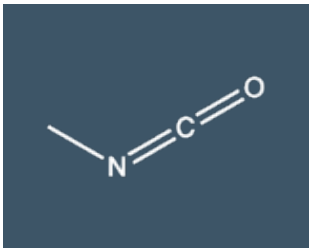
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1338-23-4	Methanol-P&T	S-4343



Methyl hydrazine

Molecular Weight	46.073
Molecular Formula	CH_6N_2
Density	0.87 g/cm³
Melting Point	-52 °C
Boiling Point	88 °C

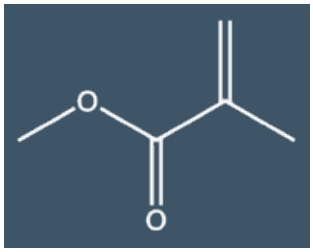
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	60-34-4	Methanol-P&T	S-4199



Methyl isocyanate

Molecular Weight	57.052
Molecular Formula	CH_3NCO
Density	0.959 g/cm³
Melting Point	-80 °C
Boiling Point	39 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	624-83-9	Hexane	S-2431

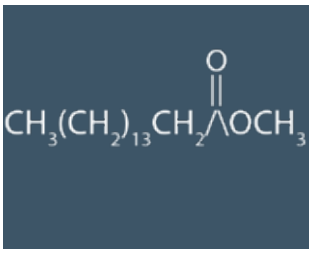


Methyl methacrylate

Molecular Weight	100.117
Molecular Formula	$C_5H_8O_2$
Density	0.94 g/cm³
Melting Point	-48 °C
Boiling Point	101 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	80-62-6	Methanol-P&T	S-2435

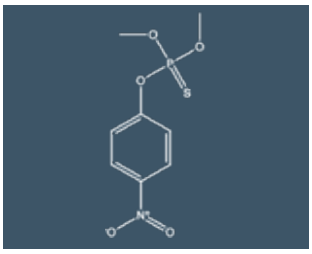
Volume for all Organic Singles is 1 mL



Methyl palmitate

Molecular Weight	270.457
Molecular Formula	$C_{17}H_{34}O_2$
Density	0.852 g/cm³
Melting Point	30 °C
Boiling Point	417 °C

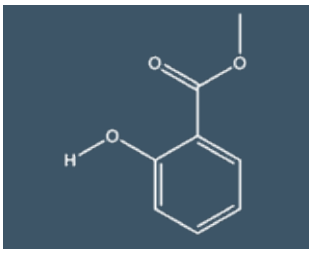
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112-39-0	Methanol	S-4656



Methyl parathion

Molecular Weight	263.2
Molecular Formula	$C_8H_{10}NO_5PS$
Density	1.36 g/cm³
Melting Point	35 °C

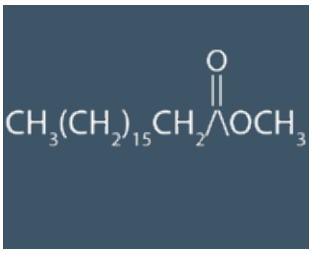
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	298-00-0	Acetone	S-2445-AC
		Acetonitrile	S-2445-ACN
		Methanol	S-2445



Methyl salicylate

Molecular Weight	152.149
Molecular Formula	$C_8H_8O_3$
Density	1.174 g/cm³
Melting Point	-9 °C
Boiling Point	222 °C

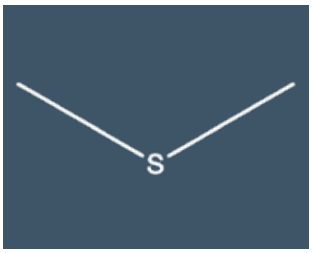
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119-36-8	Methanol-P&T	S-2458



Methyl stearate

Molecular Weight	298.511
Molecular Formula	$C_{19}H_{38}O_2$
Density	0.849 g/cm³
Melting Point	39 °C
Boiling Point	443 °C

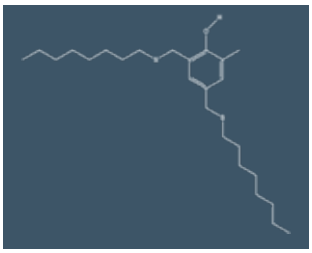
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112-61-8	Methanol-P&T	S-2453



Methyl sulfide

Molecular Weight	62.13
Molecular Formula	C_2H_6S
Density	0.84 g/cm³
Melting Point	-98 °C
Boiling Point	37 °C

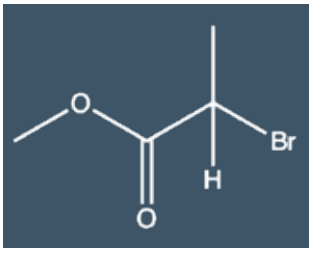
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-18-3	Methanol-P&T	S-2454



2-Methyl-4,6-bis((octylthio) methyl)phenol

Molecular Weight	424.746
Molecular Formula	$C_{25}H_{44}OS_2$

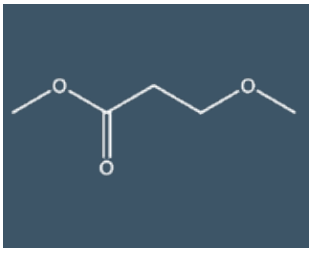
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110553-27-0	Methanol-P&T	S-3902



Methyl-2-bromopropionate

Molecular Weight	167.002
Molecular Formula	$C_4H_7BrO_2$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57885-43-5	Methyl Tertiary Butyl Ether	S-2598

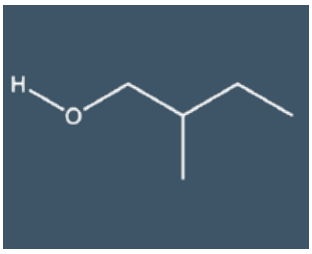


Methyl-3-methoxypropionate

Molecular Weight	118.132
Molecular Formula	$C_5H_{10}O_3$
Density	1.009 g/cm³
Boiling Point	142 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3852-09-3	Methanol-P&T	S-3857

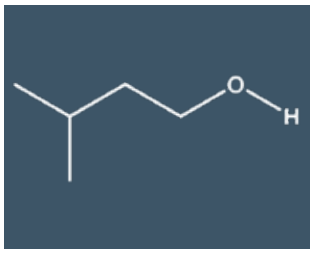
Volume for all Organic Singles is 1 mL



2-Methyl-1-butanol

Molecular Weight	88.15
Molecular Formula	$C_5H_{12}O$
Density	0.816 g/cm³
Melting Point	70 °C
Boiling Point	128 °C

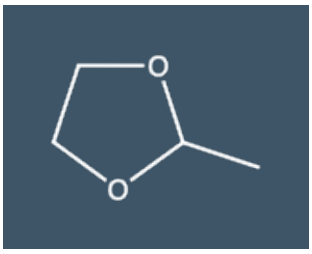
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	137-32-6	Methanol-P&T	S-4238



3-Methyl-1-butanol

Molecular Weight	88.15
Molecular Formula	$C_5H_{12}O$
Density	0.81 g/cm³
Melting Point	-117 °C
Boiling Point	132 °C

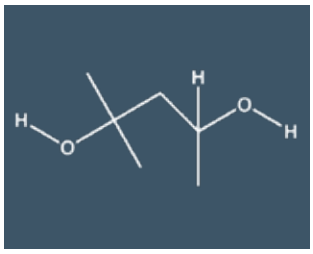
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-51-3	Methanol-P&T	S-2579



2-Methyl-1,3-dioxolane

Molecular Weight	88.106
Molecular Formula	$C_4H_8O_2$
Density	0.982 g/cm³
Boiling Point	83 °C

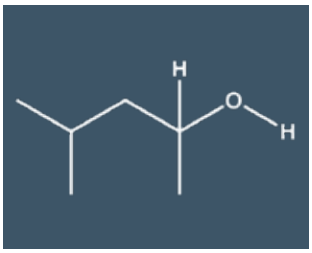
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	497-26-7	Methanol-P&T	S-2580



2-Methyl-2,4-pentanediol

Molecular Weight	118.176
Molecular Formula	$C_6H_{14}O_2$
Density	0.92 g/cm³
Melting Point	-50°C
Boiling Point	198 °C

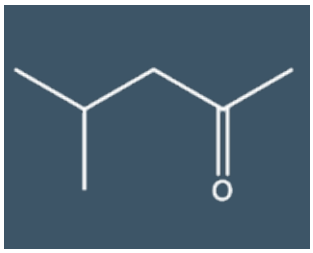
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-41-5	Methanol-P&T	S-2595



4-Methyl-2-pentanol

Molecular Weight	102.177
Molecular Formula	$C_6H_{14}O$
Density	0.81 g/cm³
Melting Point	-90 °C
Boiling Point	132 °C

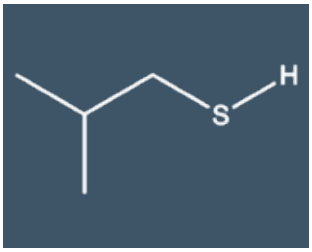
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-11-2	Methanol-P&T	S-2596



4-Methyl-2-pentanone

Molecular Weight	100.161
Molecular Formula	$C_6H_{12}O$
Density	0.804 g/cm³
Melting Point	-84 °C
Boiling Point	117 °C

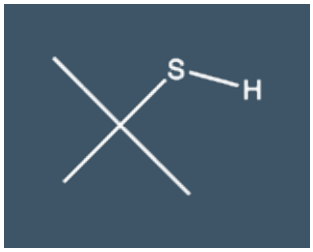
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-10-1	Methanol-P&T	S-2600



2-Methyl-1-propanethiol

Molecular Weight	90.184
Molecular Formula	$C_4H_{10}S$
Density	0.831 g/cm³
Melting Point	-79 °C
Boiling Point	88 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	513-44-0	Methanol-P&T	S-2587



2-Methyl-2-propanethiol

Molecular Weight	90.184
Molecular Formula	$C_4H_{10}S$
Density	0.794 g/cm³
Melting Point	0 °C
Boiling Point	64 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-66-1	Methanol-P&T	S-2586

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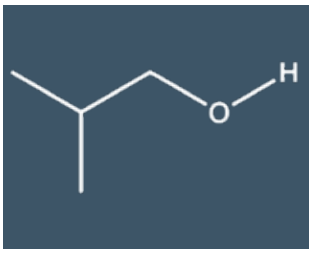
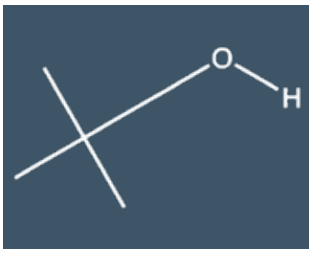
Volume for all Organic Singles is 1 mL



2-Methyl-1-propanol

Molecular Weight	74.123
Molecular Formula	$C_4H_{10}O$
Density	0.8 g/cm³
Melting Point	-108 °C
Boiling Point	108 °C

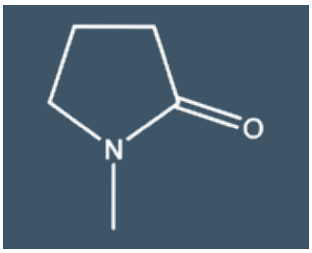
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-83-1	Methanol-P&T	S-2585



2-Methyl-2-propanol

Molecular Weight	74.123
Molecular Formula	$C_4H_{10}O$
Density	0.775 g/cm³
Melting Point	25 °C
Boiling Point	82 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-65-0	Methanol-P&T	S-2602



1-Methyl-2-pyrrolidinone

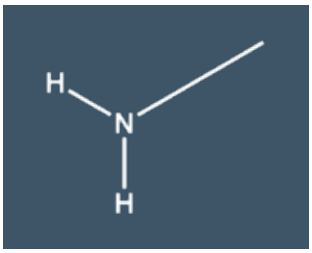
Molecular Weight	99.133
Molecular Formula	C_5H_9NO
Density	1.03 g/cm³
Melting Point	-25 °C
Boiling Point	202 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	872-50-4	Methanol-P&T	S-2590

Methyl tertiary-butyl ether

Molecular Weight	88.15
Molecular Formula	$C_5H_{12}O$
Density	0.735 g/cm³
Melting Point	-109 °C
Boiling Point	55 °C

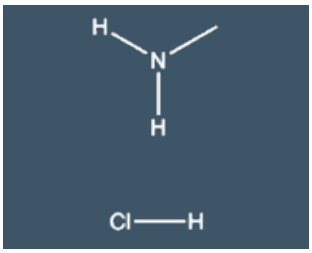
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1634-04-4	Methanol-P&T	S-2455



Methylamine

Molecular Weight	31.058
Molecular Formula	CH_5N
Density	0.656 g/cm³
Melting Point	-93 °C
Boiling Point	-6 °C

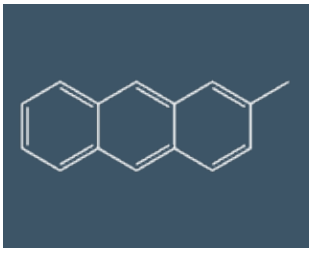
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74-89-5	Methanol-P&T	S-2457



Methylamine hydrochloride

Molecular Weight	67.516
Molecular Formula	CH_6ClN
Melting Point	232 °C
Boiling Point	230 °C

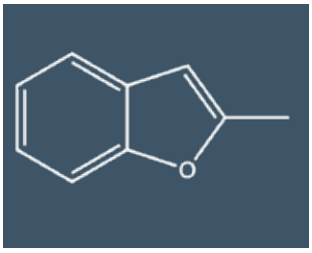
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	593-51-1	Methanol-P&T	S-2457A



2-Methylanthracene

Molecular Weight	192.261
Molecular Formula	$C_{15}H_{12}$
Melting Point	205 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	613-12-7	Methanol-P&T	S-2460

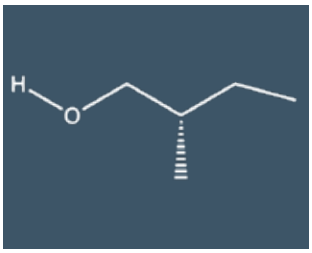


2-Methylbenzofuran

Molecular Weight	132.162
Molecular Formula	C_9H_8O
Density	1.057 g/cm³
Boiling Point	197 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4265-25-2	Methanol-P&T	S-2461

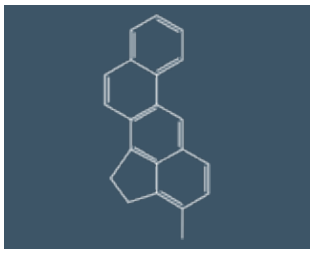
Volume for all Organic Singles is 1 mL



(S)-(-)-2-Methyl-butanol

Molecular Weight	88.15
Molecular Formula	$C_5H_{12}O$

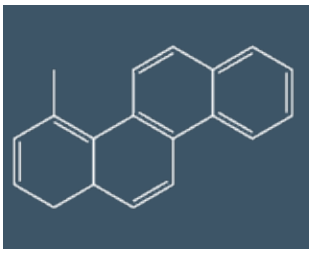
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1565-80-6	Methanol-P&T	S-3958



3-Methylcholanthrene

Molecular Weight	268.359
Molecular Formula	$C_{21}H_{16}$
Density	1.28 g/cm^3
Melting Point	178 °C
Boiling Point	280 °C

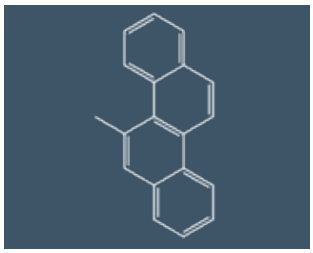
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-49-5	Methylene Chloride	S-2465



4-Methylchrysene

Molecular Weight	242.321
Molecular Formula	$C_{19}H_{14}$
Density	1.17 g/cm^3
Melting Point	238 to 240 °C
Boiling Point	413 °C

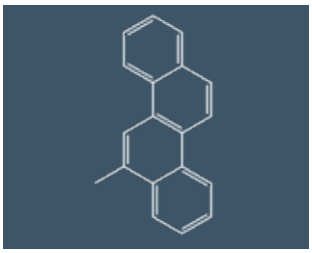
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3351-30-2	Methylene Chloride	S-2425



5-Methylchrysene

Molecular Weight	242.321
Molecular Formula	$C_{19}H_{14}$
Melting Point	118 °C

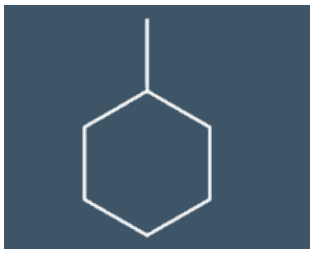
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3697-24-3	Methylene Chloride	S-4811



6-Methylchrysene

Molecular Weight	242.321
Molecular Formula	$C_{19}H_{14}$
Density	1.164 g/cm^3
Boiling Point	449 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1705-85-7	Methylene Chloride	S-2426



Methylcyclohexane

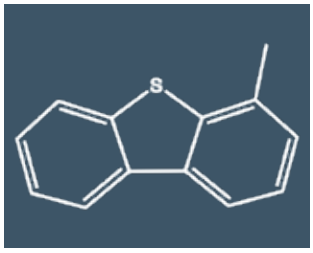
Molecular Weight	98.189
Molecular Formula	C_7H_{14}
Density	0.77 g/cm^3
Melting Point	-126 °C
Boiling Point	101 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-87-2	Methanol-P&T	S-2470

Methylcyclopentane

Molecular Weight	84.162
Molecular Formula	C_6H_{12}
Density	0.749 g/cm^3
Melting Point	-142 °C
Boiling Point	72 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	96-37-7	Methanol-P&T	S-2422



4-Methyldibenzothiophene

Molecular Weight	198.283
Molecular Formula	$C_{13}H_{10}S$
Density	1.213 g/cm^3
Melting Point	67 °C
Boiling Point	349 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7372-88-5	Methylene Chloride	S-6052

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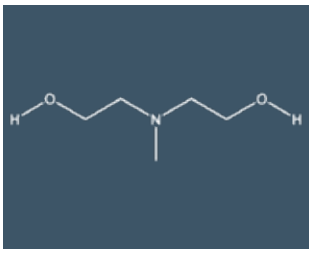
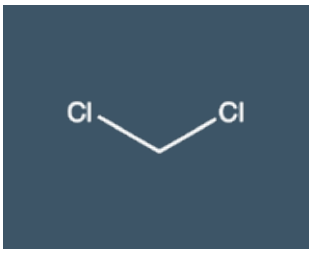
Volume for all Organic Singles is 1 mL



n-Methyldiethanolamine

Molecular Weight	119.164
Molecular Formula	$C_5H_{13}O_2N$
Density	1.043 g/cm^3
Melting Point	-21 °C
Boiling Point	247 °C

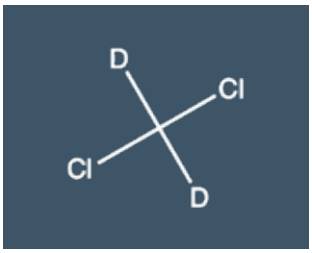
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	105-59-9	15 mM Ammonium Hydroxide	S-2484



Methylene chloride

Molecular Weight	87.927
Molecular Formula	CH_2Cl_2
Density	1.33 g/cm^3
Melting Point	-97 °C
Boiling Point	40 °C

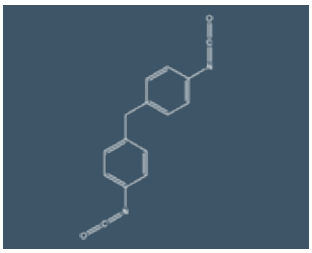
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-09-2	Methanol-P&T	S-2480



Methylene chloride-d$_2$

Molecular Weight	86.939
Molecular Formula	CH_2Cl_2

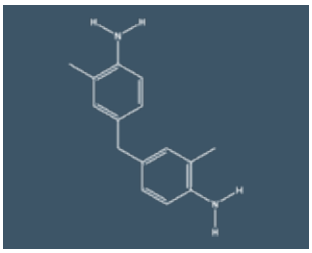
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1665-00-5	Methanol-P&T	S-2481



Methylene di-p-phenyl diisocyanate

Molecular Weight	250.257
Molecular Formula	$C_{15}H_{10}N_2O_2$
Density	1.2 g/cm^3
Melting Point	37 °C
Boiling Point	314 °C

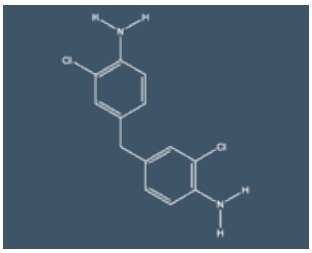
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	101-68-8	Methylene Chloride	S-2487-MC



4,4'-Methylene-bis(2-methylaniline)

Molecular Weight	226.323
Molecular Formula	$C_{15}H_{18}N_2$

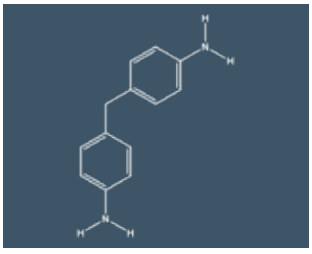
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	838-88-0	Methanol	S-4474



4,4'-Methylene-bis(2-chloroaniline)

Molecular Weight	267.153
Molecular Formula	$C_{13}H_{12}Cl_2N_2$
Density	1.35 g/cm^3
Melting Point	110 °C

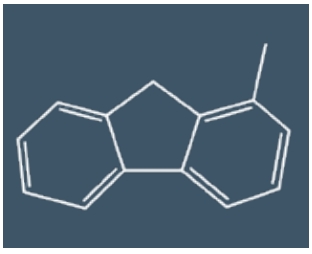
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	101-14-4	Methanol-P&T	S-2485



4,4'-Methylenedianiline

Molecular Weight	198.269
Molecular Formula	$C_{13}H_{14}N_2$
Density	0.5 g/cm^3
Melting Point	93 °C
Boiling Point	398 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	101-77-9	Methanol-P&T	S-2486

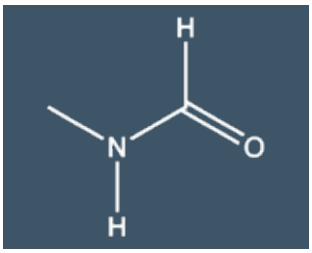


1-Methylfluorene

Molecular Weight	180.25
Molecular Formula	$C_{14}H_{12}$
Melting Point	85 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1730-37-6	Methanol-P&T	S-2490

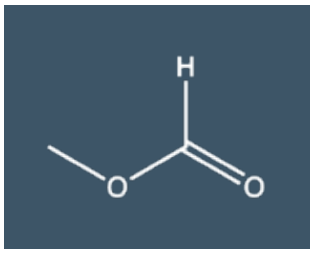
Volume for all Organic Singles is 1 mL



n-Methylformamide

Molecular Weight	59.068
Molecular Formula	C_2H_5NO
Density	1.003 g/cm^3
Melting Point	-4 °C
Boiling Point	183 °C

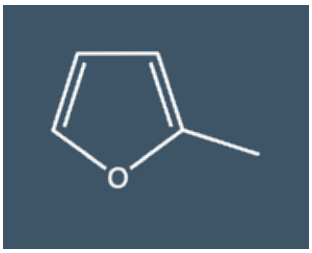
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-39-7	Methanol-P&T	S-5004



Methyl formate

Molecular Weight	60.052
Molecular Formula	$C_2H_4O_2$
Density	0.98 g/cm^3
Melting Point	-100 °C
Boiling Point	32 °C

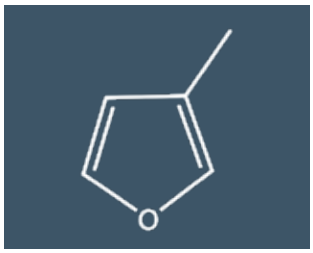
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-31-3	Methanol-P&T	S-2495



2-Methylfuran

Molecular Weight	82.102
Molecular Formula	C_5H_6O
Density	0.927 g/cm^3
Melting Point	-88 °C
Boiling Point	64 °C

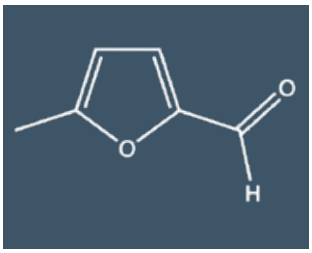
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	534-22-5	Methanol-P&T	S-2500



3-Methylfuran

Molecular Weight	82.102
Molecular Formula	C_5H_6O

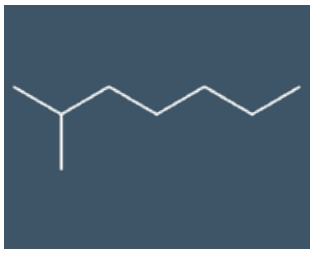
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	930-27-8	Methanol-P&T	S-2501



5-Methylfurfural

Molecular Weight	110.112
Molecular Formula	$C_6H_6O_2$
Density	1.107 g/cm^3
Boiling Point	187 °C

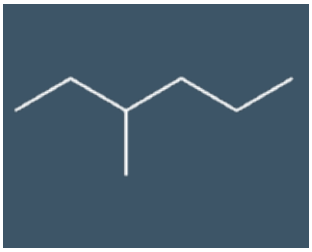
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	620-02-0	Methanol-P&T	S-2607



2-Methylheptane

Molecular Weight	114.232
Molecular Formula	C_8H_{18}
Density	0.698 g/cm^3
Melting Point	-109 °C
Boiling Point	116 °C

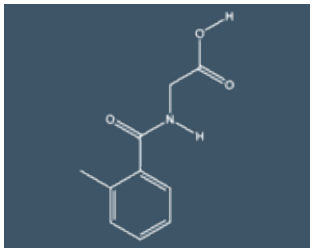
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	592-27-8	Methanol-P&T	S-2505



3-Methylhexane

Molecular Weight	100.205
Molecular Formula	C_7H_{16}
Density	0.686 g/cm^3
Melting Point	-119 °C
Boiling Point	92 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	589-34-4	Methanol-P&T	S-2515



2-Methylhippuric acid

Molecular Weight	193.202
Molecular Formula	$C_{10}H_{11}NO_3$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	42013-20-7	HPLC Acetonitrile	S-5218

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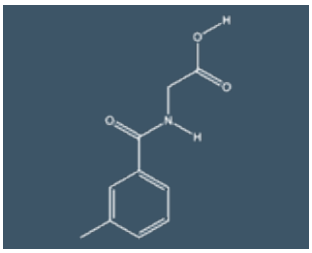
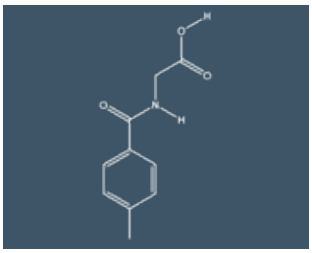
Volume for all Organic Singles is 1 mL



3-Methylhippuric acid

Molecular Weight	193.202
Molecular Formula	$C_{10}H_{11}NO_3$

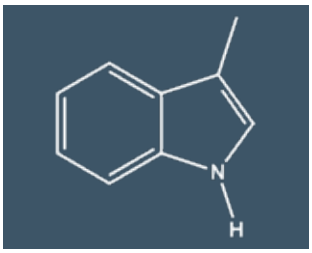
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	27115-49-7	HPLC Acetonitrile	S-5219



4-Methylhippuric acid

Molecular Weight	193.202
Molecular Formula	$C_{10}H_{11}NO_3$

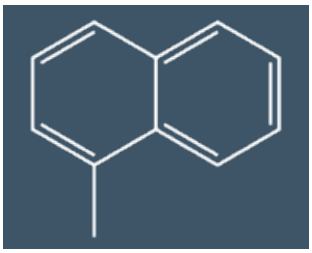
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	27115-50-0	HPLC Acetonitrile	S-5220



3-Methylindole

Molecular Weight	131.178
Molecular Formula	C_9H_9N
Melting Point	95 °C
Boiling Point	265 °C

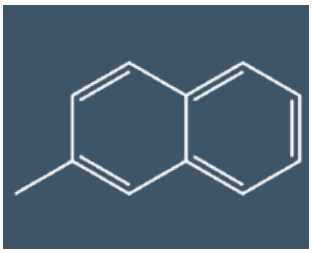
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	83-34-1	Methanol-P&T	S-2516



1-Methylnaphthalene

Molecular Weight	142.201
Molecular Formula	$C_{11}H_{10}$
Density	1 g/cm^3
Melting Point	-22 °C
Boiling Point	245 °C

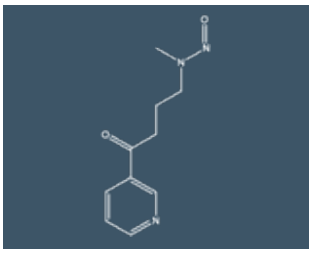
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90-12-0	Methanol-P&T	S-2520



2-Methylnaphthalene

Molecular Weight	142.201
Molecular Formula	$C_{11}H_{10}$
Density	1.006 g/cm^3
Melting Point	35 °C
Boiling Point	241 °C

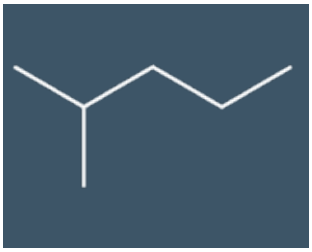
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91-57-6	Methanol-P&T	S-2525



4-(Methylnitrosamino)-1-(3-pyridl)-1-butanone

Molecular Weight	207.233
Molecular Formula	$C_{10}H_{13}N_3O_2$
Density	< 1 g/cm^3
Melting Point	64 °C

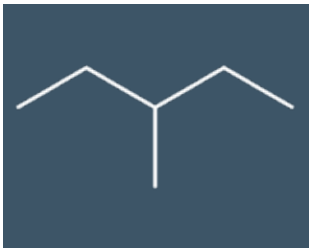
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	64091-91-4	Methanol-P&T	S-2526



2-Methylpentane

Molecular Weight	86.178
Molecular Formula	C_6H_{14}
Density	0.655 g/cm^3
Melting Point	153 °C
Boiling Point	60 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-83-5	Methanol-P&T	S-2527

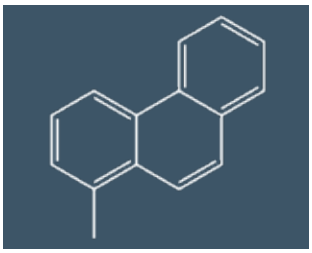


3-Methylpentane

Molecular Weight	86.178
Molecular Formula	C_6H_{14}
Density	0.664 g/cm^3
Melting Point	-118 °C
Boiling Point	64 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	96-14-0	Methanol-P&T	S-2530

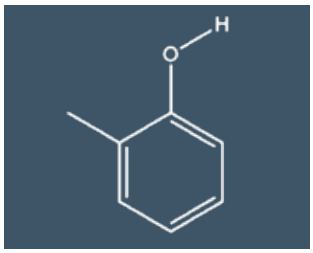
Volume for all Organic Singles is 1 mL



1-Methylphenanthrene

Molecular Weight	192.261
Molecular Formula	$C_{15}H_{12}$

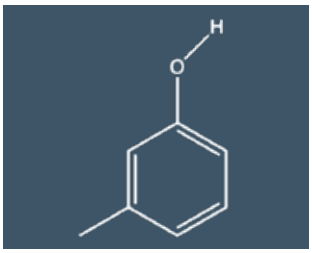
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	832-69-9	Methanol-P&T	S-2535



2-Methylphenol

Molecular Weight	108.14
Molecular Formula	C_7H_8O
Density	1.05 g/cm^3
Melting Point	31 °C
Boiling Point	191 °C

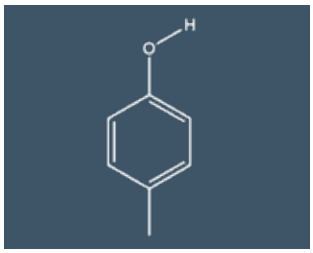
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-48-7	Methanol-P&T	S-2545



3-Methylphenol

Molecular Weight	108.14
Molecular Formula	C_7H_8O
Melting Point	11 °C
Boiling Point	202 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-39-4	Methanol	S-2540



4-Methylphenol

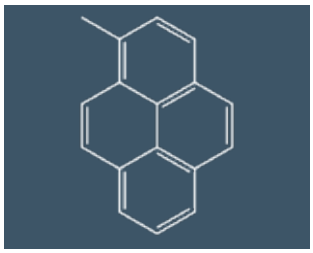
Molecular Weight	108.14
Molecular Formula	C_7H_8O
Density	1.02 g/cm^3
Melting Point	35 °C
Boiling Point	202 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-44-5	Methanol-P&T	S-2550

2-Methylpropene

Molecular Weight	56.108
Molecular Formula	C_4H_8
Density	0.59 g/cm^3
Melting Point	-140 °C
Boiling Point	-7 °C

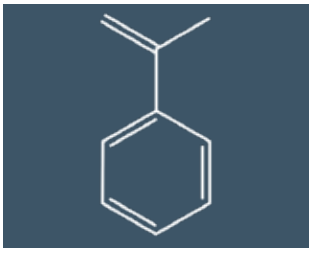
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-11-7	Methanol-P&T	S-2556



1-Methylpyrene

Molecular Weight	216.283
Molecular Formula	$C_{17}H_{12}$
Density	1.213 g/cm^3
Melting Point	74 °C
Boiling Point	410 °C

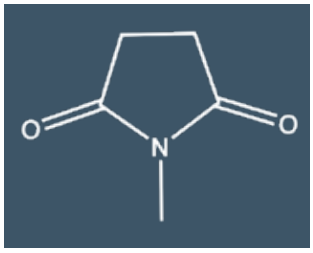
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2381-21-7	Methylene Chloride	S-3858



alpha-Methylstyrene

Molecular Weight	118.179
Molecular Formula	C_9H_{10}
Density	0.91 g/cm^3
Melting Point	-23 °C
Boiling Point	164 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-83-9	Methanol-P&T	S-2560

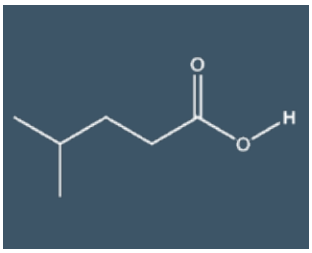


n-Methylsuccinimide

Molecular Weight	113.116
Molecular Formula	$C_5H_7NO_2$
Melting Point	65 °C
Boiling Point	234 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1121-07-9	Methanol-P&T	S-2567

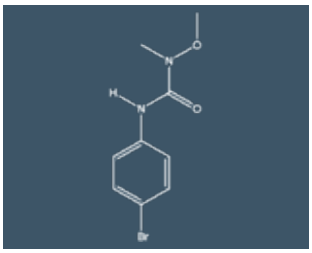
Volume for all Organic Singles is 1 mL



4-Methylvaleric acid

Molecular Weight	116.16
Molecular Formula	$C_6H_{12}O_2$
Melting Point	-33 °C

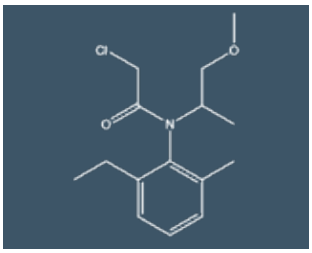
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	646-07-1	Methanol-P&T	S-2284



Metobromuron

Molecular Weight	259.103
Molecular Formula	$C_9H_{11}BrN_2O_2$
Density	1.6 g/cm^3
Melting Point	95 to 96 °C

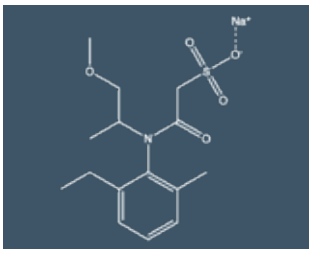
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3060-89-7	Acetonitrile	S-2574



Metolachlor

Molecular Weight	283.8
Molecular Formula	$C_{15}H_{22}ClNO_2$
Density	1.21 g/cm^3
Melting Point	-62 °C

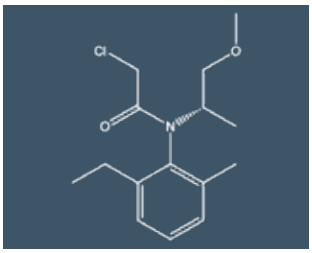
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51218-45-2	Methanol	S-2615



Metolachlor ESA (sodium salt)

Molecular Weight	351.393
Molecular Formula	$C_{15}H_{22}NNaO_5S$

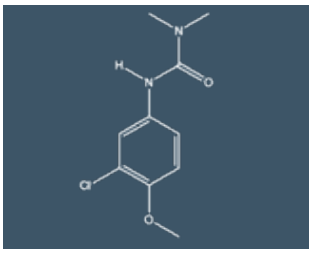
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	947601-85-6	Acetonitrile	S-4634



S-Metolachlor

Molecular Weight	283.796
Molecular Formula	$C_{15}H_{22}ClNO_2$

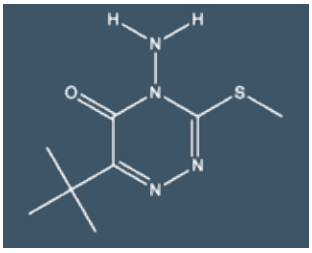
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87392-12-9	Acetone	S-5203-AC



Metoxuron

Molecular Weight	228.676
Molecular Formula	$C_{10}H_{13}ClN_2O_2$
Melting Point	127 °C

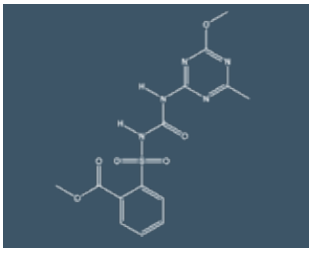
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	19937-59-8	Methanol-P&T	S-3997



Metribuzin

Molecular Weight	214.3
Molecular Formula	$C_8H_{14}N_4OS$
Density	1.26 g/cm^3
Melting Point	125 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	21087-64-9	Acetone	S-2620-AC
		Methanol	S-2620

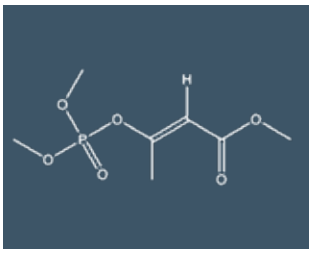


Metsulfuron methyl

Molecular Weight	381.363
Molecular Formula	$C_{14}H_{15}N_5O_6S$
Density	1.45 g/cm^3
Melting Point	163 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74223-64-6	Acetone	S-2621

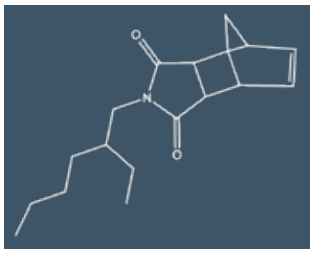
Volume for all Organic Singles is 1 mL



Mevinphos

Molecular Weight	224.149
Molecular Formula	$C_7H_{13}O_6P$
Density	1.25 g/cm^3
Melting Point	7 °C
Boiling Point	107 °C

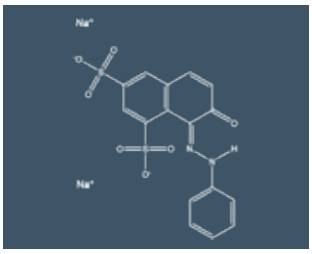
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7786-34-7	Methanol-P&T	S-2625



MGK 264™ (a=81% b=19%)

Molecular Weight	275.392
Molecular Formula	$C_{17}H_{25}NO_2$
Density	1.04 g/cm^3
Melting Point	20 °C
Boiling Point	157 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	113-48-4	Methanol-P&T	S-2627



Mineral oil

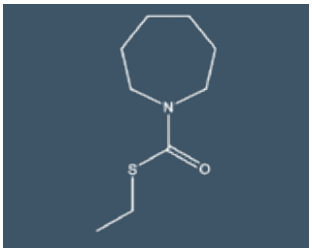
Molecular Weight	452.363
Molecular Formula	$C_{16}H_{10}N_2Na_2O_7S_2$
Melting Point	300 to 375 °C
Boiling Point	218 to 643 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	8042-47-5	Methylene Chloride	S-2630

Mirex

Molecular Weight	545.5
Molecular Formula	$C_{10}Cl_{12}$
Melting Point	485 °C
Boiling Point	Decomposes

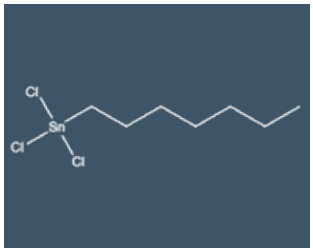
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2385-85-5	Acetonitrile	S-2635-ACN
		Hexane:Toluene (50:50)	S-2635



Molinate

Molecular Weight	187.3
Molecular Formula	$C_9H_{17}NOS$
Density	1.06 g/cm^3
Melting Point	-25 °C
Boiling Point	278 °C

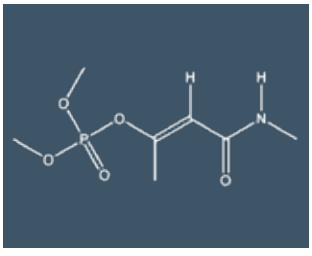
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2212-67-1	Methanol	S-2640



Mono-n-heptyltin trichloride

Molecular Weight	324.257
Molecular Formula	$C_7H_{15}Cl_3Sn$

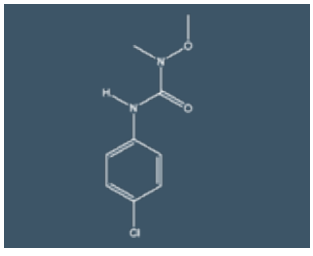
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	59344-47-7	Ethanol	S-5517-ETOH



Monocrotophos

Molecular Weight	223.2
Molecular Formula	$C_7H_{14}NO_5P$
Density	1.22 g/cm^3
Melting Point	54 °C
Boiling Point	125 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6923-22-4	Acetone	S-2645



Monolinuron

Molecular Weight	214.649
Molecular Formula	$C_9H_{11}ClN_2O_2$
Melting Point	80 to 83 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1746-81-2	Acetonitrile	S-2642

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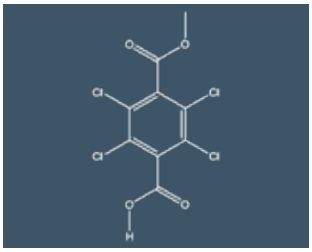
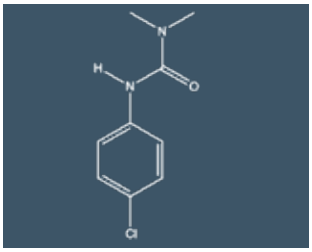
Volume for all Organic Singles is 1 mL



Monomethyl tetrachloroterephthalate

Molecular Weight	317.927
Molecular Formula	$C_9H_4Cl_4O_4$
Density	1.694 g/cm^3
Melting Point	169 °C
Boiling Point	352 °C

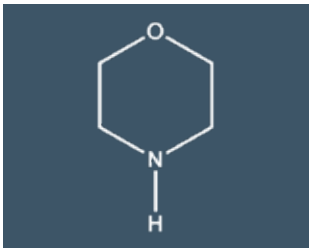
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	887-54-7	Methylene Chloride	S-1068



Monuron

Molecular Weight	198.65
Molecular Formula	$C_9H_{11}ClN_2O$
Density	1.27 g/cm^3
Melting Point	170 °C
Boiling Point	192 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	150-68-5	Methanol	S-2647



Morpholine

Molecular Weight	87.122
Molecular Formula	C_4H_9NO
Density	1.007 g/cm^3
Melting Point	-5 °C
Boiling Point	129 °C

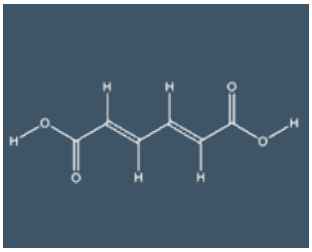
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-91-8	Methanol-P&T	S-2648

Motor Oil, SAE 20W

Density	0.88 g/cm^3
Boiling Point	> 280 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	64742-65-0	Methylene Chloride	S-2653

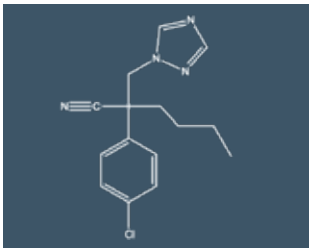
* No Image Available.



trans,trans-Muconic acid

Molecular Weight	142.11
Molecular Formula	$C_6H_6O_4$
Melting Point	301 °C

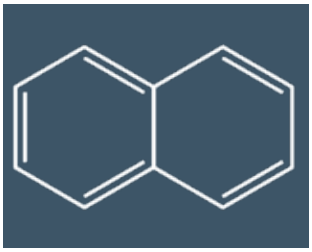
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3588-17-8	Acetone:DI Water (50:50)	S-5223



Myclobutanil (Systhane)

Molecular Weight	288.8
Molecular Formula	$C_{15}H_{17}ClN_4$
Density	1.24 g/cm^3
Melting Point	71 °C
Boiling Point	391 °C

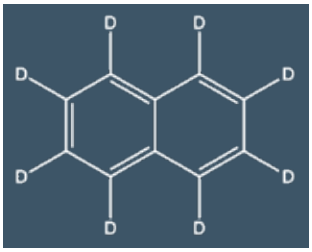
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	88671-89-0	Acetone	S-3306



Naphthalene

Molecular Weight	128.174
Molecular Formula	$C_{10}H_8$
Density	1.16 g/cm^3
Melting Point	80 °C
Boiling Point	218 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91-20-3	Methanol	S-2655

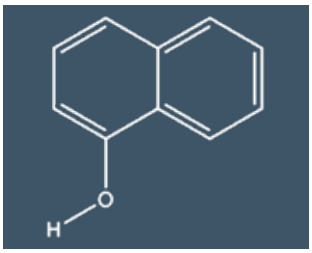


Naphthalene-d$_8$

Molecular Weight	136.223
Molecular Formula	$C_{10}H_8$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1146-65-2	Methanol-P&T	S-2660

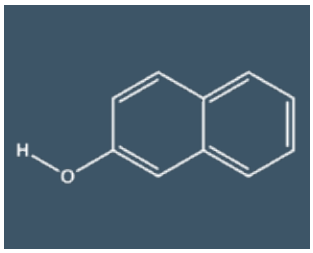
Volume for all Organic Singles is 1 mL



1-Naphthol

Molecular Weight	144.173
Molecular Formula	$C_{10}H_8O$
Density	1.095 g/cm³ @ 98.7 °C
Melting Point	96 °C
Boiling Point	288 °C

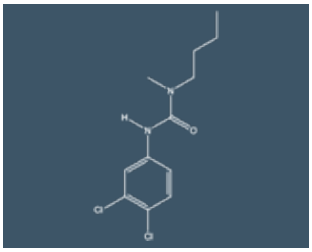
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90-15-3	Acetonitrile	S-2665



2-Naphthol

Molecular Weight	144.173
Molecular Formula	$C_{10}H_8O$
Density	1.28 g/cm³
Melting Point	123 °C
Boiling Point	285 °C

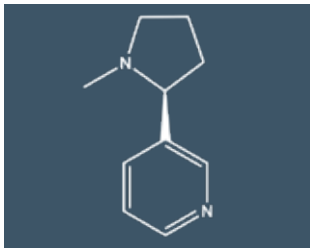
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	135-19-3	Acetonitrile	S-2666



Neburon

Molecular Weight	275.173
Molecular Formula	$C_{12}H_{16}Cl_2N_2O$

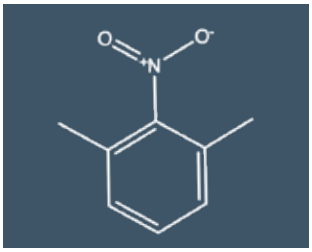
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	555-37-3	Methanol	S-2671



Nicotine

Molecular Weight	162.236
Molecular Formula	$C_{10}H_{14}N_2$
Density	1.01 g/cm³
Melting Point	-80 °C
Boiling Point	247 °C

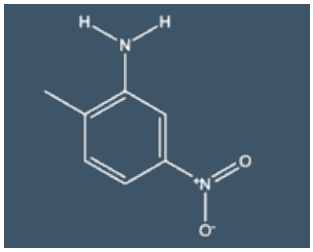
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	54-11-5	Methanol	S-2680



2-Nitro-m-xylene

Molecular Weight	151.165
Molecular Formula	$C_8H_9NO_2$
Density	1.12 g/cm³
Melting Point	15 °C
Boiling Point	225 °C

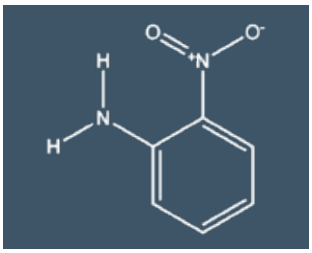
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	81-20-9	Methanol-P&T	S-2760



5-Nitro-o-toluidine

Molecular Weight	152.153
Molecular Formula	$C_7H_8N_2O_2$
Density	1.365 g/cm³
Melting Point	105 °C

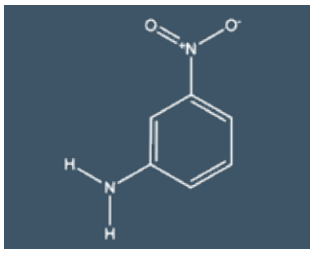
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-55-8	Methanol-P&T	S-3862



2-Nitroaniline

Molecular Weight	138.126
Molecular Formula	$C_6H_6N_2O_2$
Density	1.44 g/cm³
Melting Point	71 °C
Boiling Point	284 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	88-74-4	Methanol-P&T	S-2690

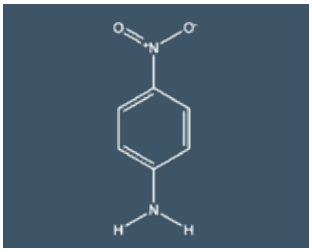


3-Nitroaniline

Molecular Weight	138.126
Molecular Formula	$C_6H_6N_2O_2$
Density	1.4 g/cm³
Melting Point	114 °C
Boiling Point	306 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-09-2	Methanol-P&T	S-2695

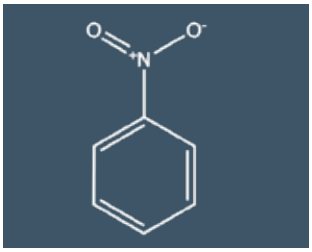
Volume for all Organic Singles is 1 mL



4-Nitroaniline

Molecular Weight	138.126
Molecular Formula	$C_6H_6N_2O_2$
Density	1.4 g/cm^3
Melting Point	148 °C
Boiling Point	332 °C

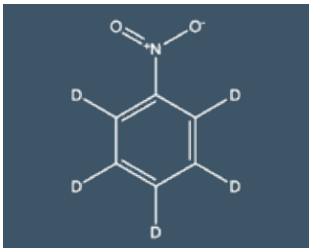
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-01-6	Methanol-P&T	S-2700



Nitrobenzene

Molecular Weight	123.111
Molecular Formula	$C_6H_5NO_2$
Density	1.2 g/cm^3
Melting Point	5 °C
Boiling Point	211 °C

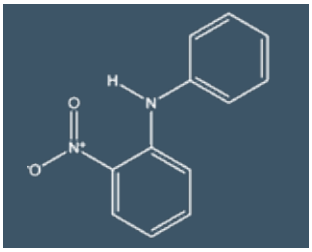
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-95-3	Methanol-P&T	S-2705



Nitrobenzene-d$_5$

Molecular Weight	128.142
Molecular Formula	$C_6H_5NO_2$
Density	1.253 g/cm^3
Boiling Point	88 °C

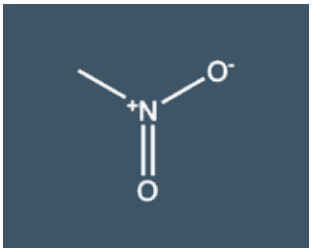
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4165-60-0	Methanol-P&T	S-2710



2-Nitrodiphenylamine

Molecular Weight	214.224
Molecular Formula	$C_{12}H_{10}N_2O_2$

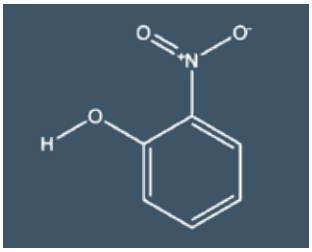
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119-75-5	Methanol-P&T	S-2717



Nitromethane

Molecular Weight	61.04
Molecular Formula	CH_3NO_2
Density	1.139 g/cm^3
Melting Point	-29 °C
Boiling Point	101 °C

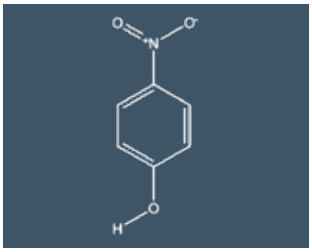
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-52-5	Methanol-P&T	S-2722



2-Nitrophenol

Molecular Weight	139.11
Molecular Formula	$C_6H_5NO_3$
Density	1.49 g/cm^3
Melting Point	45 °C
Boiling Point	216 °C

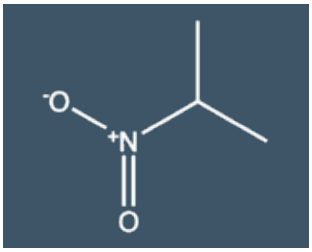
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	88-75-5	Methanol-P&T	S-2725



4-Nitrophenol

Molecular Weight	139.11
Molecular Formula	$C_6H_5NO_3$
Density	1.5 g/cm^3
Melting Point	114 °C
Boiling Point	279 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-02-7	Methanol	S-2730

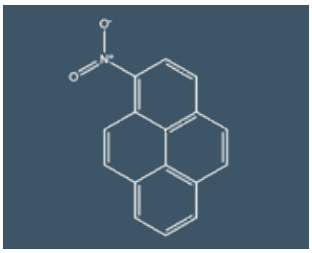


2-Nitropropane

Molecular Weight	89.094
Molecular Formula	$C_3H_7NO_2$
Density	0.99 g/cm^3
Melting Point	-91 °C
Boiling Point	120 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-46-9	Methanol-P&T	S-2732

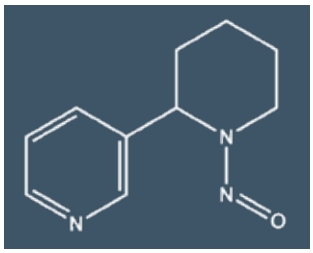
Volume for all Organic Singles is 1 mL



1-Nitropyrene

Molecular Weight	247.253
Molecular Formula	$C_{16}H_9NO_2$
Density	1.422 g/cm³
Melting Point	155 °C

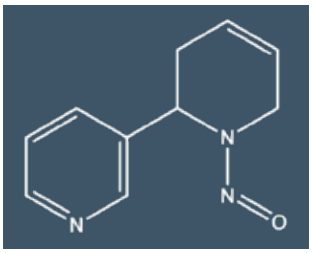
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5522-43-0	Methylene Chloride	S-2737



n-Nitrosoanabasine

Molecular Weight	191.234
Molecular Formula	$C_{10}H_{13}N_3O$

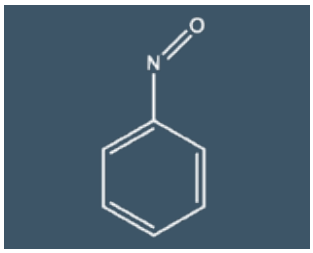
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	37620-20-5	Methanol-P&T	S-2733



n-Nitrosoanatabine

Molecular Weight	189.218
Molecular Formula	$C_{10}H_{13}N_3O$

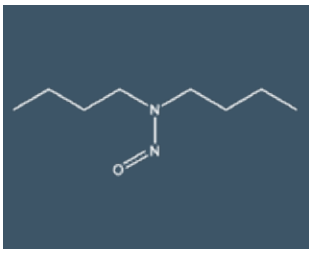
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	887407-16-1	Methanol-P&T	S-2734



Nitrosobenzene

Molecular Weight	107.112
Molecular Formula	C_6H_5NO
Melting Point	67 °C
Boiling Point	59 °C

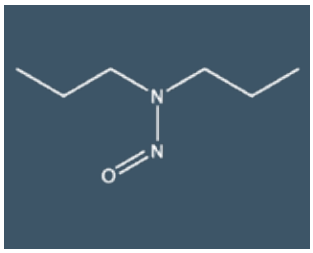
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	586-96-9	Methanol-P&T	S-2740



n-Nitrosodi-n-butylamine

Molecular Weight	158.245
Molecular Formula	$C_8H_{18}N_2O$
Density	0.009 g/cm³

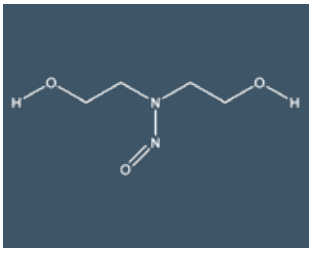
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	924-16-3	Methanol	S-2825



n-Nitrosodi-n-propylamine

Molecular Weight	130.191
Molecular Formula	$C_6H_{14}N_2O$
Density	0.916 g/cm³
Boiling Point	195 °C

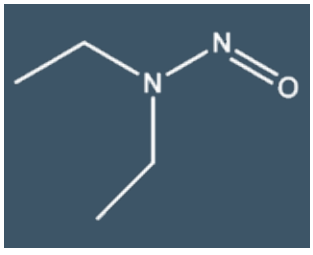
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	621-64-7	Methylene Chloride	S-2835



n-Nitrosodiethanolamine

Molecular Weight	134.135
Molecular Formula	$C_4H_{10}N_2O_3$
Density	1.28 g/cm³
Boiling Point	114 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1116-54-7	Methanol-P&T	S-2811



n-Nitrosodiethylamine

Molecular Weight	102.137
Molecular Formula	$C_4H_{10}N_2O$
Density	0.942 g/cm³
Boiling Point	177 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	55-18-5	Methanol-P&T	S-2810

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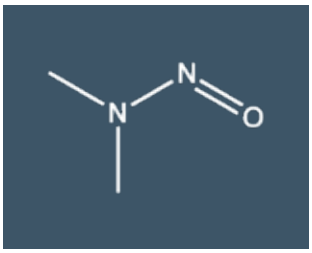
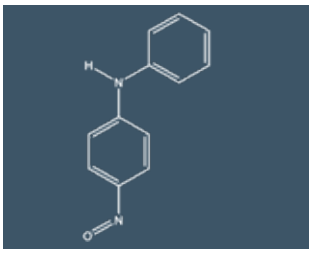
Volume for all Organic Singles is 1 mL



n-Nitrosodimethylamine

Molecular Weight	74.083
Molecular Formula	$C_2H_6N_2O$
Density	1.005 g/cm³
Boiling Point	151 °C

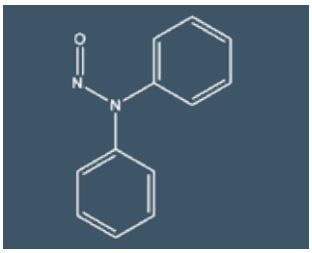
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	62-75-9	Methanol-P&T	S-2815



4-Nitrosodiphenylamine

Molecular Weight	198.225
Molecular Formula	$C_{12}H_{10}N_2O$
Melting Point	145 °C

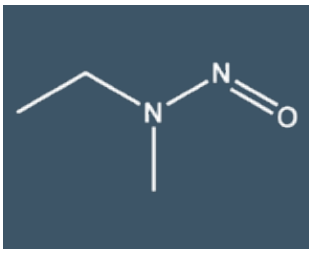
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	156-10-5	Methanol-P&T	S-2745



n-Nitrosodiphenylamine

Molecular Weight	198.225
Molecular Formula	$C_{12}H_{10}N_2O$
Density	1.23 g/cm³
Melting Point	67 °C
Boiling Point	101 °C

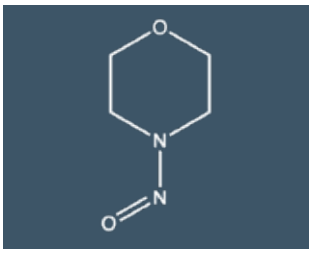
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	86-30-6	Methylene Chloride	S-2820



n-Nitrosomethylethylamine

Molecular Weight	88.11
Molecular Formula	$C_3H_8N_2O$
Density	0.945 g/cm³
Boiling Point	170 °C

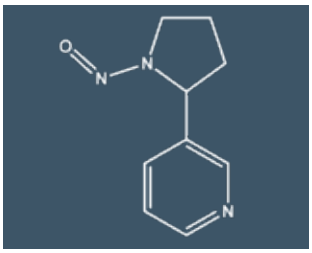
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	10595-95-6	Methanol-P&T	S-2830



n-Nitrosomorpholine

Molecular Weight	116.12
Molecular Formula	$C_4H_8N_2O_2$
Melting Point	29 °C
Boiling Point	224 °C

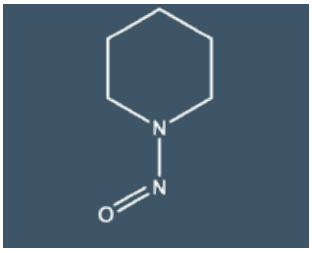
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	59-89-2	Methanol-P&T	S-2749



n′-Nitrosonornicotine (NNN)

Molecular Weight	177.207
Molecular Formula	$C_9H_{11}N_3O$
Melting Point	47 °C

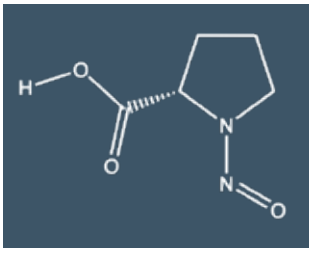
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	80508-23-2	Methanol	S-5726



n-Nitrosopiperidine

Molecular Weight	114.148
Molecular Formula	$C_5H_{10}N_2O$
Density	1.063 g/cm³
Boiling Point	219 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-75-4	Methanol-P&T	S-2750

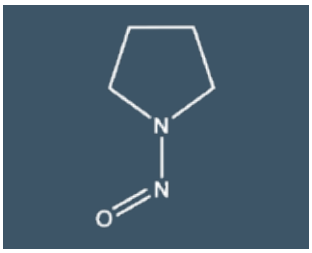


n-Nitrosoproline

Molecular Weight	144.13
Molecular Formula	$C_5H_8N_2O_3$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7519-36-0	Methanol-P&T	S-2752

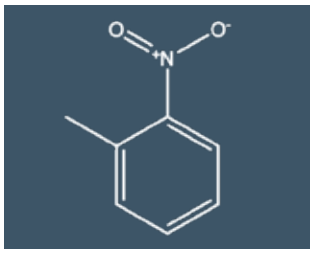
Volume for all Organic Singles is 1 mL



1-Nitrosopyrrolidine

Molecular Weight	100.121
Molecular Formula	$C_4H_8N_2O$
Boiling Point	214 °C

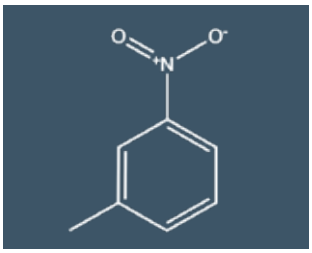
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	930-55-2	Methanol-P&T	S-2755



2-Nitrotoluene

Molecular Weight	137.138
Molecular Formula	$C_7H_7NO_2$
Density	1.16 g/cm³
Melting Point	-10 °C
Boiling Point	222 °C

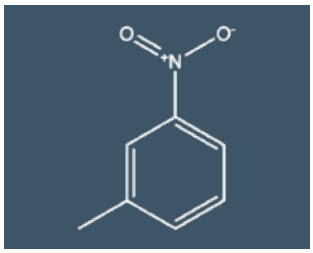
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	88-72-2	Methanol-P&T	S-2756



3-Nitrotoluene

Molecular Weight	137.138
Molecular Formula	$C_7H_7NO_2$
Density	1.16 g/cm³
Melting Point	16 °C
Boiling Point	231 °C

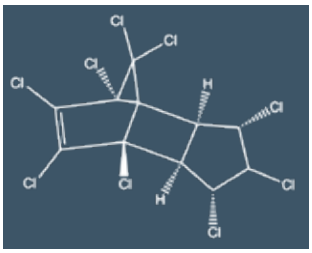
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-08-1	Methanol-P&T	S-2757



4-Nitrotoluene

Molecular Weight	137.138
Molecular Formula	$C_7H_7NO_2$
Density	1.16 g/cm³
Melting Point	16 °C
Boiling Point	231 °C

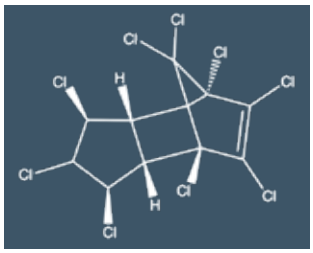
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-99-0	Methanol-P&T	S-2758



cis-Nonachlor

Molecular Weight	444.2
Molecular Formula	$C_{10}H_5Cl_9$

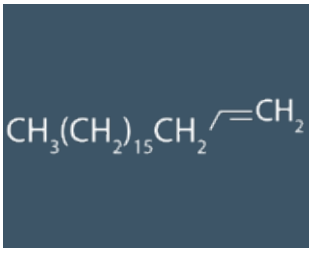
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5103-73-1	Methanol-P&T	S-2765



trans-Nonachlor

Molecular Weight	444.2
Molecular Formula	$C_{10}H_5Cl_9$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	39765-80-5	Methanol	S-2770



1-Nonadecene

Molecular Weight	266.513
Molecular Formula	$C_{19}H_{38}$
Melting Point	23 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	18435-45-5	Methanol-P&T	S-4210

n-Nonane

Molecular Weight	128.259
Molecular Formula	C_9H_{20}
Density	0.72 g/cm³
Melting Point	-51 °C
Boiling Point	151 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-84-2	Methanol-P&T	S-2785

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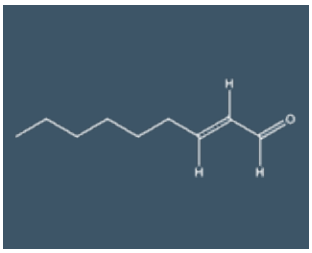
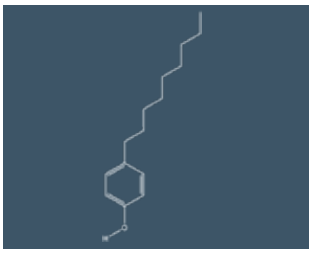
Volume for all Organic Singles is 1 mL



trans-2-Nonenal

Molecular Weight	140.226
Molecular Formula	$C_9H_{16}O$
Density	0.846 g/cm^3
Boiling Point	88 °C

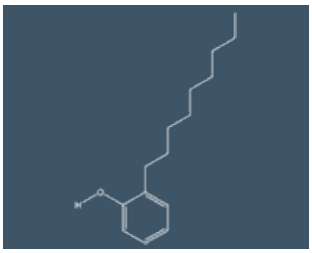
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	18829-56-6	Methanol-P&T	S-4149



4-n-Nonylphenol

Molecular Weight	220.356
Molecular Formula	$C_{15}H_{24}O$
Density	0.94 g/cm^3
Melting Point	42 °C

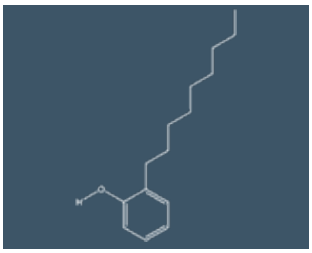
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	104-40-5	Methanol	S-5074



Nonylphenol

Molecular Weight	220.356
Molecular Formula	$C_{15}H_{24}O$
Density	0.95 g/cm^3
Melting Point	-8 °C
Boiling Point	290 to 300 °C

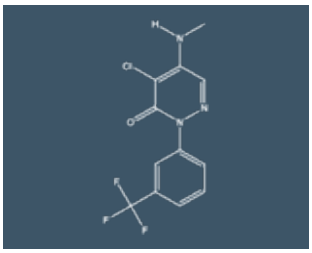
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84852-15-3	Methanol-P&T	S-2795A
		Methylene Chloride	S-2795



4-Nonylphenol (mix of isomers)

Molecular Weight	220.356
Molecular Formula	$C_{15}H_{24}O$
Density	0.95 g/cm^3
Melting Point	-8 °C
Boiling Point	290 to 300 °C

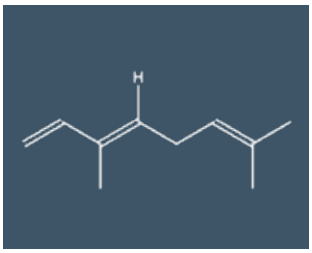
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84852-15-3	Methylene Chloride	S-6162



Norflurazon

Molecular Weight	303.669
Molecular Formula	$C_{12}H_9ClF_3N_3O$
Melting Point	184 °C

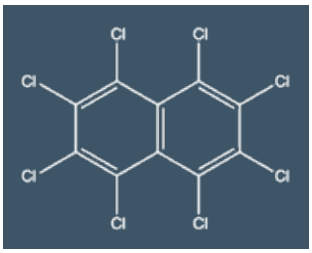
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	27314-13-2	Acetone	S-2800



Ocimene (mix of isomers)

Molecular Weight	136.238
Molecular Formula	$C_{10}H_{16}$

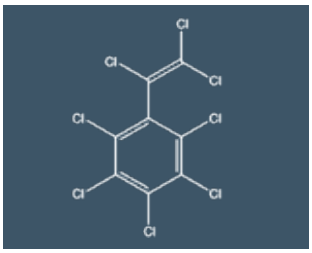
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13877-91-3	Methanol	S-7515



Octachloronaphthalene

Molecular Weight	403.71
Molecular Formula	$C_{10}Cl_8$
Density	2 g/cm^3
Melting Point	192 °C
Boiling Point	440 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2234-13-1	Methylene Chloride: Hexane	S-4200

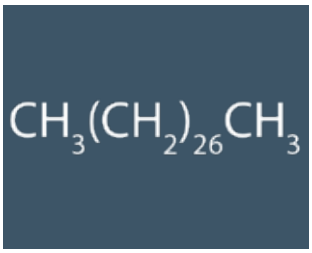


Octachlorostyrene

Molecular Weight	379.668
Molecular Formula	C_8Cl_8

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	29082-74-4	Methylene Chloride	S-2840

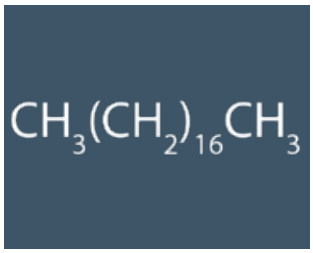
Volume for all Organic Singles is 1 mL



n-Octacosane

Molecular Weight	394.772
Molecular Formula	$C_{28}H_{58}$
Density	0.807 g/cm³
Melting Point	61 °C
Boiling Point	432 °C

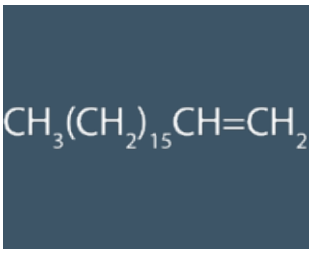
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	630-02-4	Methylene Chloride	S-2845



n-Octadecane

Molecular Weight	254.502
Molecular Formula	$C_{18}H_{38}$
Density	0.77 g/cm³
Melting Point	28 °C
Boiling Point	316 °C

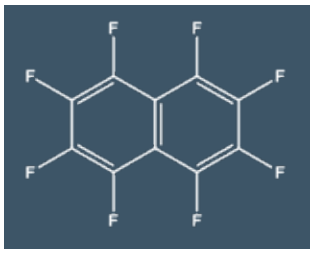
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	593-45-3	Methanol-P&T	S-2850



1-Octadecene

Molecular Weight	252.486
Molecular Formula	$C_{18}H_{36}$
Density	0.789 g/cm³
Melting Point	16 °C
Boiling Point	315 °C

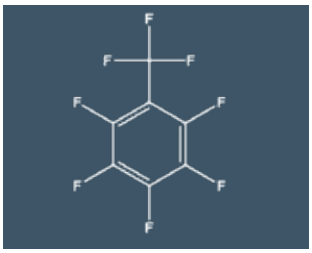
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112-88-9	Methanol-P&T	S-2855



Octafluoronaphthalene

Molecular Weight	272.097
Molecular Formula	$C_{10}F_8$

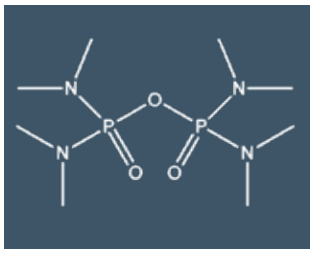
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	313-72-4	Acetone	S-3863



Octafluorotoluene

Molecular Weight	236.064
Molecular Formula	C_7F_8
Density	1.666 g/cm³
Boiling Point	104 °C

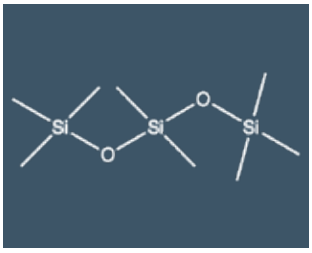
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	434-64-0	Methanol-P&T	S-2861



Octamethylpyrophosphoramide

Molecular Weight	286.253
Molecular Formula	$C_8H_{24}N_4O_3P_2$
Density	1.1 g/cm³
Melting Point	17 °C
Boiling Point	120 to 125 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	152-16-9	Acetone	S-3265



Octamethyltrisiloxane

Molecular Weight	236.533
Molecular Formula	$C_8H_{24}O_2Si_3$
Density	0.95 g/cm³
Melting Point	-50 °C
Boiling Point	153 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-51-7	Methanol-P&T	S-5942

n-Octane

Molecular Weight	114.232
Molecular Formula	C_8H_{18}
Density	0.699 g/cm³
Melting Point	-57 °C
Boiling Point	126 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-65-9	Methanol-P&T	S-2870

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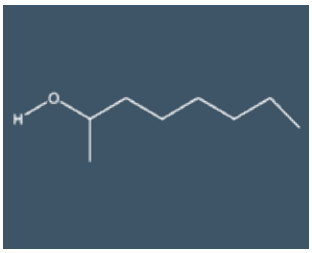
Volume for all Organic Singles is 1 mL

1-Octanol

Molecular Weight	130.231
Molecular Formula	$C_8H_{18}O$
Density	0.824 g/cm^3
Melting Point	-16 °C
Boiling Point	195 °C

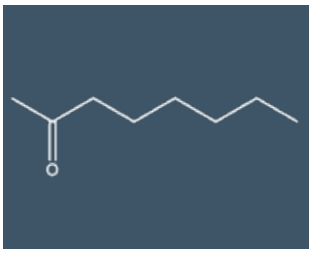
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-87-5	Methanol-P&T	S-2875



2-Octanol

Molecular Weight	130.231
Molecular Formula	$C_8H_{18}O$
Density	0.819 g/cm^3
Melting Point	-39 °C
Boiling Point	179 °C

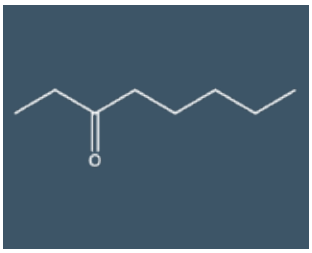
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4128-31-8	Methanol-P&T	S-2880



2-Octanone

Molecular Weight	128.215
Molecular Formula	$C_8H_{16}O$
Density	0.82 g/cm^3
Melting Point	-16 °C
Boiling Point	174 °C

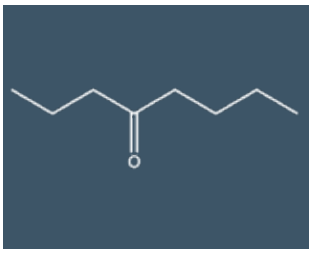
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-13-7	Methanol-P&T	S-4234



3-Octanone

Molecular Weight	128.215
Molecular Formula	$C_8H_{16}O$
Density	0.822 g/cm^3
Melting Point	-57 °C
Boiling Point	168 °C

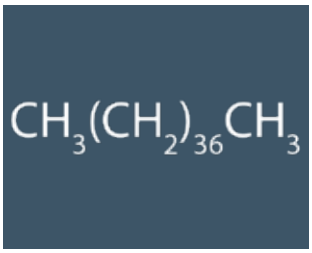
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-68-3	Methanol-P&T	S-2885



4-Octanone

Molecular Weight	128.215
Molecular Formula	$C_8H_{16}O$
Density	0.82 g/cm^3
Boiling Point	166 °C

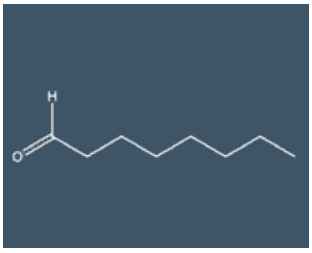
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	589-63-9	Methanol-P&T	S-2871



n-Octatriacontane

Molecular Weight	535.042
Molecular Formula	$C_{38}H_{78}$

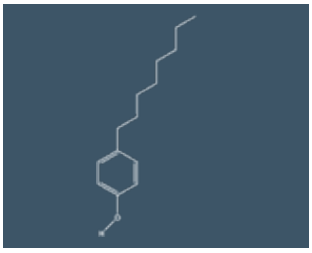
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7194-85-6	Hexane	S-2886



Octyl aldehyde

Molecular Weight	128.215
Molecular Formula	$C_8H_{16}O$
Density	0.821 g/cm^3
Melting Point	14 °C
Boiling Point	171 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	124-13-0	Methanol-P&T	S-2892

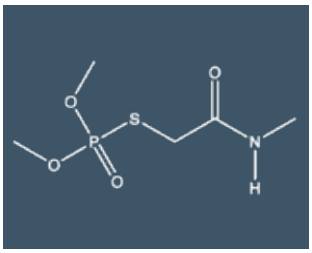


4-Octylphenol

Molecular Weight	206.329
Molecular Formula	$C_{14}H_{22}O$
Melting Point	44 °C
Boiling Point	280 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1806-26-4	Methanol-P&T	S-4177

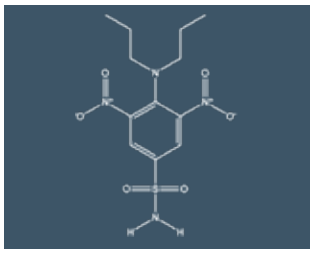
Volume for all Organic Singles is 1 mL



Omethoate

Molecular Weight	213.188
Molecular Formula	$C_5H_{12}NO_4PS$
Density	1.32 g/cm^3
Melting Point	-28 °C

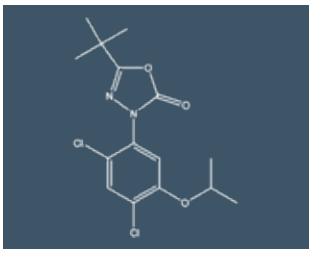
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1113-02-6	Methanol	S-3864



Oryzalin

Molecular Weight	346.358
Molecular Formula	$C_{12}H_{18}N_4O_6S$
Melting Point	141 °C
Boiling Point	265 °C

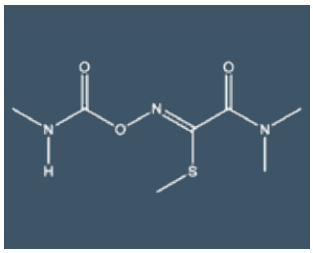
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	19044-88-3	Methanol-P&T	S-2900



Oxadiazon

Molecular Weight	345.22
Molecular Formula	$C_{15}H_{18}Cl_2N_2O_3$
Density	1.25 mg/L
Melting Point	90 °C

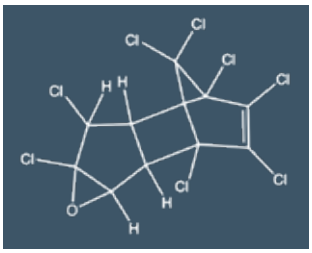
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	19666-30-9	Acetone	S-2912



Oxamyl

Molecular Weight	219.3
Molecular Formula	$C_7H_{13}N_3O_3S$
Density	1.31 g/cm^3
Melting Point	99 °C
Boiling Point	Decomposes

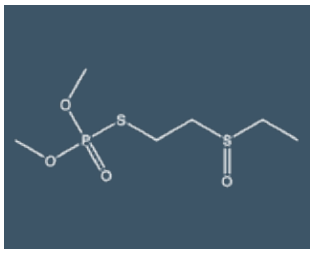
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	23135-22-0	Acetonitrile	S-2905



Oxychlordane

Molecular Weight	423.741
Molecular Formula	$C_{10}H_4Cl_8O$
Melting Point	144 °C

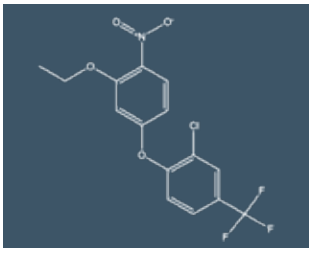
Concentration	CAS #	Matrix	Part #
100 µg/mL	27304-13-8	Methanol	S-2910-100



Oxydemeton-methyl

Molecular Weight	246.3
Molecular Formula	$C_6H_{15}O_4PS_2$
Density	1.29 g/cm^3
Melting Point	-49 °C
Boiling Point	Decomposes

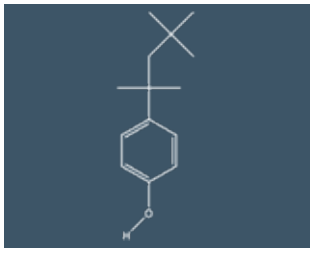
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	301-12-2	Acetonitrile	S-4828



Oxyfluorfen

Molecular Weight	361.701
Molecular Formula	$C_{15}H_{11}ClF_3NO_4$
Density	1.49 g/L
Melting Point	85 to 90 °C
Boiling Point	358 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	42874-03-3	Acetone	S-2911



4-tert-Octylphenol

Molecular Weight	206.329
Molecular Formula	$C_{14}H_{22}O$
Density	0.89 g/cm^3
Melting Point	84 °C
Boiling Point	158 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	140-66-9	Methanol	S-4379

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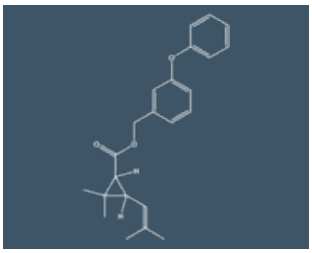
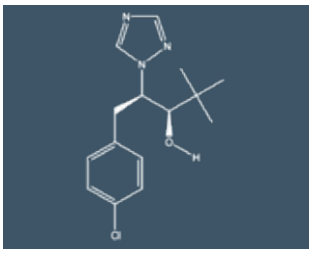
Volume for all Organic Singles is 1 mL



d-(cis-trans)-Phenothrin

Molecular Weight	350.458
Molecular Formula	$C_{23}H_{26}O_3$
Density	1.06 g/cm^3
Melting Point	> 290 °C

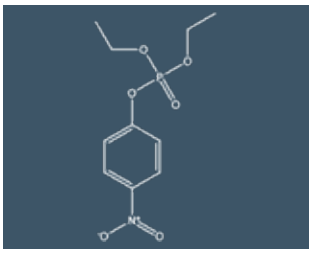
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	26002-80-2	Acetone	S-3041



Paclobutrazol

Molecular Weight	293.8
Molecular Formula	$C_{15}H_{20}ClN_3O$
Density	1.23 g/cm^3
Melting Point	164 °C
Boiling Point	384 °C

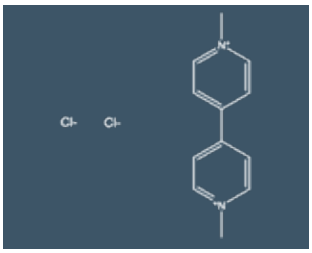
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76738-62-0	Acetone	S-4345



Paraoxon

Molecular Weight	275.197
Molecular Formula	$C_{10}H_{14}NO_6P$
Density	1.268 g/cm^3
Boiling Point	169 to 170 °C

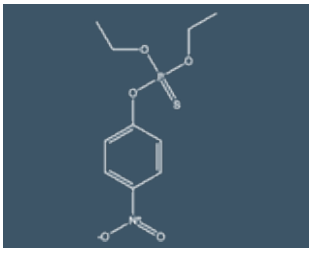
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	311-45-5	Acetone	S-2914



Paraquat dichloride tetrahydrate

Molecular Weight	257.158
Molecular Formula	$C_{12}H_{14}Cl_2N_2$
Density	1.25 g/cm^3
Melting Point	175 °C
Boiling Point	300 °C

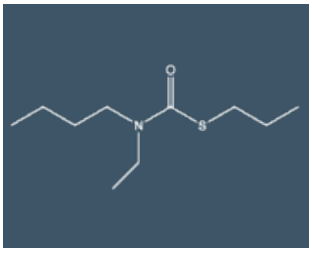
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1910-42-5	Methanol-P&T	S-2915



Parathion

Molecular Weight	291.3
Molecular Formula	$C_{10}H_{14}NO_5PS$
Density	1.26 g/cm^3
Melting Point	6 °C
Boiling Point	375 °C

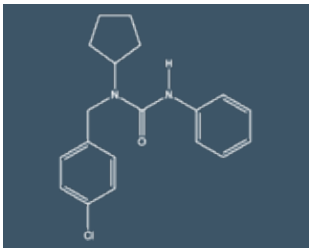
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56-38-2	Methanol	S-2920



Pebulate

Molecular Weight	203.344
Molecular Formula	$C_{10}H_{21}NOS$
Density	0.946 g/cm^3
Boiling Point	142 °C

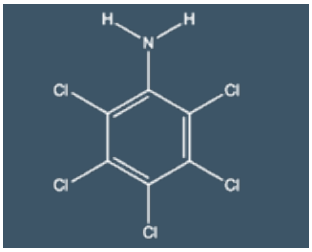
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1114-71-2	Methanol	S-2925



Pencycuron

Molecular Weight	328.8
Molecular Formula	$C_{19}H_{21}ClN_2O$
Density	1.22 g/cm^3
Melting Point	132 °C
Boiling Point	286 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	66063-05-6	Acetonitrile	S-5171

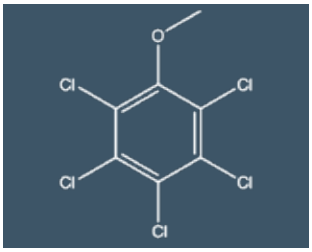


Pentachloroaniline

Molecular Weight	265.339
Molecular Formula	$C_6H_2Cl_5N$
Melting Point	235 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	527-20-8	Acetone	S-4783

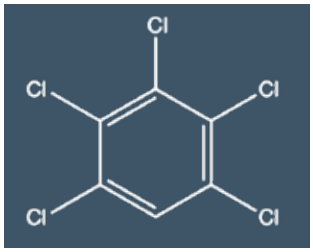
Volume for all Organic Singles is 1 mL



2,3,4,5,6-Pentachloroanisole

Molecular Weight	280.35
Molecular Formula	$C_7H_3Cl_5O$
Melting Point	109 °C

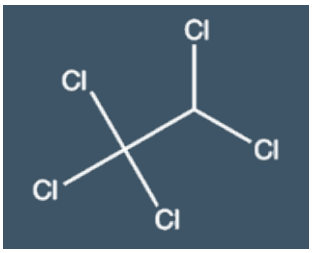
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1825-21-4	Methanol	S-2930



Pentachlorobenzene

Molecular Weight	250.324
Molecular Formula	C_6HCl_5
Density	1.834 g/cm³
Melting Point	86 °C
Boiling Point	275 to 277 °C

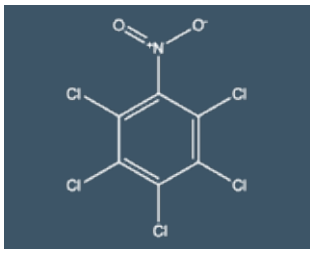
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	608-93-5	Acetone	S-2935-AC
		Methanol-P&T	S-2935



Pentachloroethane

Molecular Weight	202.28
Molecular Formula	C_2HCl_5
Density	1.679 g/cm³
Melting Point	-29 °C
Boiling Point	162 °C

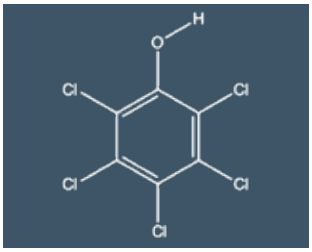
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76-01-7	Methanol-P&T	S-2940



Pentachloronitrobenzene (Quintozene)

Molecular Weight	295.321
Molecular Formula	$C_6Cl_5NO_2$
Density	1.72 g/cm³
Melting Point	143 °C
Boiling Point	328 °C

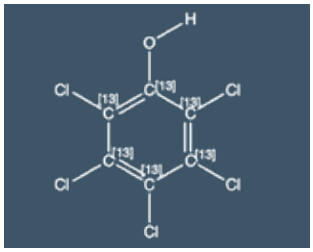
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	82-68-8	Methanol	S-2945



Pentachlorophenol

Molecular Weight	266.323
Molecular Formula	C_6HCl_5O
Density	1.98 g/cm³
Melting Point	174 °C
Boiling Point	309 °C

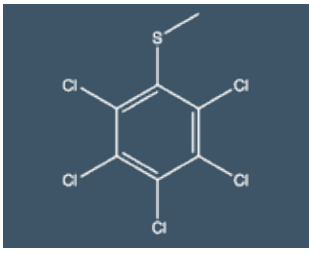
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87-86-5	Methanol	S-2950



Pentachlorophenol-13C6

Molecular Weight	272.277
Molecular Formula	C_6HCl_5O

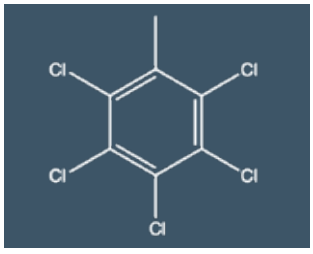
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	85380-74-1	Methanol-P&T	S-4202



Pentachlorophenyl

Molecular Weight	296.411
Molecular Formula	$C_7H_3Cl_5S$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1825-19-0	Methanol	S-5505



2,3,4,5,6-Pentachlorotoluene

Molecular Weight	264.351
Molecular Formula	$C_7H_3Cl_5$
Density	1.597 g/cm³
Boiling Point	301 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	877-11-2	Methylene Chloride	S-2952

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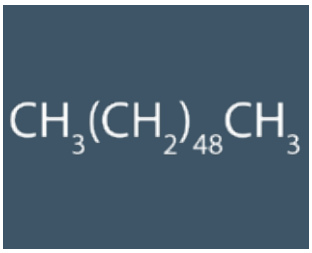
Volume for all Organic Singles is 1 mL



n-Pentacontane

Molecular Weight	703.366
Molecular Formula	$C_{50}H_{102}$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6596-40-3	Carbon Disulfide:Pentane: Methylene Chloride	S-2953

n-Pentadecane

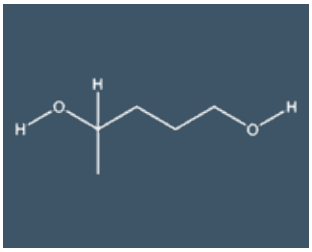
Molecular Weight	212.421
Molecular Formula	$C_{15}H_{32}$
Density	0.769 g/cm^3
Melting Point	10 °C
Boiling Point	270 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	629-62-9	Methanol-P&T	S-2960

n-Pentadecene

Molecular Weight	210.405
Molecular Formula	$C_{15}H_{30}$
Melting Point	-3 °C
Boiling Point	58 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13360-61-7	Methanol-P&T	S-4212



1,4-Pentanediol

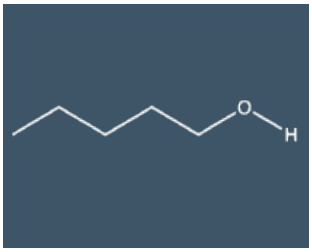
Molecular Weight	104.149
Molecular Formula	$C_5H_{12}O_2$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	626-95-9	Methanol-P&T	S-2965

1,5-Pentanediol

Molecular Weight	104.149
Molecular Formula	$C_5H_{12}O_2$
Density	0.994 g/cm^3
Melting Point	-18 °C
Boiling Point	242 °C

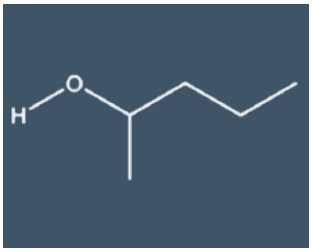
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-29-5	Methanol-P&T	S-2974



1-Pentanol

Molecular Weight	88.15
Molecular Formula	$C_5H_{12}O$
Density	0.815 g/cm^3
Melting Point	-79 °C
Boiling Point	138 °C

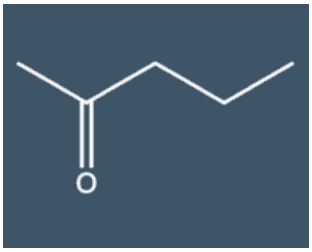
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	71-41-0	Methanol-P&T	S-2980



2-Pentanol

Molecular Weight	88.15
Molecular Formula	$C_5H_{12}O$
Density	0.812 g/cm^3
Melting Point	-73 °C
Boiling Point	119 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6032-29-7	Methanol-P&T	S-2985

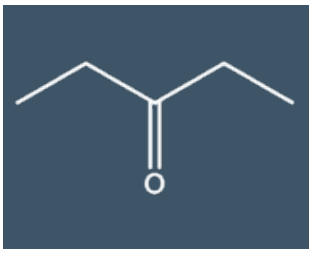


2-Pentanone

Molecular Weight	86.134
Molecular Formula	$C_5H_{10}O$
Density	0.809 g/cm^3
Melting Point	-78 °C
Boiling Point	102 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-87-9	Methanol-P&T	S-2986

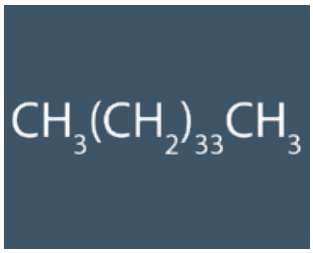
Volume for all Organic Singles is 1 mL



3-Pentanone

Molecular Weight	86.134
Molecular Formula	$C_5H_{10}O$
Density	0.99 g/cm^3
Melting Point	-42 °C
Boiling Point	102 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	96-22-0	Methanol-P&T	S-3932



n-Pentatriacontane

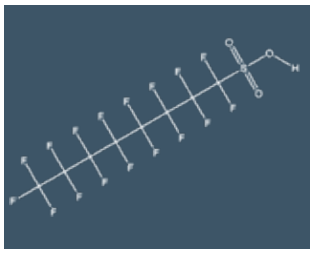
Molecular Weight	492.961
Molecular Formula	$C_{35}H_{72}$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	630-07-9	Hexane	S-2990

1-Pentene

Molecular Weight	70.135
Molecular Formula	C_5H_{10}
Density	0.641 g/cm^3
Melting Point	-165 °C
Boiling Point	30 °C

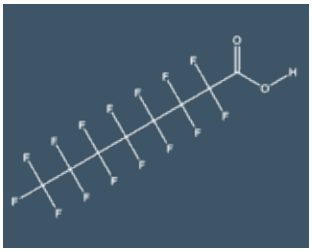
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-67-1	Methanol-P&T	S-2995



Perfluorooctanesulfonic acid

Molecular Weight	500.126
Molecular Formula	$C_8HF_{17}O_3S$
Boiling Point	133 °C

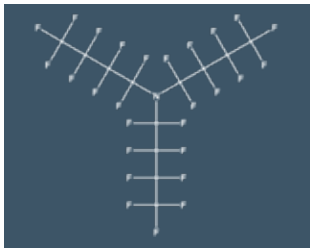
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1763-23-1	Methanol	S-5059



Perfluorooctanoic acid

Molecular Weight	414.07
Molecular Formula	$C_8HF_{15}O_2$
Density	1.8 g/cm^3
Melting Point	45 °C
Boiling Point	189 °C

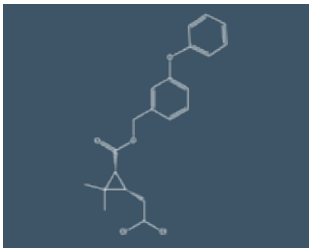
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	335-67-1	Methanol	S-4460-MEOH



Perfluorotributylamine

Molecular Weight	671.096
Molecular Formula	$C_{12}F_{27}N$
Density	1.884 g/cm^3
Melting Point	-50 °C
Boiling Point	178 °C

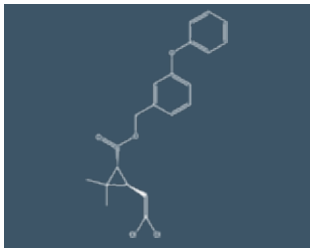
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	311-89-7	Methanol-P&T	S-2997



cis-Permethrin

Molecular Weight	391.288
Molecular Formula	$C_{21}H_{20}Cl_2O_3$
Density	1.19 to 1.27 g/cm^3
Melting Point	< 20 °C
Boiling Point	> 290 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	61949-76-6	Methanol-P&T	S-3001



trans-Permethrin

Molecular Weight	391.228
Molecular Formula	$C_{21}H_{20}Cl_2O_3$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51877-74-8	Methanol	S-3003

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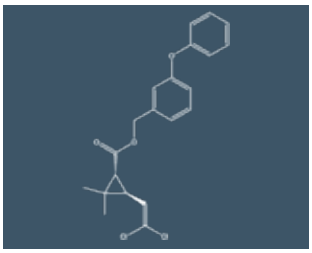
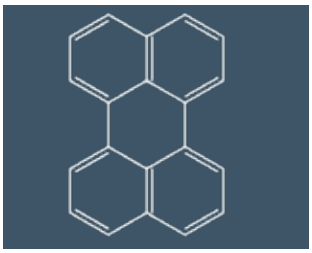
Volume for all Organic Singles is 1 mL



trans-Permethrin (isomeric mix)

Molecular Weight	391.228
Molecular Formula	$C_{21}H_{20}Cl_2O_3$

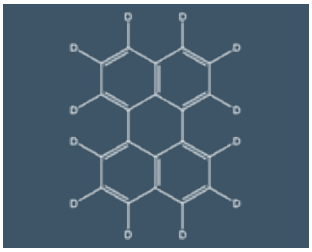
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	61949-77-7	Acetone	S-5732



Perylene

Molecular Weight	252.316
Molecular Formula	$C_{20}H_{12}$
Density	1.35 g/cm³
Melting Point	273 to 274 °C
Boiling Point	350 to 400 °C

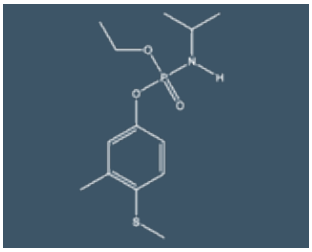
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	198-55-0	Methylene Chloride	S-3005



Perylene-d_{12}

Molecular Weight	264.389
Molecular Formula	$C_{20}H_{12}$
Density	1.348 g/cm³
Melting Point	277 to 279 °C
Boiling Point	468 °C

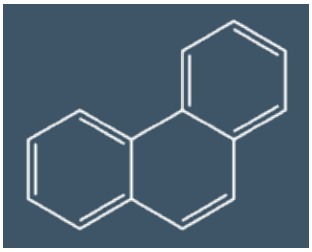
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1520-96-3	Methylene Chloride	S-3010



Phenamiphos

Molecular Weight	303.357
Molecular Formula	$C_{13}H_{22}NO_3PS$
Density	1.15 g/cm³
Melting Point	49 °C

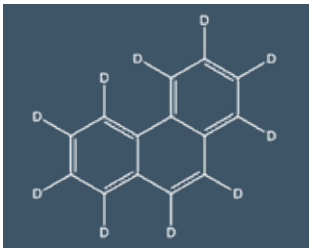
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	22224-92-6	Methanol	S-3014



Phenanthrene

Molecular Weight	178.234
Molecular Formula	$C_{14}H_{10}$
Density	1.179 g/cm³
Melting Point	100 °C
Boiling Point	340 °C

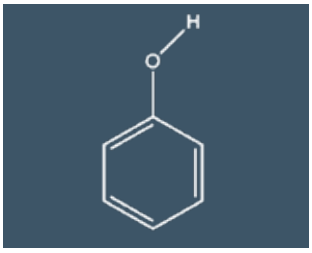
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	85-01-8	Methylene Chloride	S-3015



Phenanthrene-d_{10}

Molecular Weight	188.295
Molecular Formula	$C_{14}H_{10}$
Density	1.194 g/cm³
Melting Point	100 to 101 °C
Boiling Point	337 °C

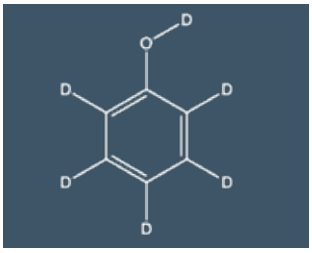
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1517-22-2	Methylene Chloride	S-3020



Phenol

Molecular Weight	94.113
Molecular Formula	C_6H_6O
Density	1.071 g/cm³
Melting Point	41 °C
Boiling Point	182 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-95-2	DI Water	S-3030-W
		Methanol-P&T	S-3030

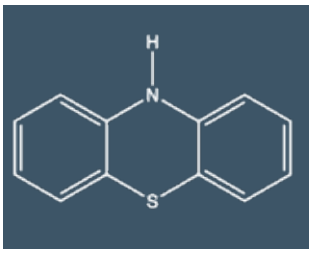


Phenol-d_6

Molecular Weight	100.15
Molecular Formula	C_6H_6O

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13127-88-3	Methanol-P&T	S-3035

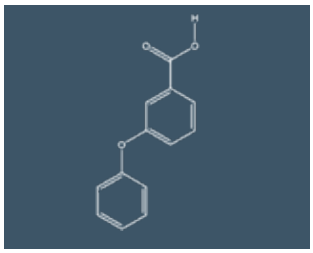
Volume for all Organic Singles is 1 mL



Phenothiazine

Molecular Weight	199.271
Molecular Formula	$C_{12}H_9NS$
Density	1.34 g/cm^3
Melting Point	185 °C
Boiling Point	371 °C

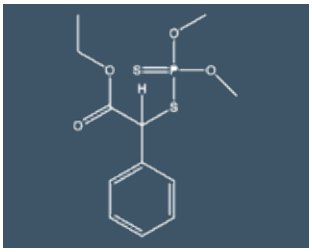
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	92-84-2	Methanol-P&T	S-3040



3-Phenoxybenzoic acid

Molecular Weight	214.22
Molecular Formula	$C_{13}H_{10}O_3$
Melting Point	149 to 150 °C

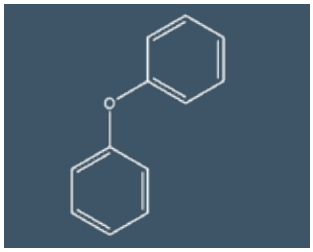
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3739-38-6	Hexane:Methylene Chloride (90:10)	S-5946-H



Phenthoate

Molecular Weight	320.4
Molecular Formula	$C_{12}H_{17}O_4PS_2$
Density	1.23 g/cm^3
Melting Point	17 °C

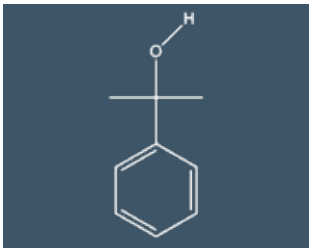
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2597-03-7	Methanol-P&T	S-4250



Phenyl ether

Molecular Weight	170.211
Molecular Formula	$C_{12}H_{10}O$
Density	0.018 g/cm^3
Melting Point	28 °C
Boiling Point	257 °C

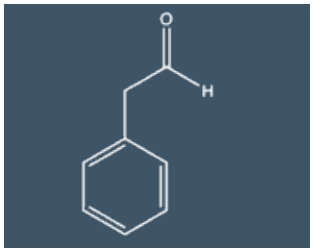
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	101-84-8	Methanol-P&T	S-3055



2-Phenyl-2-propanol

Molecular Weight	136.194
Molecular Formula	$C_9H_{12}O$
Density	0.973 g/cm^3
Melting Point	36 °C
Boiling Point	202 °C

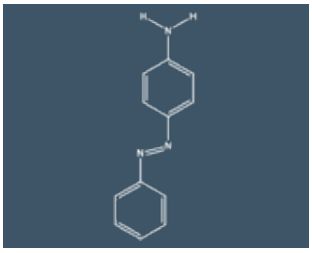
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	617-94-7	Methanol-P&T	S-3076



Phenylacetaldehyde

Molecular Weight	120.151
Molecular Formula	C_8H_8O
Density	1.079 g/cm^3
Melting Point	-10 °C
Boiling Point	195 °C

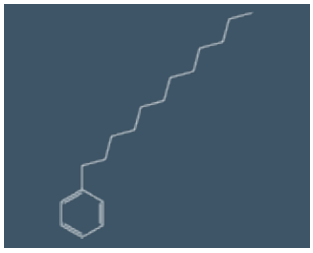
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	122-78-1	Methanol-P&T	S-3062



4-Phenylazoaniline

Molecular Weight	197.241
Molecular Formula	C_6H_5N
Density	1.05 g/cm^3
Melting Point	128 °C
Boiling Point	360 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	60-09-3	Methanol-P&T	S-3065



1-Phenyldodecane

Molecular Weight	246.438
Molecular Formula	$C_{18}H_{30}$
Density	0.86 g/cm^3
Melting Point	3 °C
Boiling Point	328 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-01-3	Methanol-P&T	S-3933

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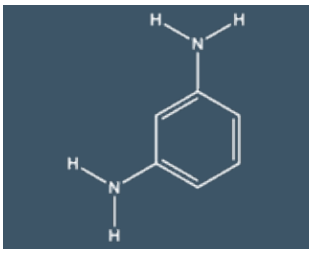
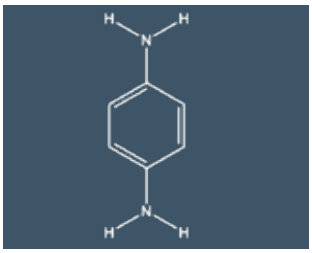
Volume for all Organic Singles is 1 mL



1,3-Phenylenediamine

Molecular Weight	108.144
Molecular Formula	$C_6H_8N_2$
Density	1.14 g/cm³
Melting Point	62 to 63 °C
Boiling Point	284 to 287 °C

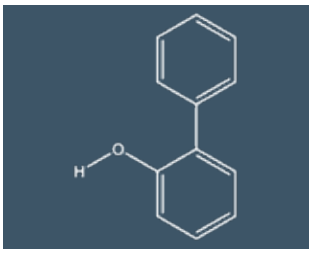
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-45-2	Methanol	S-3072



p-Phenylenediamine

Molecular Weight	108.144
Molecular Formula	$C_6H_8N_2$
Density	> 1 g/cm³
Melting Point	139 to 147 °C
Boiling Point	267 °C

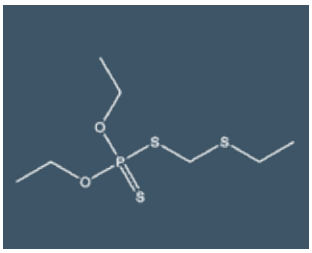
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-50-3	Methanol-P&T	S-3070



2-Phenylphenol

Molecular Weight	170.211
Molecular Formula	$C_{12}H_{10}O$
Density	1.213 g/cm³
Melting Point	56 °C
Boiling Point	286 °C

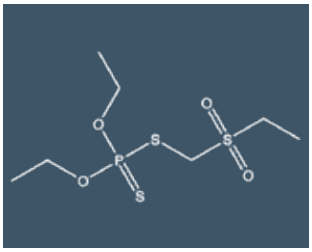
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	90-43-7	Methanol-P&T	S-3075



Phorate

Molecular Weight	260.4
Molecular Formula	$C_7H_{17}O_2PS_3$
Density	1.17 g/cm³
Melting Point	-15 °C
Boiling Point	75 to 78 °C

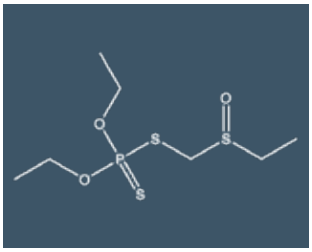
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	298-02-2	Acetone	S-3080-AC
		Methanol	S-3080



Phorate sulfone

Molecular Weight	292.363
Molecular Formula	$C_7H_{17}O_4PS_3$

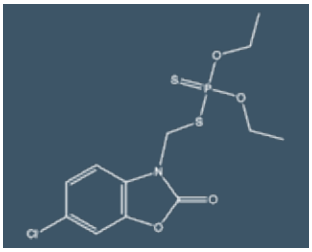
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2588-04-7	Methanol-P&T	S-4256



Phorate sulfoxide

Molecular Weight	276.364
Molecular Formula	$C_7H_{17}O_3PS_3$

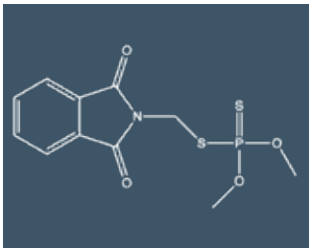
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2588-03-6	Acetonitrile	S-5777-ACN



Phosalone

Molecular Weight	367.8
Molecular Formula	$C_{12}H_{15}ClNO_4PS_2$
Density	1.49 g/cm³
Melting Point	50 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2310-17-0	Methanol	S-3085

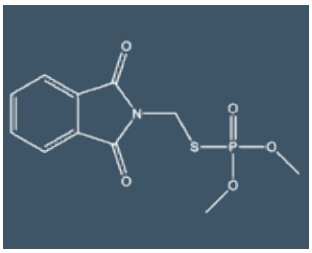


Phosmet (Imidan)

Molecular Weight	317.3
Molecular Formula	$C_{11}H_{12}NO_4PS_2$
Density	1.44 g/cm³
Melting Point	72 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	732-11-6	Methanol	S-2245

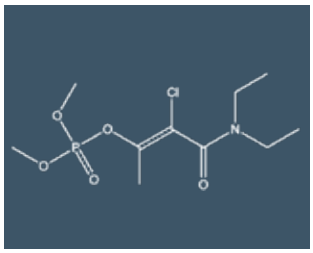
Volume for all Organic Singles is 1 mL



Phosmet oxon

Molecular Weight	301.253
Molecular Formula	$C_{11}H_{12}NO_5PS$
Density	1.45 g/cm^3
Boiling Point	110 °C

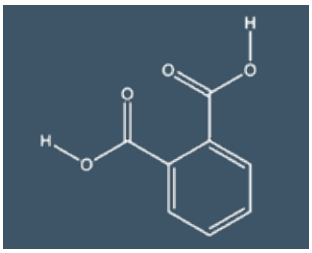
Concentration	CAS #	Matrix	Part #
100 µg/mL	3735-33-9	Toluene	S-4182



Phosphamidon (33.4% E; 64.6% Z)

Molecular Weight	299.688
Molecular Formula	$C_{10}H_{19}ClNO_5P$
Density	1.21 g/cm^3
Melting Point	120 °C
Boiling Point	162 °C

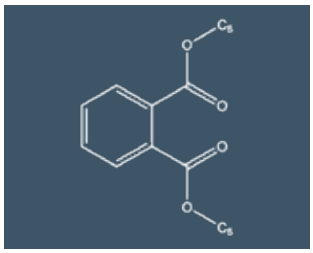
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13171-21-6	Methanol-P&T	S-3090



Phthalic acid

Molecular Weight	166.132
Molecular Formula	$C_8H_6O_4$
Density	1.593 g/cm^3
Melting Point	230 °C
Boiling Point	Decomposes

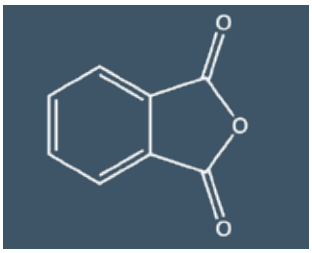
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	88-99-3	Methyl Tertiary Butyl Ether	S-3095



Phthalic acid, n-pentyl-isopentyl ester (mix of isomers)

Molecular Weight	306.402
Molecular Formula	$C_{18}H_{26}O_4$

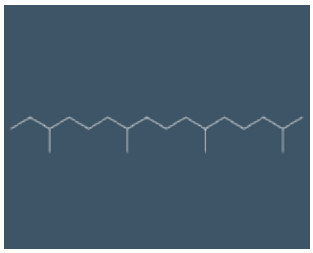
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84777-06-0	Methanol	S-6147



Phthalic anhydride

Molecular Weight	148.117
Molecular Formula	$C_8H_4O_3$
Density	1.53 g/cm^3
Melting Point	131 °C
Boiling Point	284 to 285 °C

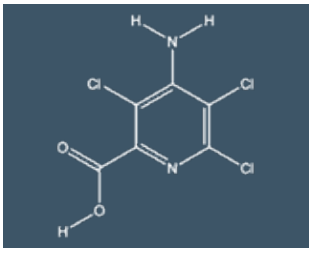
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	85-44-9	Methanol	S-3100



Phytane

Molecular Weight	282.556
Molecular Formula	$C_{20}H_{42}$
Density	288.5 g/cm^3

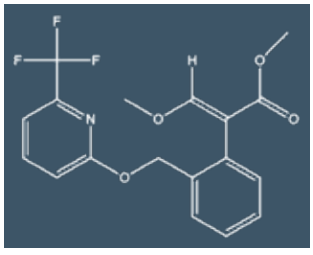
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	638-36-8	Methylene Chloride	S-3105



Picloram

Molecular Weight	241.452
Molecular Formula	$C_6H_3Cl_3N_2O_2$
Melting Point	218 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1918-02-1	Methanol	S-3110



Picoxystrobin

Molecular Weight	367.324
Molecular Formula	$C_{18}H_{16}F_3NO_4$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	117428-22-5	Methanol	S-5467

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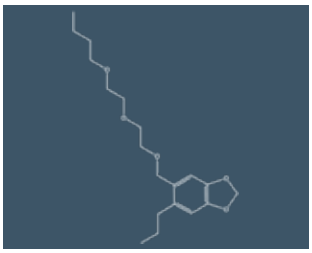
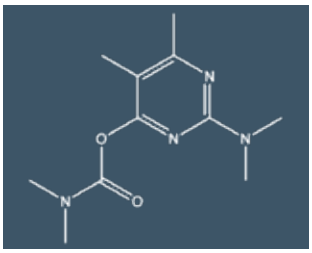
Volume for all Organic Singles is 1 mL



Piperonyl butoxide

Molecular Weight	338.4
Molecular Formula	$C_{19}H_{30}O_5$
Density	1.06 g/cm^3

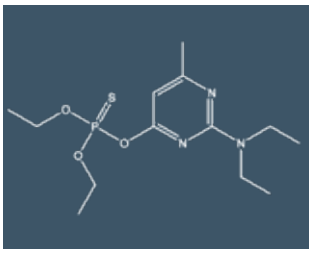
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51-03-6	Methanol-P&T	S-3117



Pirimicarb

Molecular Weight	238.3
Molecular Formula	$C_{11}H_{18}N_4O_2$
Density	1.18 g/cm^3
Melting Point	92 °C

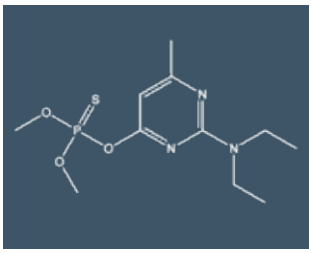
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	23103-98-2	Methanol	S-3118



Pirimiphos-ethyl

Molecular Weight	333.387
Molecular Formula	$C_{11}H_{20}N_3O_3PS$
Density	1.147 g/cm^3
Melting Point	17 °C

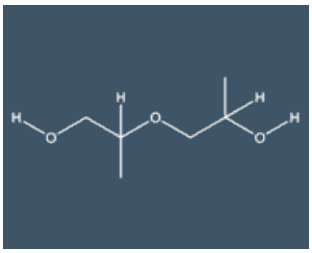
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	23505-41-1	Methanol-P&T	S-3120



Pirimiphos-methyl

Molecular Weight	305.3
Molecular Formula	$C_{11}H_{20}N_3O_3PS$
Density	1.17 g/cm^3
Melting Point	21 °C
Boiling Point	Decomposes

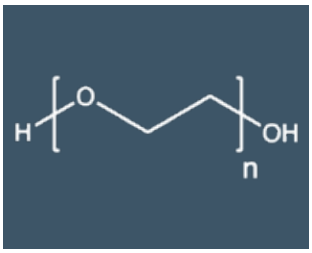
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	29232-93-7	Methanol-P&T	S-3119



Poly(propylene glycol) - 1000

Molecular Weight	134.175
Molecular Formula	$C_6H_{14}O_3$
Density	1.012 g/cm^3
Melting Point	-50 °C

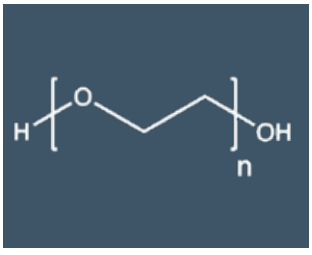
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25322-69-4	Methanol-P&T	S-3131



Polyethylene glycol - 200

Molecular Formula	$H(OCH_2CH_2)nOH$
Density	1.27 g/cm^3
Melting Point	64 to 66 °C
Boiling Point	> 250 °C

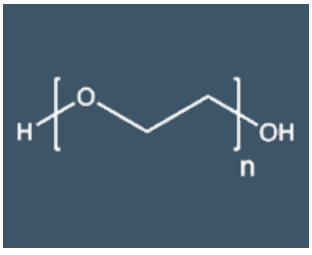
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25322-68-3	Methanol-P&T	S-3126



Polyethylene glycol - 400

Molecular Formula	$H(OCH_2CH_2)nOH$
Density	1.27 g/cm^3
Melting Point	64 to 66 °C
Boiling Point	> 250 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25322-68-3	Methanol-P&T	S-3127

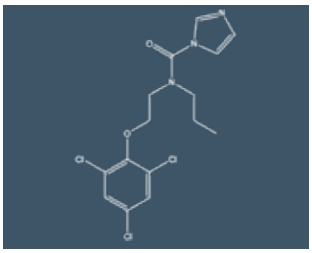


Polyethylene glycol - 600

Molecular Formula	$H(OCH_2CH_2)nOH$
Density	1.27 g/cm^3
Melting Point	64 to 66 °C
Boiling Point	> 250 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25322-68-3	Methanol-P&T	S-3128

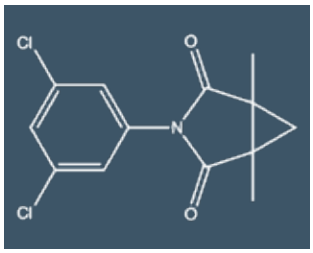
Volume for all Organic Singles is 1 mL



Prochloraz

Molecular Weight	376.7
Molecular Formula	$C_{15}H_{16}Cl_3N_3O_2$
Density	1.42 g/cm^3
Melting Point	48 °C
Boiling Point	Decomposes

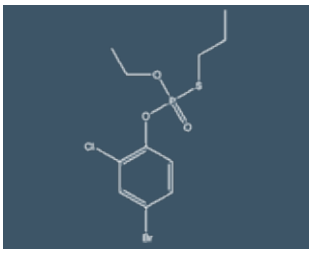
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67747-09-5	Methanol-P&T	S-4268



Procymidone

Molecular Weight	284.136
Molecular Formula	$C_{13}H_{11}Cl_2NO_2$

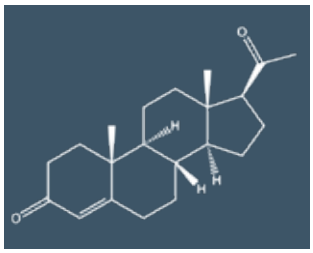
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	32809-16-8	Methanol-P&T	S-3871



Profenofos

Molecular Weight	373.626
Molecular Formula	$C_{11}H_{15}BrClO_3PS$
Density	1.46 g/cm^3

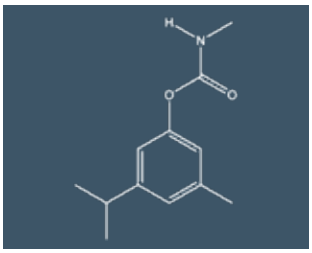
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	41198-08-7	Methanol-P&T	S-3134



Progesterone

Molecular Weight	314.469
Molecular Formula	$C_{21}H_{30}O_2$
Density	1.166 g/cm^3
Melting Point	121 °C

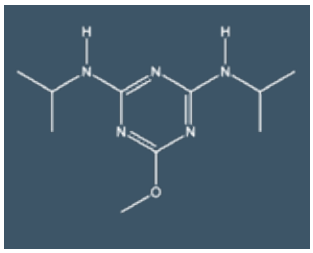
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57-83-0	Methanol	S-5543



Promecarb

Molecular Weight	207.273
Molecular Formula	$C_{12}H_{17}NO_2$
Melting Point	87 °C
Boiling Point	117 °C

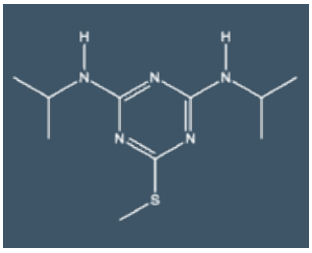
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2631-37-0	Methanol	S-3133



Prometon

Molecular Weight	225.296
Molecular Formula	$C_{10}H_{19}N_5O$
Density	1.088 g/cm^3
Melting Point	91 to 92 °C

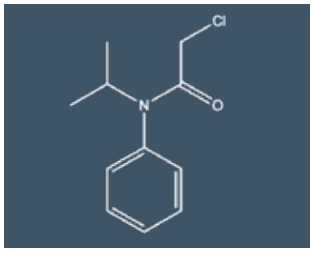
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1610-18-0	Acetone	S-3130



Prometryne

Molecular Weight	241.357
Molecular Formula	$C_{10}H_{19}N_5S$
Density	1.157 g/cm^3
Melting Point	119 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7287-19-6	Methanol-P&T	S-3135

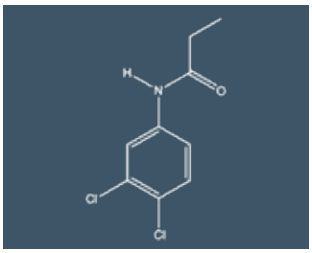


Propachlor

Molecular Weight	211.689
Molecular Formula	$C_{11}H_{14}ClNO$
Density	1.242 g/cm^3
Melting Point	77 °C
Boiling Point	110 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1918-16-7	Acetone	S-3140

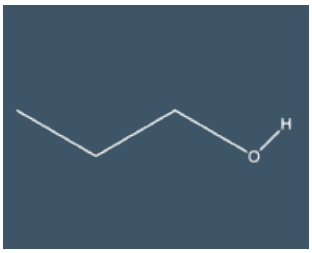
Volume for all Organic Singles is 1 mL



Propanil

Molecular Weight	218.077
Molecular Formula	$C_9H_9Cl_2NO$
Density	1.25 g/cm^3
Melting Point	92 °C
Boiling Point	351 °C

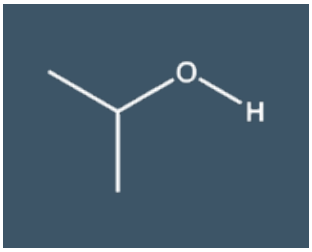
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	709-98-8	Acetone	S-3155-AC
		Methanol-P&T	S-3155



1-Propanol

Molecular Weight	60.096
Molecular Formula	C_3H_8O
Density	0.803 g/cm^3
Melting Point	-127 °C
Boiling Point	97 °C

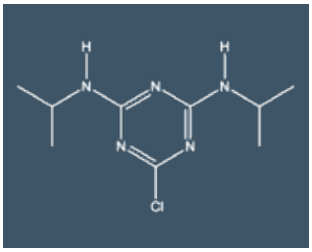
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	71-23-8	Methanol-P&T	S-3160



2-Propanol

Molecular Weight	60.096
Molecular Formula	C_3H_8O
Density	0.779 g/cm^3
Melting Point	-89 °C
Boiling Point	82 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67-63-0	Methanol-P&T	S-3167



Propazine

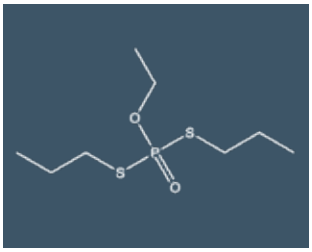
Molecular Weight	229.7
Molecular Formula	$C_9H_{16}ClN_5$
Density	1.16 g/cm^3
Melting Point	213 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	139-40-2	Methanol	S-3170

Propene

Molecular Weight	42.081
Molecular Formula	C_3H_6
Density	0.514 g/cm^3
Melting Point	-185 °C
Boiling Point	-48 °C

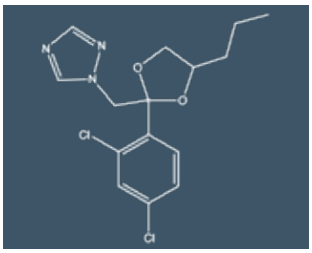
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-07-1	Methanol-P&T	S-3175



Prophos

Molecular Weight	242.332
Molecular Formula	$C_8H_{19}O_2PS_2$
Density	1.094 g/cm^3
Melting Point	-13 °C
Boiling Point	86 to 91 °C

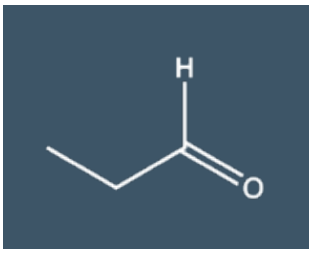
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13194-48-4	Acetone	S-3185



Propiconazole (Tilt)

Molecular Weight	342.2
Molecular Formula	$C_{15}H_{17}Cl_2N_3O_2$
Density	1.09 g/cm^3
Melting Point	-23 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	60207-90-1	Acetone	S-3186

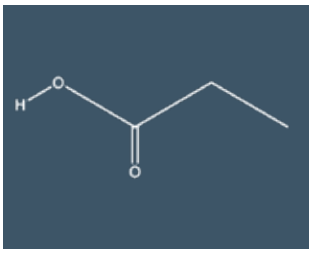


Propionaldehyde

Molecular Weight	58.08
Molecular Formula	C_3H_6O
Density	0.81 g/cm^3
Melting Point	92 °C
Boiling Point	49 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	123-38-6	Methanol-P&T	S-3190

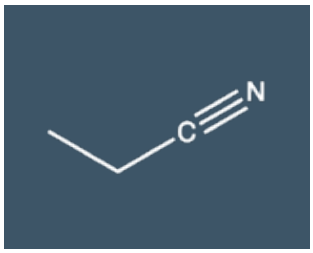
Volume for all Organic Singles is 1 mL



Propionic acid

Molecular Weight	74.079
Molecular Formula	$C_3H_6O_2$
Density	0.99 g/cm^3
Melting Point	-21 °C
Boiling Point	141 °C

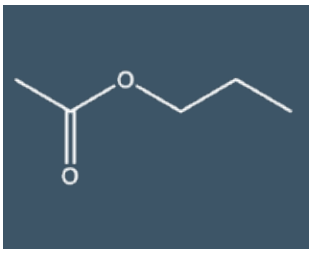
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-09-4	DI Water	S-3192



Propionitrile

Molecular Weight	55.08
Molecular Formula	C_3H_5N
Density	0.78 g/cm^3
Melting Point	-92 °C
Boiling Point	97 °C

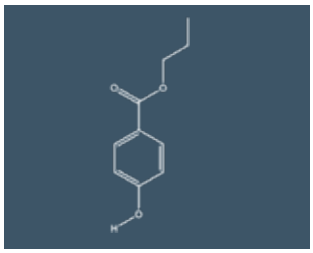
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-12-0	Methanol-P&T	S-3195



Propyl acetate

Molecular Weight	102.133
Molecular Formula	$C_5H_{10}O_2$
Density	0.89 g/cm^3
Melting Point	-95 °C
Boiling Point	102 °C

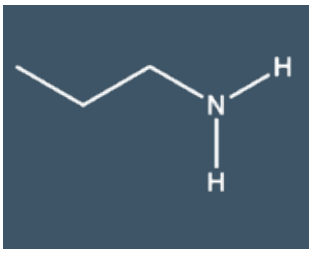
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-60-4	Methanol-P&T	S-3204



Propyl paraben

Molecular Weight	180.203
Molecular Formula	$C_{10}H_{12}O_3$
Density	1.06 g/cm^3
Melting Point	97 °C

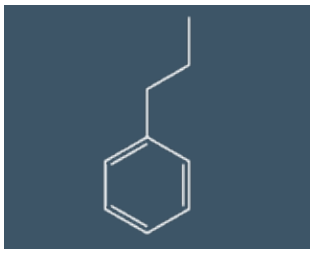
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	94-13-3	Methanol-P&T	S-3202



Propylamine

Molecular Weight	59.112
Molecular Formula	C_3H_9N
Density	0.719 g/cm^3
Melting Point	-83 °C
Boiling Point	48 °C

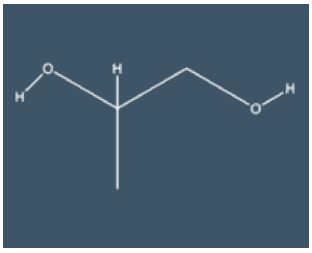
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-10-8	Methanol-P&T	S-3205



n-Propylbenzene

Molecular Weight	120.195
Molecular Formula	C_9H_{12}
Density	0.862 g/cm^3
Melting Point	-99 °C
Boiling Point	159 °C

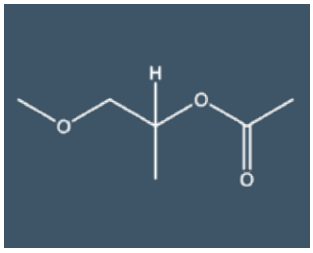
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	103-65-1	Methanol-P&T	S-3210



Propylene glycol

Molecular Weight	76.095
Molecular Formula	$C_3H_8O_2$
Density	1.04 g/cm^3
Melting Point	-60 °C
Boiling Point	188 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57-55-6	Methanol-P&T	S-3212



Propylene glycol methyl ether acetate

Molecular Weight	132.159
Molecular Formula	$C_6H_{12}O_3$
Density	0.969 g/cm^3
Boiling Point	146 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-65-6	Methanol-P&T	S-3213

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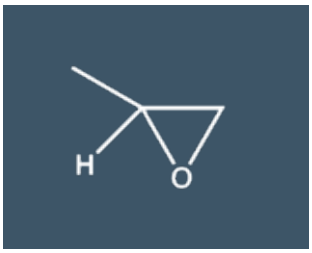
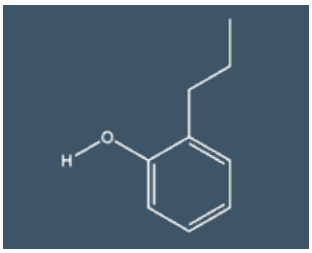
Volume for all Organic Singles is 1 mL



Propylene oxide

Molecular Weight	58.08
Molecular Formula	C_3H_6O
Density	0.859 g/cm^3
Melting Point	-112 °C
Boiling Point	34 °C

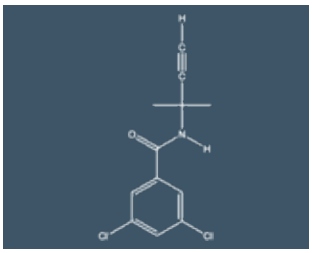
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-56-9	Methanol-P&T	S-3214



2-n-Propylphenol

Molecular Weight	136.194
Molecular Formula	$C_9H_{12}O$
Density	0.989 g/cm^3
Boiling Point	225 °C

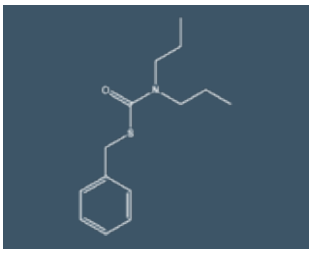
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	644-35-9	Methanol-P&T	S-4301



Propyzamide

Molecular Weight	256.126
Molecular Formula	$C_{12}H_{11}Cl_2NO$
Melting Point	155 °C

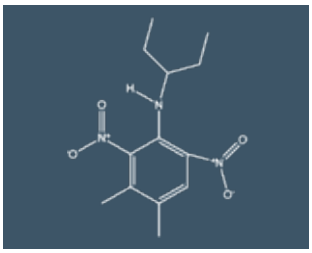
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	23950-58-5	Methanol-P&T	S-3220



Prosulfocarb

Molecular Weight	251.388
Molecular Formula	$C_{14}H_{21}NOS$

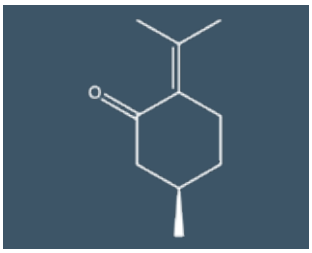
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	52888-80-9	Methanol	S-3223



Prowl (Pendimethalin)

Molecular Weight	281.3
Molecular Formula	$C_{13}H_{19}N_3O_4$
Density	1.17 g/cm^3
Melting Point	56 °C
Boiling Point	246 °C

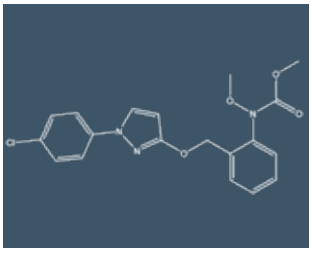
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	40487-42-1	Methanol-P&T	S-3230



(+)-Pulegone

Molecular Weight	152.237
Molecular Formula	$C_{10}H_{16}O$
Density	0.932 g/cm^3
Boiling Point	224 °C

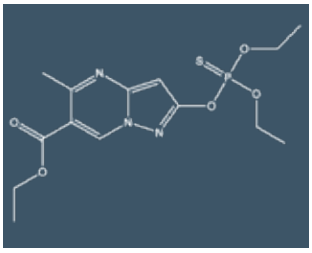
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	89-82-7	Methanol	S-5136



Pyraclostrobin

Molecular Weight	387.8
Molecular Formula	$C_{19}H_{18}ClN_3O_4$
Density	1.37 g/cm^3
Melting Point	64 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	175013-18-0	Methanol	S-4968

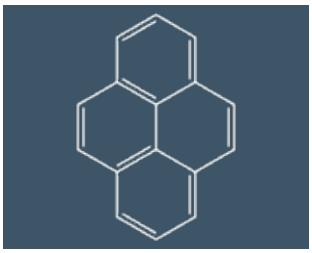


Pyrazophos

Molecular Weight	373.364
Molecular Formula	$C_{14}H_{20}N_3O_5PS$
Density	1.348 g/cm^3
Melting Point	51 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13457-18-6	Methanol-P&T	S-3234

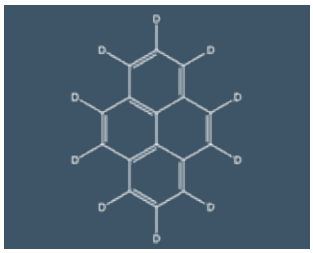
Volume for all Organic Singles is 1 mL



Pyrene

Molecular Weight	202.256
Molecular Formula	$C_{16}H_{10}$
Density	1.271 g/cm^3
Melting Point	151 °C
Boiling Point	404 °C

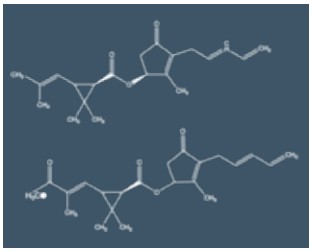
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	129-00-0	Methylene Chloride	S-3235



Pyrene-d_{10}

Molecular Weight	212.317
Molecular Formula	$C_{16}H_{10}$
Melting Point	146 °C

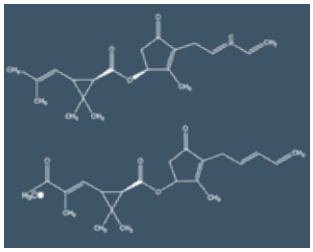
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1718-52-1	Methanol-P&T	S-3236



Pyrethrins (mix of isomers)

Molecular Weight	328.4
Molecular Formula	$C_{21}H_{28}O_3$
Density	0.85 g/cm^3
Melting Point	142 °C

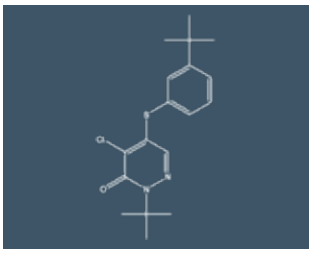
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	8003-34-7	Acetone	S-5506-AC
		Methanol	S-5506



Pyrethrins (mix of isomers)

Molecular Weight	700.913
Molecular Formula	$C_{43}H_{56}O_8$
Density	0.84 to 0.90 g/cm^3

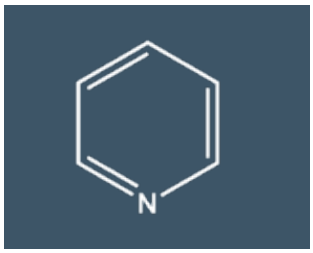
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	8003-34-7	Methanol-P&T	S-3872A



Pyridaben

Molecular Weight	364.9
Molecular Formula	$C_{19}H_{25}ClN_2OS$
Density	1.20 g/cm^3
Melting Point	109 °C
Boiling Point	Decomposes

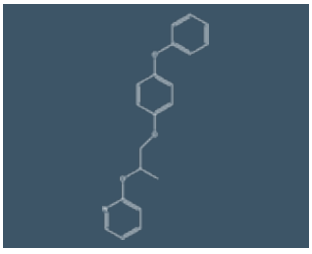
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	96489-71-3	Acetone	S-5779-AC



Pyridine

Molecular Weight	79.102
Molecular Formula	C_5H_5N
Density	0.98 g/cm^3
Melting Point	-42 °C
Boiling Point	115 °C

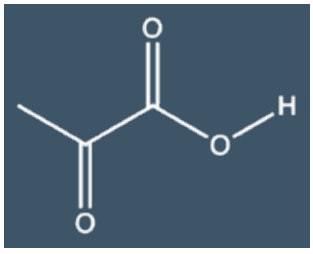
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-86-1	Methanol-P&T	S-3240
		Toluene	S-3240-TOL



Pyriproxyfen

Molecular Weight	321.376
Molecular Formula	$C_{20}H_{19}NO_3$
Density	1.24 g/cm^3
Melting Point	47 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95737-68-1	Acetonitrile	S-4969



Pyruvic acid

Molecular Weight	88.06
Molecular Formula	$C_3H_4O_3$
Density	1.25 g/cm^3
Melting Point	14 °C
Boiling Point	54 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	127-17-3	DI Water	S-3242

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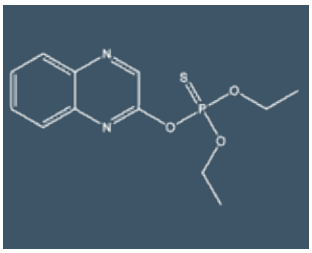
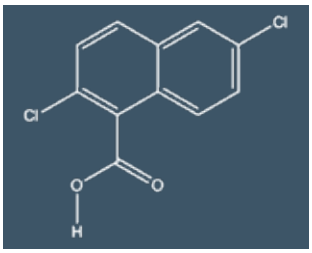
Volume for all Organic Singles is 1 mL



Quinalphos

Molecular Weight	298.3
Molecular Formula	$C_{12}H_{15}N_2O_3PS$
Density	1.24 g/cm^3
Melting Point	31 °C

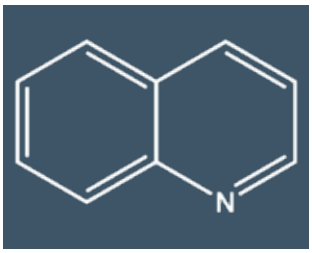
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13593-03-8	Acetone	S-3246



Quinchlorac

Molecular Weight	242.055
Molecular Formula	$C_{10}H_5Cl_2NO_2$

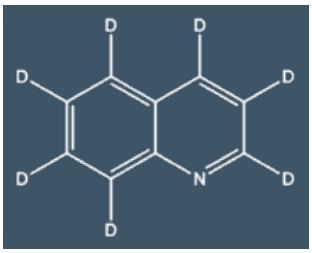
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84087-01-4	Methanol-P&T	S-3950



Quinoline

Molecular Weight	129.162
Molecular Formula	C_9H_7N
Density	1.095 g/cm^3
Melting Point	-15 °C
Boiling Point	238 °C

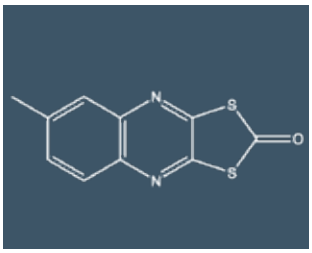
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91-22-5	Methanol-P&T	S-3245
		Methylene Chloride	S-3245-MC



Quinoline-d_7

Molecular Weight	136.205
Molecular Formula	C_9H_7N
Density	1.151 g/cm^3
Melting Point	-15 °C
Boiling Point	237 °C

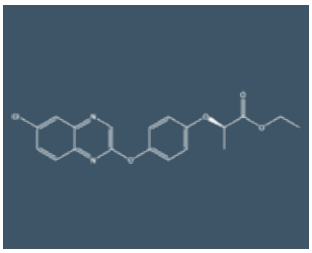
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	34071-94-8	Methanol	S-4310



Quinomethionate

Molecular Weight	234.291
Molecular Formula	$C_{10}H_6N_2OS_2$
Density	1.556 g/cm^3
Melting Point	171 °C

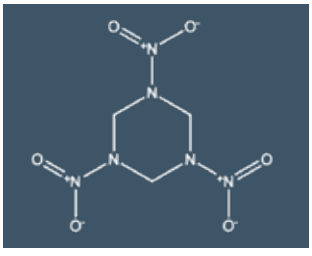
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2439-01-2	Toluene	S-3247



Quizalofop-p-ethyl

Molecular Weight	372.805
Molecular Formula	$C_{19}H_{17}ClN_2O_4$
Density	1.35 g/cm^3
Melting Point	92 °C
Boiling Point	220 °C

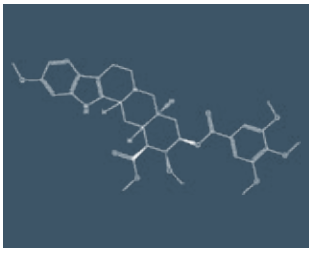
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100646-51-3	Acetonitrile	S-5037



RDX

Molecular Weight	222.117
Molecular Formula	$C_3H_6N_6O_6$
Density	1.82 g/cm^3
Melting Point	206 °C
Boiling Point	276 to 280 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	121-82-4	Acetonitrile: Methanol	S-3251

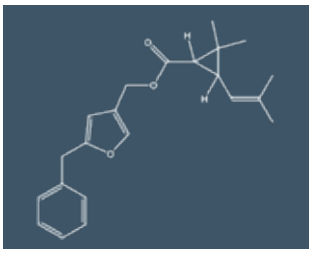


Reserpine

Molecular Weight	608.688
Molecular Formula	$C_{33}H_{40}N_2O_9$
Melting Point	265 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	50-55-5	Methanol:Acetone (50:50)	S-3249

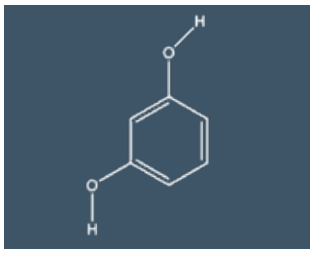
Volume for all Organic Singles is 1 mL



Resmethrin

Molecular Weight	338.4
Molecular Formula	$C_{22}H_{26}O_3$
Density	0.96 g/cm^3
Melting Point	56 °C
Boiling Point	Decomposes

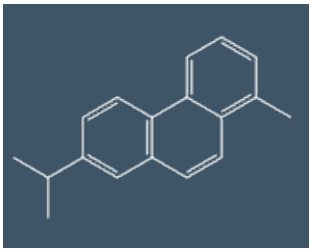
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	10453-86-8	Acetone	S-3252



Resorcinol

Molecular Weight	110.112
Molecular Formula	$C_6H_6O_2$
Density	1.28 g/cm^3
Melting Point	111 °C
Boiling Point	280 °C

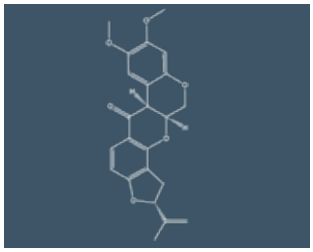
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-46-3	Methanol-P&T	S-3250



Retene

Molecular Weight	234.342
Molecular Formula	$C_{18}H_{18}$
Density	1.04 g/cm^3
Melting Point	99 °C
Boiling Point	208 °C

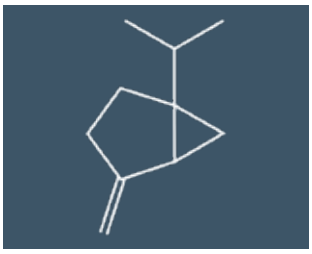
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	483-65-8	Methylene Chloride	S-4436



Rotenone

Molecular Weight	394.423
Molecular Formula	$C_{23}H_{22}O_6$
Density	1.27 g/cm^3
Melting Point	163 °C
Boiling Point	215 °C

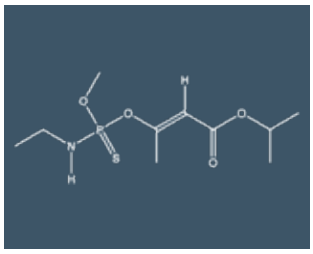
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	83-79-4	Methanol-P&T	S-3248



Sabinene

Molecular Weight	136.238
Molecular Formula	$C_{10}H_{16}$

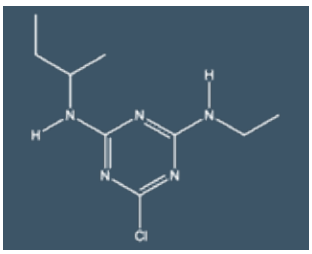
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3387-41-5	Methanol	S-6645



Safrotin

Molecular Weight	281.307
Molecular Formula	$C_{10}H_{20}NO_4PS$
Density	1.129 g/cm^3
Boiling Point	88 °C

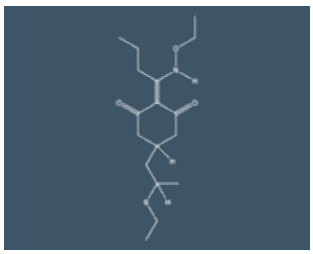
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	31218-83-4	Methanol-P&T	S-3260



Sebuthylazine

Molecular Weight	229.712
Molecular Formula	$C_9H_{16}ClN_5$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7286-69-3	Methanol	S-4003



Sethoxydim

Molecular Weight	327.483
Molecular Formula	$C_{17}H_{29}NO_3S$
Density	1.043 g/cm^3
Boiling Point	> 90 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74051-80-2	Acetone	S-3266
		Acetonitrile	S-3266-ACN

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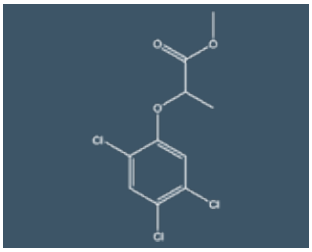
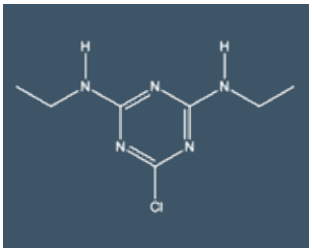
Volume for all Organic Singles is 1 mL



Silvex methyl ester

Molecular Weight	283.529
Molecular Formula	$C_{10}H_9Cl_3O_3$

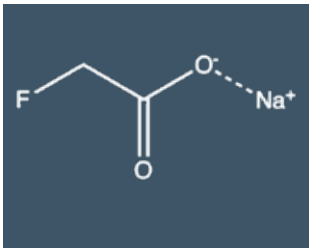
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4841-20-7	Methanol-P&T	S-3270



Simazine

Molecular Weight	201.7
Molecular Formula	$C_7H_{12}ClN_5$
Density	1.30 g/cm^3
Melting Point	Decomposes
Boiling Point	Decomposes

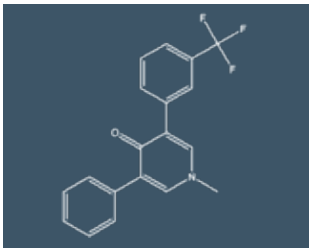
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	122-34-9	Acetone	S-3280



Sodium fluoroacetate

Molecular Weight	100.024
Molecular Formula	$C_2H_2FNaO_2$
Density	< 1 g/cm^3
Melting Point	200-202 °C

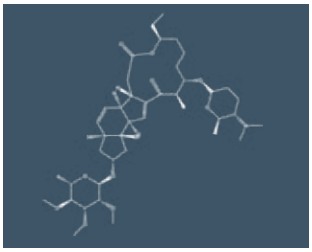
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	62-74-8	DI Water	S-3291



Sonar/Fluridone

Molecular Weight	329.332
Molecular Formula	$C_{19}H_{14}F_3NO$
Density	0.358 g/cm^3
Melting Point	154 °C

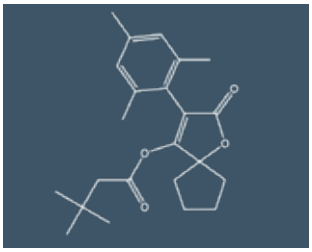
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	59756-60-4	Methanol-P&T	S-3290



Spinosad

Molecular Weight	732.0
Molecular Formula	$C_{41}H_{65}NO_{10}$
Density	0.51 g/cm^3
Melting Point	92 °C

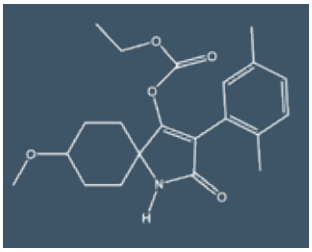
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	131929-60-7	Acetonitrile	S-5672



Spiromesifen

Molecular Weight	370.5
Molecular Formula	$C_{23}H_{30}O_4$
Density	1.13 g/cm^3
Melting Point	98 °C
Boiling Point	Decomposes

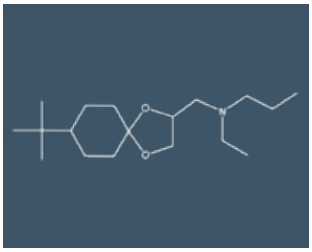
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	283594-90-1	Acetone	S-5296



Spirotetramat

Molecular Weight	373.4
Molecular Formula	$C_{21}H_{27}NO_5$
Density	1.22 g/cm^3
Melting Point	142 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	203313-25-1	HPLC Acetonitrile	S-5873

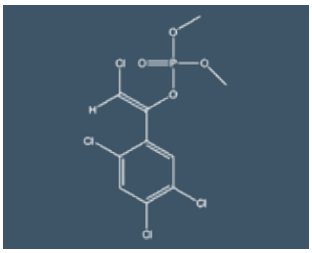


Spiroxamine

Molecular Weight	297.483
Molecular Formula	$C_{18}H_{35}NO_2$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	118134-30-8	Methanol	S-5469

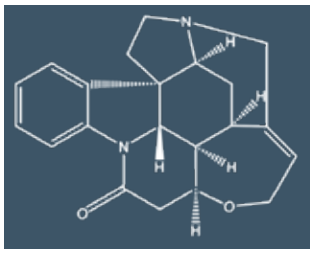
Volume for all Organic Singles is 1 mL



Stirophos (Tetrachlorvinphos)

Molecular Weight	365.952
Molecular Formula	$C_{10}H_9Cl_4O_4P$
Melting Point	97 to 98 °C

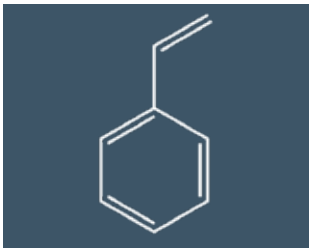
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	961-11-5	Acetone	S-3425



Strychnine

Molecular Weight	334.419
Molecular Formula	$C_{21}H_{22}N_2O_2$
Density	1.36 g/cm^3
Melting Point	275 to 285 °C
Boiling Point	Decomposes

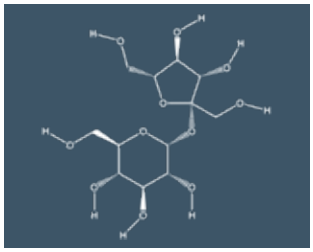
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57-24-9	Methanol	S-3295



Styrene

Molecular Weight	104.152
Molecular Formula	C_8H_8
Density	0.902 g/cm^3
Melting Point	-33 °C
Boiling Point	145 °C

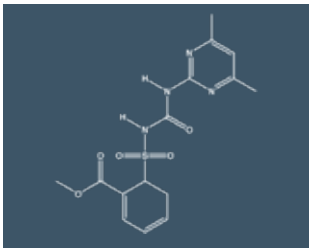
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-42-5	Methanol-P&T	S-3300



Sucrose

Molecular Weight	342.297
Molecular Formula	$C_{12}H_{22}O_{11}$
Density	1.587 g/cm^3

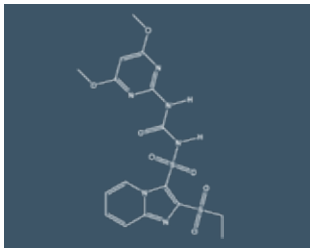
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57-50-1	Methanol-P&T	S-3308



Sulfometuromethyl

Molecular Weight	364.376
Molecular Formula	$C_{15}H_{16}N_4O_5S$
Density	1.48 g/cm^3
Melting Point	202 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	74222-97-2	Methanol-P&T	S-3302



Sulfosulfuron

Molecular Weight	470.475
Molecular Formula	$C_{16}H_{18}N_6O_7S_2$
Density	1.519 g/cm^3
Melting Point	201 °C

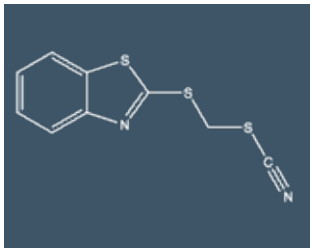
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	141776-32-1	Methanol	S-4997

S

Sulfur

Molecular Weight	32.06
Molecular Formula	S
Density	2.1 g/cm^3
Melting Point	120 °C
Boiling Point	445 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7704-34-9	Methylene Chloride	S-3875



TCMTB

Molecular Weight	238.341
Molecular Formula	$C_9H_6N_2S_3$
Density	1.05 g/cm^3
Melting Point	-10 °C
Boiling Point	> 120 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	21564-17-0	Methanol	S-3359

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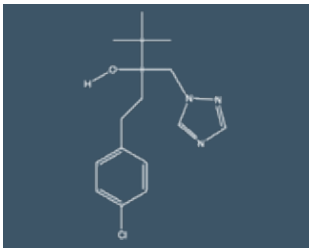
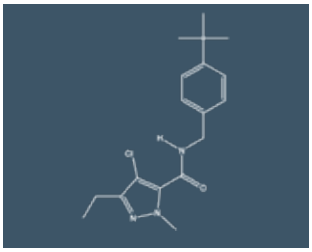
Volume for all Organic Singles is 1 mL



Tebuconazole (Folicur)

Molecular Weight	307.8
Molecular Formula	$C_{16}H_{22}ClN_3O$
Density	1.25 g/cm^3
Melting Point	105 °C
Boiling Point	Decomposes

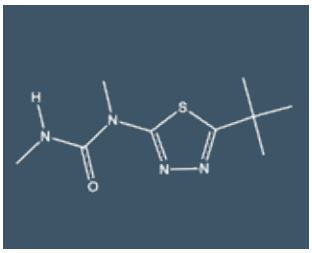
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107534-96-3	Methanol	S-2056



Tebufenpyrad

Molecular Weight	333.9
Molecular Formula	$C_{18}H_{24}ClN_3O$
Density	1.17 g/cm^3
Melting Point	65 °C
Boiling Point	Decomposes

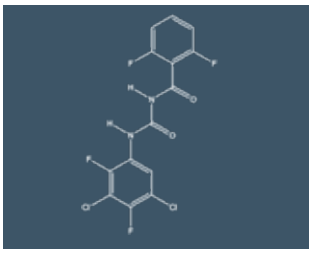
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119168-77-3	Methanol	S-5226



Tebuthiuron

Molecular Weight	228.314
Molecular Formula	$C_9H_{16}N_4OS$
Melting Point	162 to 164 °C

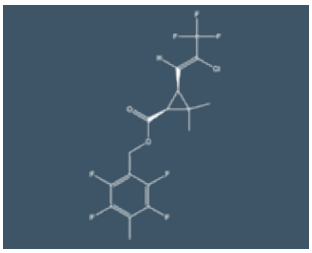
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	34014-18-1	Acetone	S-3310



Teflubenzuron

Molecular Weight	381.108
Molecular Formula	$C_{14}H_6Cl_2F_4N_2O_2$

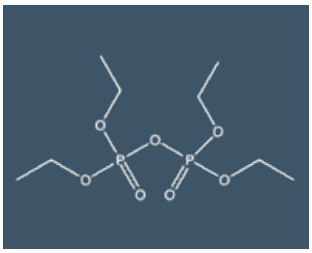
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	83121-18-0	Acetonitrile	S-5458-ACN



Tefluthrin

Molecular Weight	418.736
Molecular Formula	$C_{17}H_{14}ClF_7O_2$
Density	1.48 g/cm^3
Melting Point	45 °C
Boiling Point	156 °C

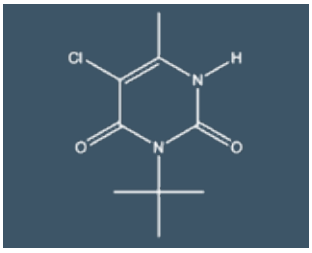
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79538-32-2	Acetone	S-4281-AC



TEPP

Molecular Weight	290.189
Molecular Formula	$C_8H_{20}O_7P_2$
Density	1.18 g/cm^3
Melting Point	0 °C
Boiling Point	124 °C

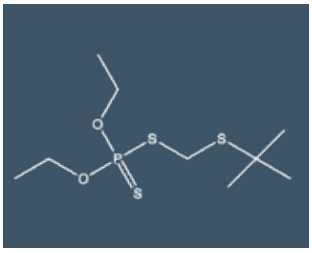
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	107-49-3	Methanol	S-3315



Terbacil

Molecular Weight	216.665
Molecular Formula	$C_9H_{13}ClN_2O_2$
Density	1.34 g/cm^3
Melting Point	176 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5902-51-2	Methanol-P&T	S-3320

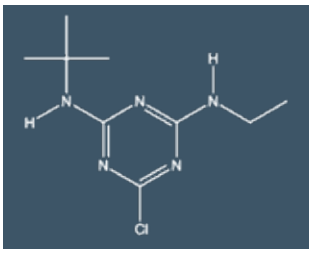


Terbufos

Molecular Weight	288.4
Molecular Formula	$C_9H_{21}O_2PS$
Density	1.11 g/cm^3
Melting Point	-29 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	13071-79-9	Methanol	S-3325

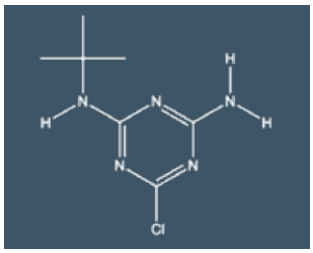
Volume for all Organic Singles is 1 mL



Terbuthylazine

Molecular Weight	229.712
Molecular Formula	$C_9H_{16}ClN_5$
Density	1.122 g/cm^3

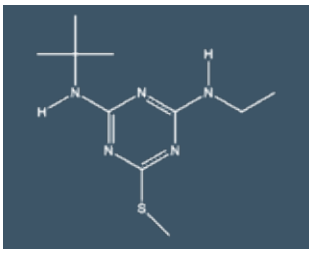
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5915-41-3	Methanol	S-3330



Terbuthylazine-desethyl

Molecular Weight	201.658
Molecular Formula	$C_7H_{12}ClN_5$

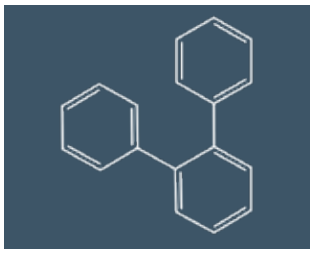
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	30125-63-4	HPLC Acetonitrile	S-5591



Terbutryne

Molecular Weight	241.357
Molecular Formula	$C_{10}H_{19}N_5S$
Density	1.115 g/cm^3
Melting Point	104 °C
Boiling Point	157 °C

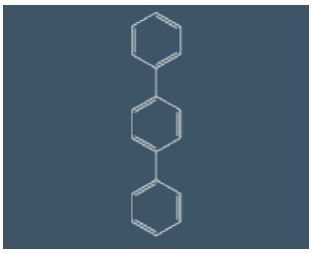
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	886-50-0	Methanol-P&T	S-3335



o-Terphenyl

Molecular Weight	230.31
Molecular Formula	$C_{18}H_{14}$
Density	1.1 g/cm^3
Melting Point	56 °C
Boiling Point	332 °C

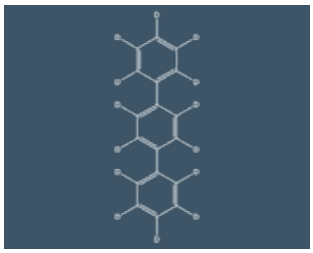
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	84-15-1	Methanol	S-3345



p-Terphenyl

Molecular Weight	230.31
Molecular Formula	$C_{18}H_{14}$
Density	1.23 g/cm^3
Melting Point	210 °C
Boiling Point	376 °C

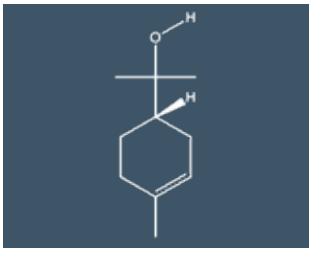
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	92-94-4	Methylene Chloride	S-3350



p-Terphenyl-d$_{14}$

Molecular Weight	244.395
Molecular Formula	$C_{18}H_{14}$

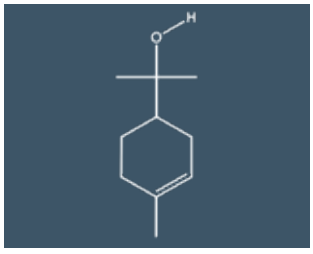
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1718-51-0	Methylene Chloride	S-3355



alpha-Terpineol

Molecular Weight	154.253
Molecular Formula	$C_{10}H_{18}O$
Density	0.935 g/cm^3
Melting Point	36 °C
Boiling Point	81 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	10482-56-1	Acetone	S-3356-AC



alpha-Terpineol

Molecular Weight	154.253
Molecular Formula	$C_{10}H_{18}O$
Density	0.93 g/cm^3
Melting Point	-30 °C
Boiling Point	215 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-55-5	Methanol-P&T	S-4145

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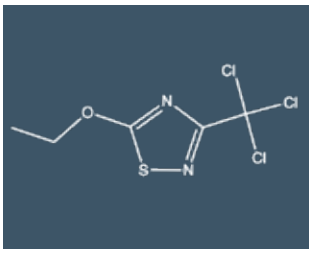
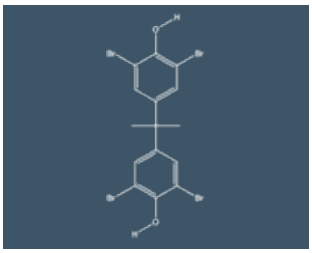
Volume for all Organic Singles is 1 mL



Terrazole

Molecular Weight	247.518
Molecular Formula	$C_5H_5Cl_3N_2OS$
Density	1.497 g/cm^3
Melting Point	22 °C
Boiling Point	95 °C

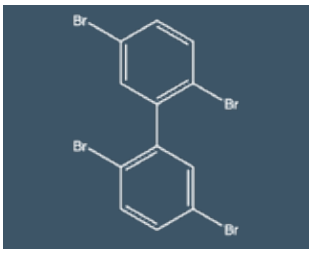
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2593-15-9	Methanol-P&T	S-3360



Tetrabromo bisphenol A

Molecular Weight	543.875
Molecular Formula	$C_{15}H_{12}Br_4O_2$
Melting Point	179 °C
Boiling Point	316 °C

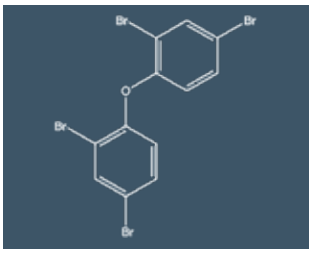
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-94-7	Methanol-P&T	S-4311



2,2′,5,5′-Tetrabromo-biphenyl

Molecular Weight	469.796
Molecular Formula	$C_{12}H_6Br_4$

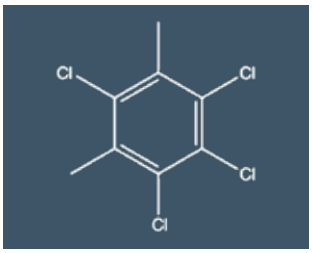
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	59080-37-4	Methanol	S-4144



2,2′,4,4′ Tetrabromo-diphenyl ether

Molecular Weight	485.795
Molecular Formula	$C_{12}H_6Br_4O$
Melting Point	82 °C

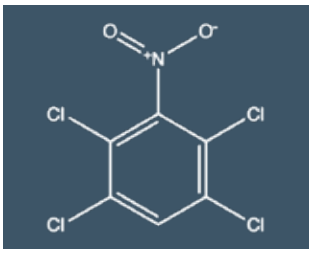
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	5436-43-1	Methanol	S-4376



2,4,5,6-Tetrachloro-m-xylene

Molecular Weight	243.936
Molecular Formula	$C_8H_6Cl_4$

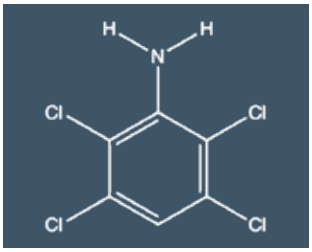
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	877-09-8	Acetone	S-3420



1,2,4,5-Tetrachloro-3-nitrobenzene

Molecular Weight	260.879
Molecular Formula	$C_6HCl_4NO_2$
Density	1.744 g/cm^3
Melting Point	100 °C
Boiling Point	Decomposes

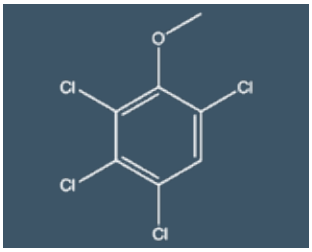
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	117-18-0	Methanol-P&T	S-3415



2,3,5,6-Tetrachloro-aniline

Molecular Weight	230.897
Molecular Formula	$C_6H_3Cl_4N$
Melting Point	107 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3481-20-7	Methanol	S-4924

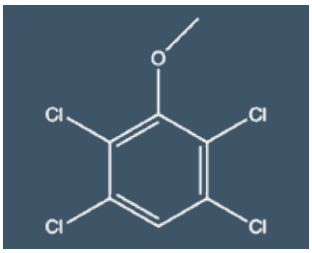


2,3,4,6-Tetrachloroanisole

Molecular Weight	245.908
Molecular Formula	$C_7H_4Cl_4O$
Melting Point	65 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	938-22-7	Methanol	S-3405B

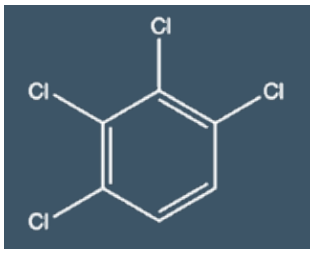
Volume for all Organic Singles is 1 mL



2,3,5,6-Tetrachloroanisole

Molecular Weight	245.908
Molecular Formula	$C_7H_4Cl_4O$

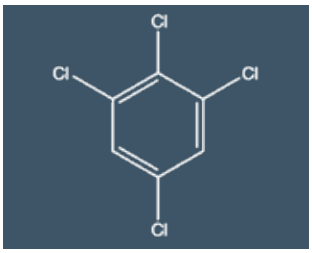
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6936-40-9	Methanol	S-4465



1,2,3,4-Tetrachlorobenzene

Molecular Weight	215.882
Molecular Formula	$C_6H_2Cl_4$
Melting Point	48 °C
Boiling Point	254 °C

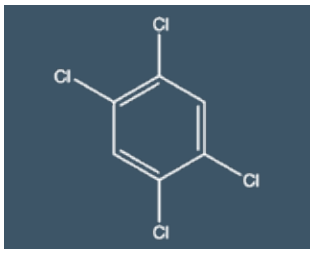
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	634-66-2	Methanol-P&T	S-3370



1,2,3,5-Tetrachlorobenzene

Molecular Weight	215.882
Molecular Formula	$C_6H_2Cl_4$
Melting Point	51 °C
Boiling Point	246 °C

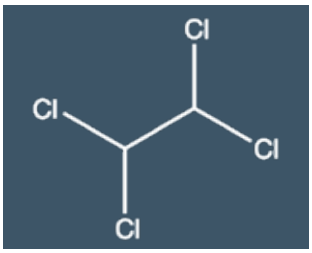
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	634-90-2	Methanol-P&T	S-3375



1,2,4,5-Tetrachlorobenzene

Molecular Weight	215.882
Molecular Formula	$C_6H_2Cl_4$
Melting Point	139 °C
Boiling Point	246 °C

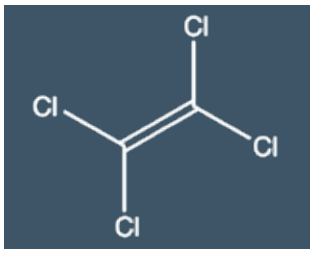
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-94-3	Methanol-P&T	S-3380



1,1,2,2-Tetrachloroethane

Molecular Weight	167.838
Molecular Formula	$C_2H_2Cl_4$
Density	1.59 g/cm^3
Melting Point	-42 °C
Boiling Point	146 °C

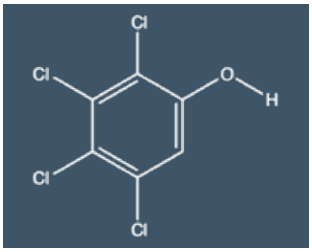
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-34-5	Methanol-P&T	S-3390



Tetrachloroethene

Molecular Weight	165.822
Molecular Formula	C_2Cl_4
Density	1.62 g/cm^3
Melting Point	-22 °C
Boiling Point	121 °C

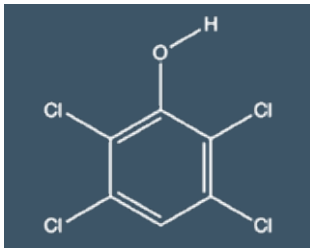
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	127-18-4	Methanol-P&T	S-3395



2,3,4,5-Tetrachlorophenol

Molecular Weight	231.881
Molecular Formula	$C_6H_2Cl_4O$
Density	1.6 g/cm^3
Melting Point	117 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4901-51-3	Methanol-P&T	S-3400



2,3,5,6-Tetrachlorophenol

Molecular Weight	231.881
Molecular Formula	$C_6H_2Cl_4O$
Density	1.6 g/cm^3
Melting Point	115 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	935-95-5	Methanol	S-3410

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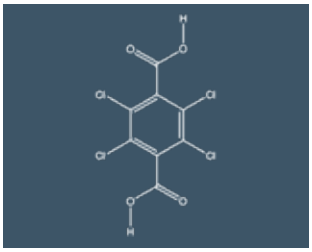
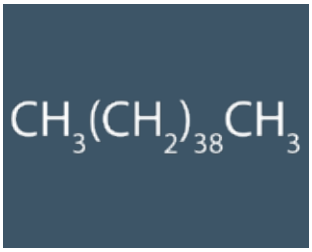
Volume for all Organic Singles is 1 mL



Tetrachloroterephthalic acid

Molecular Weight	303.9
Molecular Formula	$C_8H_2Cl_4O_4$
Melting Point	343 to 345 °C

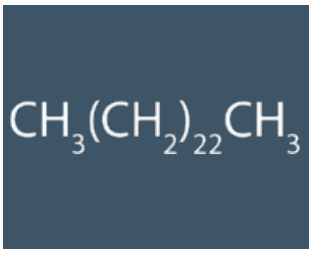
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2136-79-0	Acetone	S-1067



n-Tetracontane

Molecular Weight	563.096
Molecular Formula	$C_{40}H_{82}$

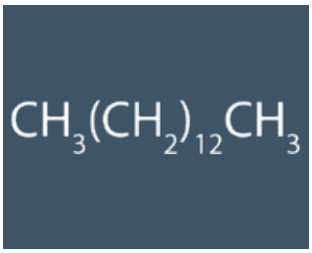
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	4181-95-7	Hexane	S-3430



n-Tetracosane

Molecular Weight	338.664
Molecular Formula	$C_{24}H_{50}$
Density	0.799 g/cm^3
Melting Point	50 °C
Boiling Point	391 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	646-31-1	1,1,2-Trichloro-1,2,2-trifluoroethane	S-3435



n-Tetradecane

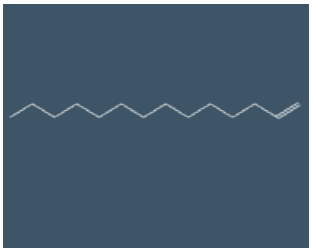
Molecular Weight	198.394
Molecular Formula	$C_{14}H_{30}$
Density	0.763 g/cm^3
Melting Point	6 °C
Boiling Point	253 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	629-59-4	Methylene Chloride	S-3440

1-Tetradecanol

Molecular Weight	214.393
Molecular Formula	$C_{14}H_{30}O$
Density	0.823 g/cm^3
Melting Point	212 °C
Boiling Point	296 °C

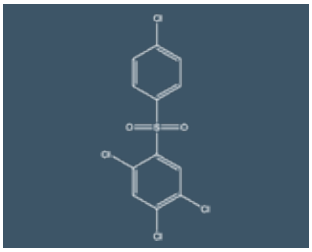
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112-72-1	Methanol-P&T	S-3943



1-Tetradecene

Molecular Weight	196.378
Molecular Formula	$C_{14}H_{28}$
Density	0.771 g/cm^3
Melting Point	-12 °C
Boiling Point	252 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1120-36-1	Methanol-P&T	S-3445



Tetradifon

Molecular Weight	356.038
Molecular Formula	$C_{12}H_6Cl_4O_2S$
Density	1.151 g/cm^3
Melting Point	148 to 149 °C

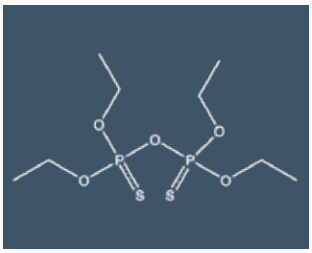
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	116-29-0	Acetone	S-3450-AC

Tetraethyl lead

Molecular Weight	323.448
Molecular Formula	$C_8H_{20}Pb$
Melting Point	136 °C
Boiling Point	200 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-00-2	Methanol	S-4871

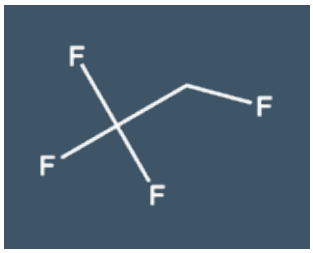
Volume for all Organic Singles is 1 mL



Tetraethyldithio Pyrophosphate/Sulfotepp

Molecular Weight	322.311
Molecular Formula	$C_8H_{20}O_5P_2S_2$
Boiling Point	138 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3689-24-5	Methanol	S-3455



1,1,1,2-Tetrafluoroethane

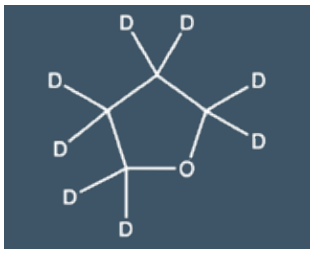
Molecular Weight	102.032
Molecular Formula	CH_2FCF_3
Density	1.207 g/cm^3
Melting Point	-101 °C
Boiling Point	-26 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	811-97-2	Methanol-P&T	S-3386

Tetrahydrofuran

Molecular Weight	72.107
Molecular Formula	C_4H_8O
Density	0.89 g/cm^3
Melting Point	-109 °C
Boiling Point	66 °C

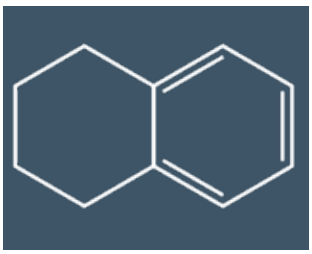
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-99-9	Methanol-P&T	S-3460



Tetrahydrofuran-d_8

Molecular Weight	80.156
Molecular Formula	C_4H_8O
Density	0.985 g/cm^3
Melting Point	-106 °C
Boiling Point	66 °C

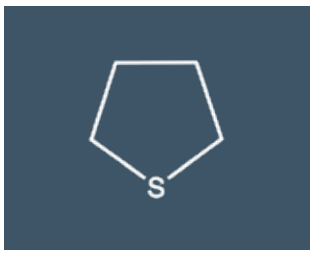
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1693-74-9	Methanol-P&T	S-3461



1,2,3,4-Tetrahydro-naphthalene

Molecular Weight	132.206
Molecular Formula	$C_{10}H_{12}$
Density	0.719 g/cm^3
Melting Point	-36 °C
Boiling Point	208° C

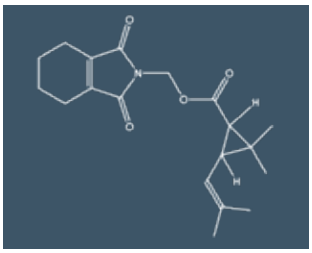
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119-64-2	Methanol-P&T	S-3464



Tetrahydrothiophene

Molecular Weight	88.168
Molecular Formula	C_4H_8S
Density	0.997 g/cm^3
Melting Point	-96 °C
Boiling Point	121 °C

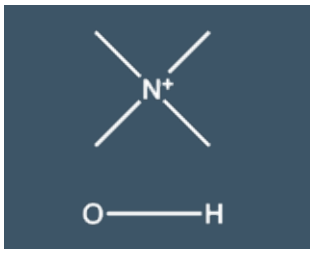
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-01-0	Methanol-P&T	S-3470



Tetramethrin

Molecular Weight	331.4
Molecular Formula	$C_{19}H_{25}NO_4$
Density	1.11 g/cm^3
Melting Point	69 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7696-12-0	Acetone	S-4251-AC
		Methanol-P&T	S-4251



Tetramethylammonium hydroxide

Molecular Weight	91.154
Molecular Formula	$C_4H_{13}NO$
Density	1.015 g/cm^3
Melting Point	63 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-59-2	Methanol-P&T	S-3476

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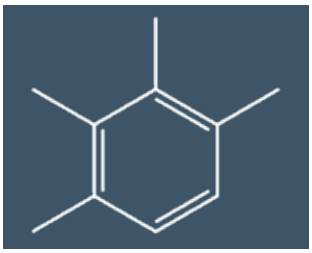
Volume for all Organic Singles is 1 mL



1,2,3,4-Tetramethylbenzene

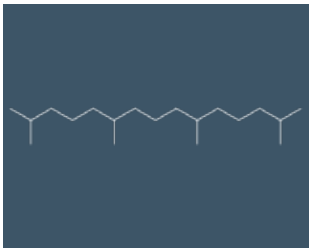
Molecular Weight	134.222
Molecular Formula	$C_{10}H_{14}$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	488-23-3	Methanol-P&T	S-3472

Tetramethylene sulfone

Molecular Weight	120.166
Molecular Formula	$C_4H_8O_2S$
Density	1.26 g/cm^3
Melting Point	28 °C
Boiling Point	285 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126-33-0	Methanol-P&T	S-3877



2,6,10,14-Tetramethylpentadecane

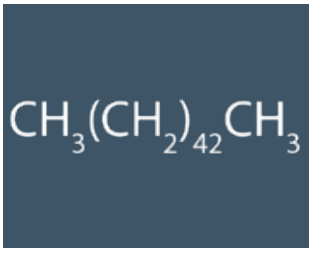
Molecular Weight	268.529
Molecular Formula	$C_{19}H_{40}$
Density	0.775 g/cm^3
Melting Point	100 °C
Boiling Point	296 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1921-70-6	Methylene Chloride	S-3125

Tetrapropylene glycol

Molecular Weight	250.335
Molecular Formula	$C_{12}H_{26}O_5$

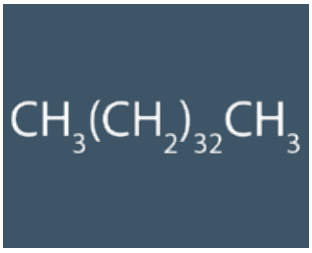
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	30242-05-8	Methanol-P&T	S-3471



n-Tetratetracontane

Molecular Weight	619.204
Molecular Formula	$C_{44}H_{90}$

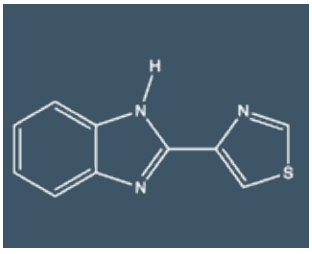
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	7098-22-8	Cyclohexane: Methylene Chloride (50:50)	S-3480



n-Tetratriacontane

Molecular Weight	478.934
Molecular Formula	$C_{34}H_{70}$

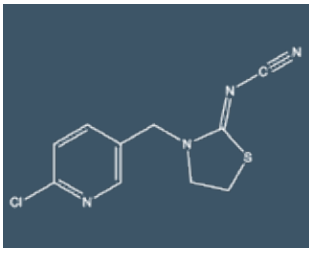
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	14167-59-0	Methylene Chloride	S-3485



Thiabendazole

Molecular Weight	201.247
Molecular Formula	$C_{10}H_7N_3S$
Density	1.103 g/cm^3
Melting Point	300 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	148-79-8	Methanol	S-3490

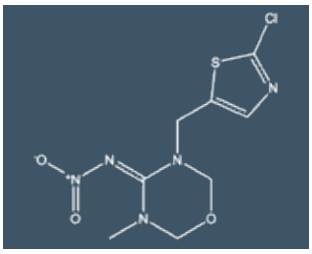


Thiacloprid

Molecular Weight	252.72
Molecular Formula	$C_{10}H_9ClN_4S$
Density	1.46 g/cm^3
Melting Point	136 °C
Boiling Point	Decomposes

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111988-49-9	Acetonitrile	S-5723

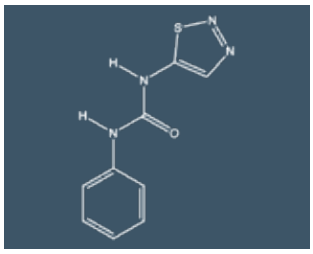
Volume for all Organic Singles is 1 mL



Thiamethoxam

Molecular Weight	291.7
Molecular Formula	$C_8H_{10}ClN_5O_3S$
Density	1.57 g/cm^3
Melting Point	139 °C
Boiling Point	Decomposes

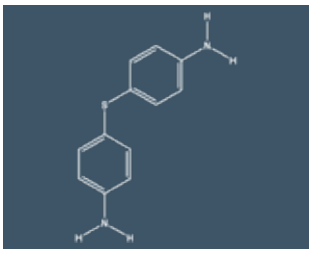
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	153719-23-4	Acetonitrile	S-5173



Thidiazuron

Molecular Weight	220.25
Molecular Formula	$C_9H_8N_4OS$

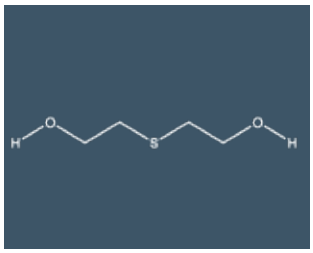
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51707-55-2	Methanol-P&T	S-3978



4,4'-Thiobisbenzeneamine

Molecular Weight	216.302
Molecular Formula	$C_{12}H_{12}N_2S$
Melting Point	108 °C

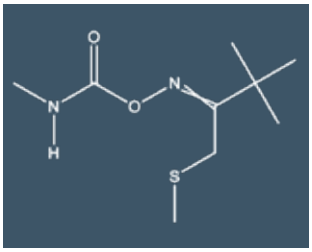
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	139-65-1	Methanol	S-4475



Thiodiglycol

Molecular Weight	122.182
Molecular Formula	$C_4H_{10}O_2S$
Density	1.179 g/cm^3
Melting Point	-10 °C
Boiling Point	282 °C

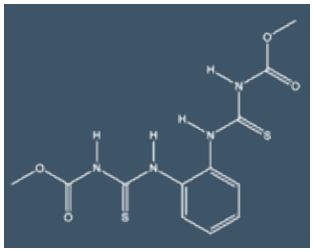
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	111-48-8	Acetonitrile: Methanol	S-4010



Thiofanox

Molecular Weight	218.315
Molecular Formula	$C_9H_{18}N_2O_2S$
Melting Point	57 °C

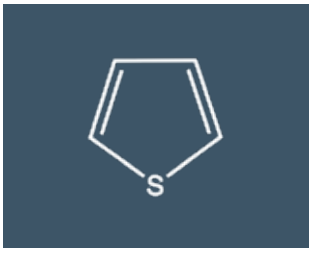
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	39196-18-4	Methanol-P&T	S-3492



Thiophanate-methyl

Molecular Weight	342.4
Molecular Formula	$C_{12}H_{14}N_4O_4S_2$
Density	1.45 g/cm^3
Melting Point	Decomposes
Boiling Point	Decomposes

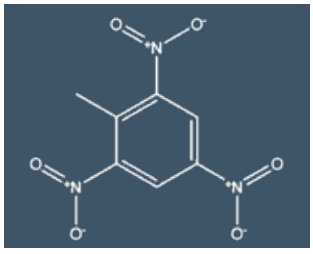
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	23564-05-8	Methanol	S-3494



Thiophene

Molecular Weight	84.136
Molecular Formula	C_4H_4S
Density	1.05 g/cm^3
Melting Point	-38 °C
Boiling Point	84 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-02-1	Methanol-P&T	S-3496



TNT

Molecular Weight	227.132
Molecular Formula	$C_7H_5N_3O_6$
Density	1.65 g/cm^3
Melting Point	80 °C
Boiling Point	240 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	118-96-7	Methanol: Acetonitrile (90:10)	S-3501

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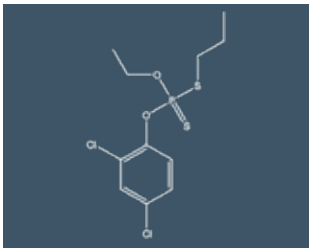
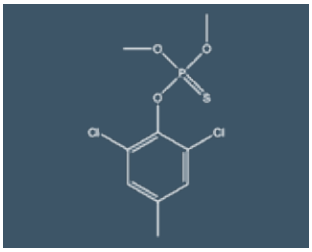
Volume for all Organic Singles is 1 mL



Tokuthion/Prothiophos

Molecular Weight	345.233
Molecular Formula	$C_{11}H_{15}Cl_2O_2PS_2$

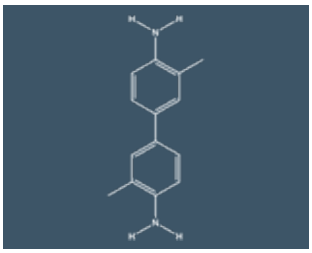
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	34643-46-4	Acetone	S-3225



Tolclofos-methyl

Molecular Weight	301.118
Molecular Formula	$C_9H_{11}Cl_2O_3PS$
Melting Point	78 to 80 °C

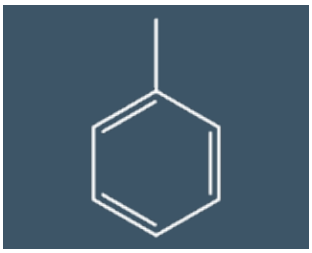
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	57018-04-9	Methanol	S-4835



o-Tolidine

Molecular Weight	212.296
Molecular Formula	$C_{14}H_{16}N_2$
Density	1.234 g/cm^3
Melting Point	131 to 132 °C
Boiling Point	300 °C

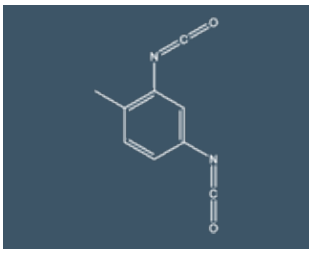
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	119-93-7	Methylene Chloride	S-3500



Toluene

Molecular Weight	92.141
Molecular Formula	$C_6H_5CH_3$
Density	0.867 g/cm^3
Melting Point	-95 °C
Boiling Point	111 °C

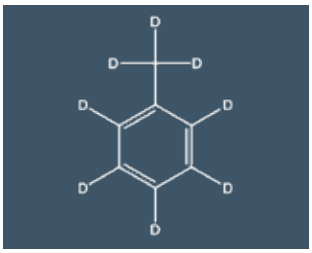
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-88-3	Methanol-P&T	S-3505



Toluene-2,4-diisocyanate

Molecular Weight	174.159
Molecular Formula	$C_9H_6N_2O_2$
Density	1.22 g/cm^3
Melting Point	21 °C
Boiling Point	251 °C

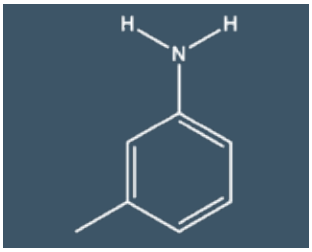
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	584-84-9	Methanol-P&T	S-3530



Toluene-d_8

Molecular Weight	100.19
Molecular Formula	C_7H_8
Density	0.943 g/cm^3
Melting Point	-84 °C
Boiling Point	110 °C

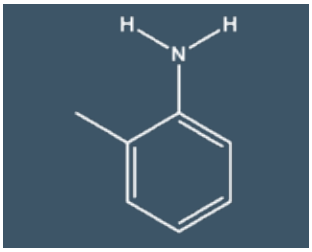
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2037-26-5	Methanol-P&T	S-3510



m-Toluidine

Molecular Weight	107.156
Molecular Formula	C_7H_9N
Density	0.989 g/cm^3
Melting Point	-30 °C
Boiling Point	203 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-44-1	Methanol-P&T	S-3515

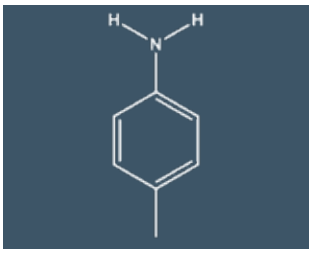


o-Toluidine

Molecular Weight	107.156
Molecular Formula	C_7H_9N
Density	0.998 g/cm^3
Melting Point	-16 °C
Boiling Point	200 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-53-4	Methanol-P&T	S-3520

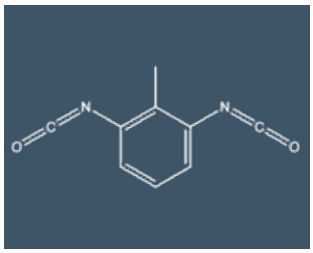
Volume for all Organic Singles is 1 mL



p-Toluidine

Molecular Weight	107.156
Molecular Formula	C_7H_9N
Density	0.962 g/cm^3
Melting Point	44 °C
Boiling Point	200 °C

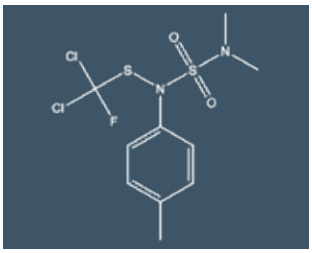
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-49-0	Methanol-P&T	S-3525



Tolylene-2,6-diisocyanate

Molecular Weight	174.159
Molecular Formula	$C_9H_6N_2O_2$
Density	1.22 g/cm^3
Melting Point	18 °C
Boiling Point	129 to 133 °C

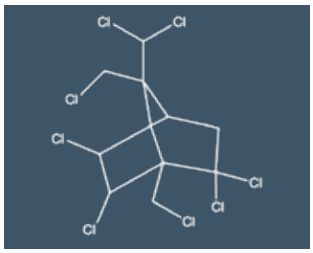
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	91-08-7	Methylene Chloride	S-5870



Tolylfluanid

Molecular Weight	347.244
Molecular Formula	$C_{10}H_{13}Cl_2FN_2O_2S_2$
Density	1.52 g/cm^3
Melting Point	93 °C
Boiling Point	Decomposes

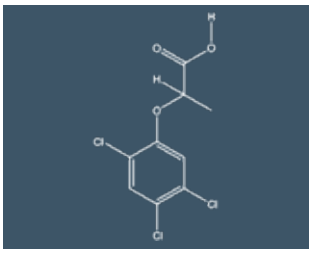
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	731-27-1	Methanol-P&T	S-3531



Toxaphene

Molecular Weight	413.79
Molecular Formula	$C_{10}H_{10}Cl_8$
Density	1.65 g/cm^3
Melting Point	65 to 90 °C
Boiling Point	Decomposes

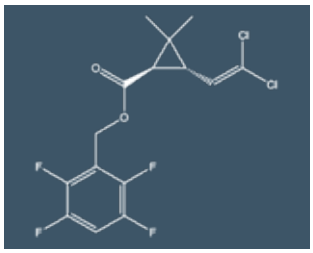
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	8001-35-2	Hexane	S-3535



2,4,5 TP (Silvex)

Molecular Weight	269.502
Molecular Formula	$C_9H_7Cl_3O_3$
Density	1.21 g/cm^3
Melting Point	180 °C

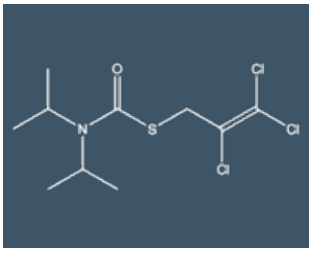
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93-72-1	Methanol-P&T	S-3275



Transfluthrin

Molecular Weight	371.153
Molecular Formula	$C_{15}H_{12}Cl_2F_4O_2$

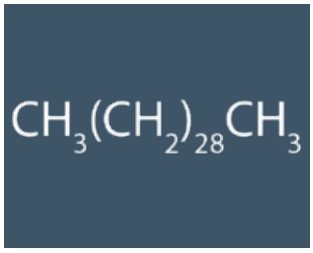
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	118712-89-3	Acetonitrile	S-6375



Tri-allate

Molecular Weight	304.654
Molecular Formula	$C_{10}H_{16}Cl_3NOS$
Density	1.273 g/cm^3
Melting Point	29 to 30 °C
Boiling Point	117 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2303-17-5	Methanol	S-3550



n-Triacontane

Molecular Weight	422.826
Molecular Formula	$C_{30}H_{62}$
Density	0.809 g/cm^3
Melting Point	66 °C
Boiling Point	451 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	638-68-6	Methylene Chloride	S-3540

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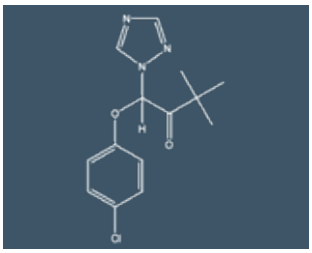
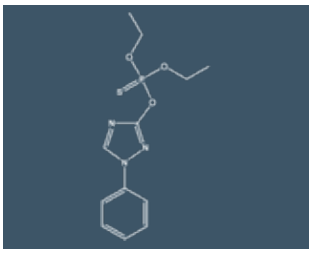
Volume for all Organic Singles is 1 mL



Triadimefon

Molecular Weight	293.751
Molecular Formula	$C_{14}H_{16}ClN_3O_2$
Density	1.22 g/cm^3
Melting Point	82 °C

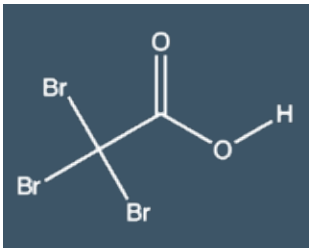
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	43121-43-3	Methanol-P&T	S-3545



Triazophos

Molecular Weight	313.312
Molecular Formula	$C_{12}H_{16}N_3O_3PS$
Density	1.251 g/cm^3
Melting Point	5 °C
Boiling Point	Decomposes

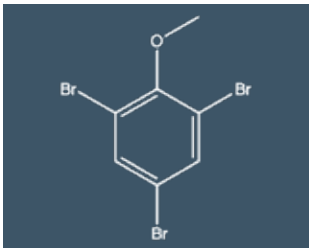
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	24017-47-8	Acetonitrile	S-4160-ACN
		Methanol	S-4160



Tribromoacetic acid

Molecular Weight	296.74
Molecular Formula	$C_2HBr_3O_2$
Melting Point	129 to 135 °C
Boiling Point	245 °C

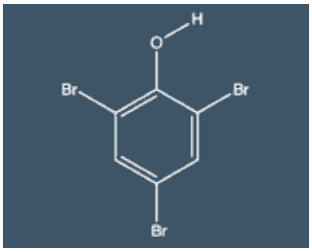
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-96-7	Methanol-P&T	S-3879
		Methyl Tertiary Butyl Ether	S-3879-MTBE



2,4,6-Tribromoanisole

Molecular Weight	344.828
Molecular Formula	$C_7H_5Br_3O$
Density	2.491 g/cm^3
Melting Point	88 °C
Boiling Point	298 °C

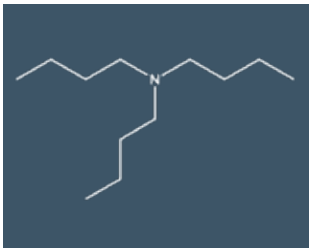
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	607-99-8	Methanol	S-4309



2,4,6-Tribromophenol

Molecular Weight	330.801
Molecular Formula	$C_6H_3Br_3O$
Density	2.55 g/cm^3
Melting Point	95 °C
Boiling Point	286 °C

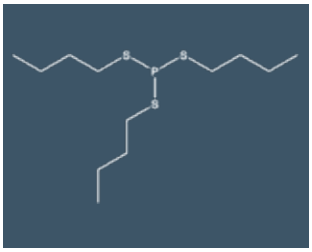
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	118-79-6	Methanol-P&T	S-3555



Tributylamine

Molecular Weight	185.355
Molecular Formula	$C_{12}H_{27}N$
Density	0.778 g/cm^3
Melting Point	-70 °C
Boiling Point	207 °C

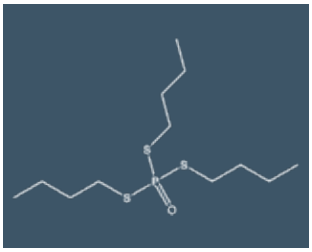
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	102-82-9	Methanol-P&T	S-3556



Tributylphosphoro-trithioite

Molecular Weight	298.502
Molecular Formula	$C_{12}H_{27}PS_3$
Density	1 g/cm^3
Boiling Point	115 to 134 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	150-50-5	Acetone	S-3565

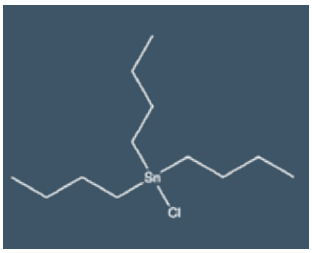


S.S.S.-Tributyl-phosphorotrithioate

Molecular Weight	314.501
Molecular Formula	$C_{12}H_{27}OPS_3$
Density	1.057 g/cm^3
Melting Point	-25 °C
Boiling Point	210 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-48-8	Methanol-P&T	S-3564

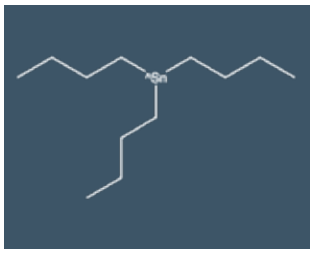
Volume for all Organic Singles is 1 mL



Tributyltin chloride

Molecular Weight	325.508
Molecular Formula	$C_{12}H_{27}ClSn$
Density	1.20 g/cm^3
Boiling Point	171 to 173 °C

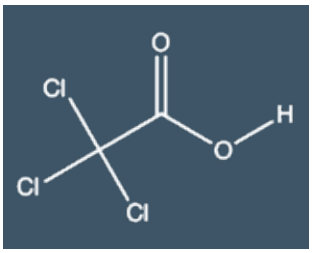
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1461-22-9	Acetone	S-4638



Tributyltin hydride

Molecular Weight	290.058
Molecular Formula	$C_{12}H_{27}Sn$
Density	1.103 g/cm^3
Boiling Point	112 °C

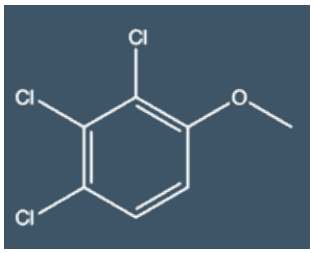
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	688-73-3	Methanol	S-4418



Trichloroacetic acid

Molecular Weight	163.378
Molecular Formula	$C_2HCl_3O_2$
Density	1.62 g/cm^3
Melting Point	58 °C
Boiling Point	198 °C

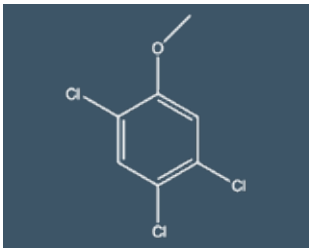
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76-03-9	Methyl Tertiary Butyl Ether	S-3575



2,3,4-Trichloroanisole

Molecular Weight	211.466
Molecular Formula	$C_7H_5Cl_3O$

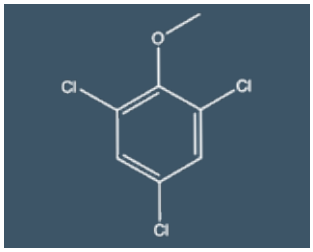
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	54135-80-7	Methanol	S-3584



2,4,5-Trichloroanisole

Molecular Weight	211.466
Molecular Formula	$C_7H_5Cl_3O$
Melting Point	78 °C

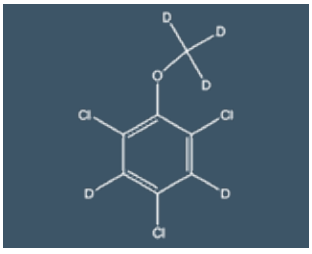
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	6130-75-2	Methanol	S-3578



2,4,6-Trichloroanisole

Molecular Weight	211.466
Molecular Formula	$C_7H_5Cl_3O$
Melting Point	62 °C
Boiling Point	140 °C

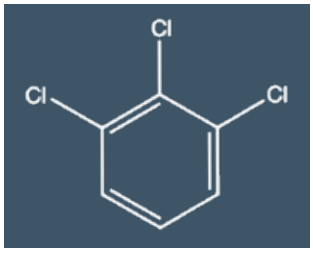
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87-40-1	Methanol	S-3586



2,4,6-Trichloroanisole-d$_5$

Molecular Weight	216.497
Molecular Formula	$C_7H_5Cl_3O$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	352439-08-8	Methanol-P&T	S-4336



1,2,3-Trichlorobenzene

Molecular Weight	181.44
Molecular Formula	$C_6H_3Cl_3$
Density	1.45 g/cm^3
Melting Point	51 °C
Boiling Point	219 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	87-61-6	Methanol-P&T	S-3580

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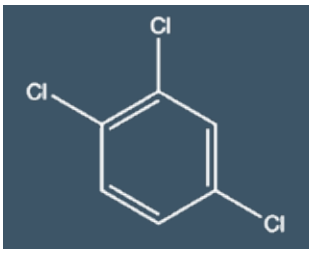
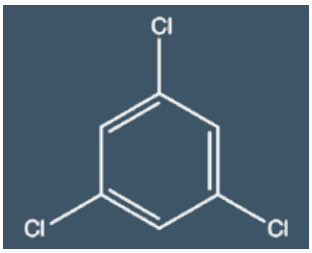
Volume for all Organic Singles is 1 mL



1,2,4-Trichlorobenzene

Molecular Weight	181.44
Molecular Formula	$C_6H_3Cl_3$
Density	1.45 g/cm^3
Melting Point	17 °C
Boiling Point	213 °C

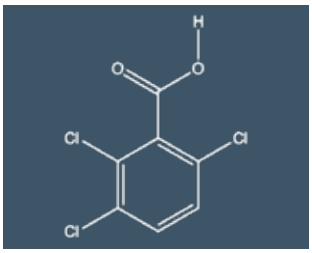
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	120-82-1	Methanol-P&T	S-3585



1,3,5-Trichlorobenzene

Molecular Weight	181.44
Molecular Formula	$C_6H_3Cl_3$
Density	1.456 g/cm^3
Melting Point	63 °C
Boiling Point	208 °C

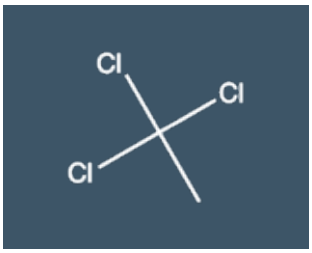
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-70-3	Methanol-P&T	S-3590



2,3,6-Trichlorobenzoic acid

Molecular Weight	225.449
Molecular Formula	$C_7H_3Cl_3O_2$
Melting Point	126 °C

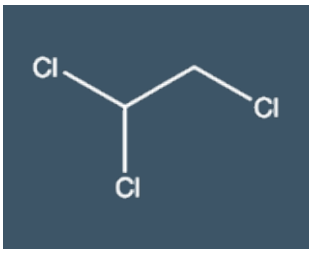
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	50-31-7	Methanol-P&T	S-3965



1,1,1-Trichloroethane

Molecular Weight	133.396
Molecular Formula	$C_2H_3Cl_3$
Density	1.34 g/cm^3
Melting Point	-30 °C
Boiling Point	74 °C

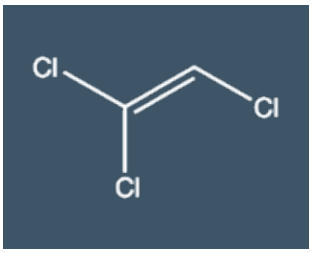
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	71-55-6	Methanol-P&T	S-3605



1,1,2-Trichloroethane

Molecular Weight	133.396
Molecular Formula	$C_2H_3Cl_3$
Density	1.44 g/cm^3
Melting Point	-36 °C
Boiling Point	114 °C

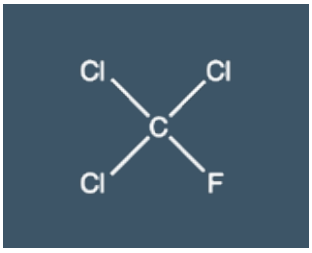
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-00-5	Methanol-P&T	S-3610



Trichloroethene

Molecular Weight	131.38
Molecular Formula	C_2HCl_3
Density	1.46 g/cm^3
Melting Point	-86 °C
Boiling Point	87 °C

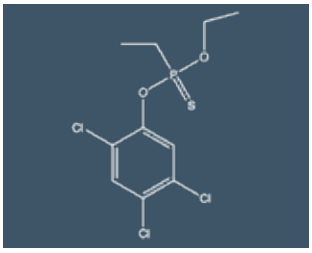
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	79-01-6	Methanol-P&T	S-3615



Trichlorofluoromethane

Molecular Weight	137.359
Molecular Formula	CCl_3F
Density	1.49 g/cm^3
Melting Point	-111 °C
Boiling Point	24 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-69-4	Methanol-P&T	S-3620

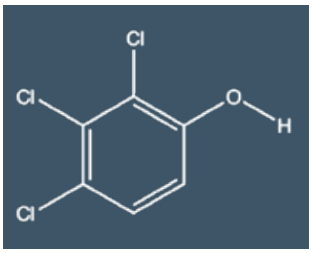


Trichloronate

Molecular Weight	333.588
Molecular Formula	$C_{10}H_{12}Cl_3O_2PS$
Density	1.365 g/cm^3
Boiling Point	108 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	327-98-0	Acetone	S-3570

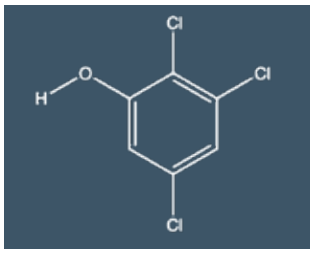
Volume for all Organic Singles is 1 mL



2,3,4-Trichlorophenol

Molecular Weight	197.439
Molecular Formula	$C_6H_3Cl_3O$
Density	1.5 g/cm^3
Melting Point	57 °C
Boiling Point	252 °C

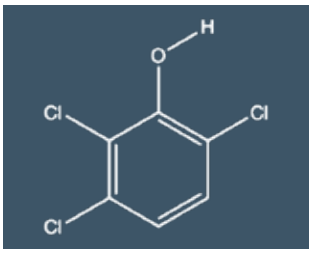
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	15950-66-0	Methanol-P&T	S-3625



2,3,5-Trichlorophenol

Molecular Weight	197.439
Molecular Formula	$C_6H_3Cl_3O$
Melting Point	62 °C
Boiling Point	250 °C

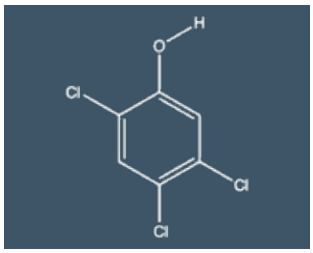
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	933-78-8	Methanol-P&T	S-3630



2,3,6-Trichlorophenol

Molecular Weight	197.439
Molecular Formula	$C_6H_3Cl_3O$
Melting Point	58 °C
Boiling Point	272 °C

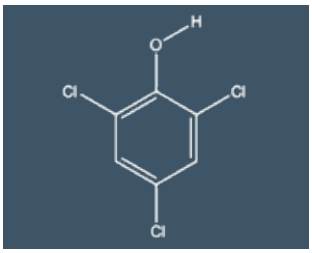
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	933-75-5	Methanol-P&T	S-3635



2,4,5-Trichlorophenol

Molecular Weight	197.439
Molecular Formula	$C_6H_3Cl_3O$
Density	1.68 g/cm^3
Melting Point	67 °C
Boiling Point	253 °C

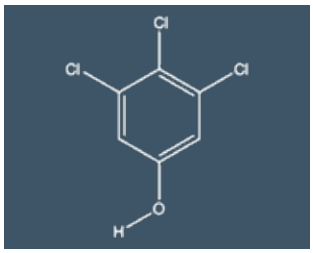
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-95-4	Methanol-P&T	S-3640



2,4,6-Trichlorophenol

Molecular Weight	197.439
Molecular Formula	$C_6H_3Cl_3O$
Density	1.7 g/cm^3
Melting Point	69 °C
Boiling Point	246 °C

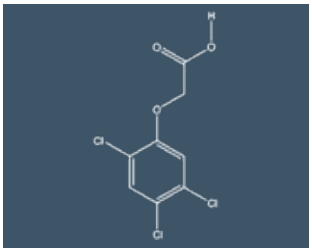
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	88-06-2	Methanol-P&T	S-3645



3,4,5-Trichlorophenol

Molecular Weight	197.439
Molecular Formula	$C_6H_3Cl_3O$
Melting Point	101 °C
Boiling Point	275 °C

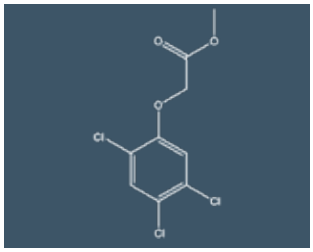
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	609-19-8	Methanol-P&T	S-3647



2,4,5-Trichlorophenoxy acetic acid

Molecular Weight	255.475
Molecular Formula	$C_8H_5Cl_3O_3$
Density	1.803 g/cm^3
Melting Point	153 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	93-76-5	Methyl Tertiary Butyl Ether	S-3655

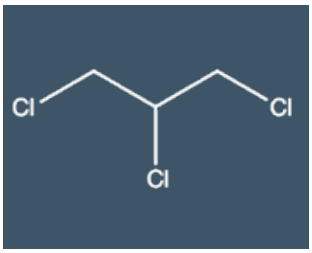


2,4,5-Trichlorophenoxy acetic acid methyl ester

Molecular Weight	269.502
Molecular Formula	$C_9H_7Cl_3O_3$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1928-37-6	Methanol-P&T	S-3650

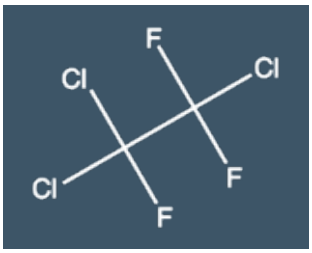
Volume for all Organic Singles is 1 mL



1,2,3-Trichloropropane

Molecular Weight	147.423
Molecular Formula	$C_3H_5Cl_3$
Density	1.39 g/cm³
Melting Point	-14 °C
Boiling Point	156 °C

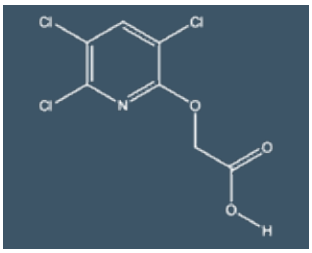
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	96-18-4	Methanol-P&T	S-3665
		Methyl Tertiary Butyl Ether	S-3665-MTBE



1,1,2-Trichlorotri-fluoroethane

Molecular Weight	187.367
Molecular Formula	$C_2Cl_3F_3$
Density	1.56 g/cm³
Melting Point	-36 °C
Boiling Point	48 °C

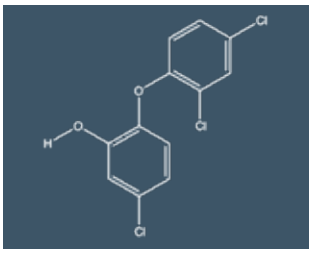
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	76-13-1	Methanol-P&T	S-3675



Triclopyr

Molecular Weight	256.463
Molecular Formula	$C_7H_4Cl_3NO_3$
Density	1.85 g/cm³
Melting Point	150 °C
Boiling Point	290 °C

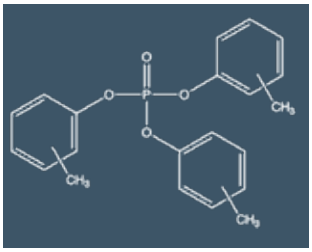
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	55335-06-3	Methanol	S-3680



Triclosan

Molecular Weight	289.536
Molecular Formula	$C_{12}H_7Cl_3O_2$
Melting Point	56 °C
Boiling Point	120 °C

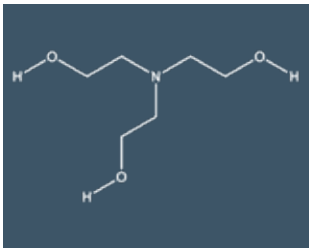
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	3380-34-5	Methanol	S-4382



Tricresyl phosphate

Molecular Weight	368.36
Molecular Formula	$C_{21}H_{21}O_4P$
Density	1.143 g/cm³
Melting Point	< -40 °C
Boiling Point	265 °C

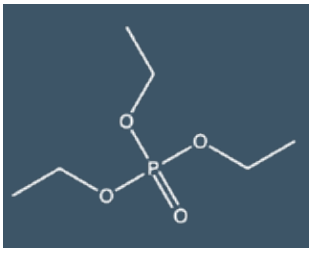
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1330-78-5	Methanol-P&T	S-3880



Triethanolamine

Molecular Weight	149.19
Molecular Formula	$C_6H_{15}NO_3$
Density	1.13 g/cm³
Melting Point	21 °C
Boiling Point	350 °C

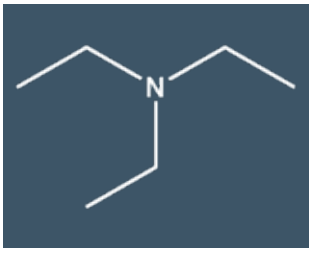
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	102-71-6	Methanol-P&T	S-3695



Triethyl phosphate

Molecular Weight	182.156
Molecular Formula	$C_6H_{15}O_4P$
Density	1.07 g/cm³
Melting Point	-57 °C
Boiling Point	215 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	78-40-0	Methanol-P&T	S-3700

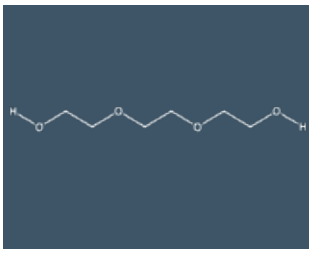


Triethylamine

Molecular Weight	101.193
Molecular Formula	$C_6H_{15}N$
Density	0.73 g/cm³
Melting Point	-115 °C
Boiling Point	89 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	121-44-8	Methanol-P&T	S-3702

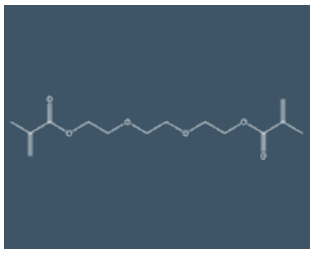
Volume for all Organic Singles is 1 mL



Triethylene glycol

Molecular Weight	150.174
Molecular Formula	$C_6H_{14}O_4$
Density	1.125 g/cm³
Melting Point	-7 °C
Boiling Point	285 °C

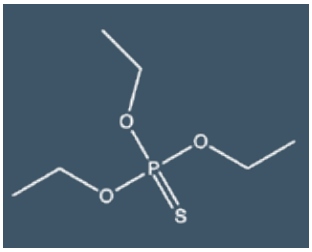
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	112-27-6	Methanol-P&T	S-3703



Triethylene glycol dimethacrylate

Molecular Weight	286.324
Molecular Formula	$C_{14}H_{22}O_6$
Density	1.072 g/cm³
Boiling Point	155 °C

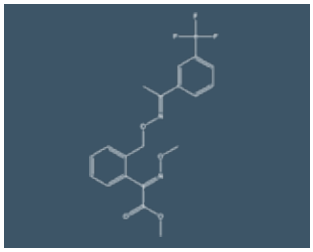
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-16-0	Methanol-P&T	S-3704



o,o,o-Triethylphosphorothioate

Molecular Weight	198.217
Molecular Formula	$C_6H_{15}O_3PS$
Density	1.11 g/cm³
Boiling Point	231 °C

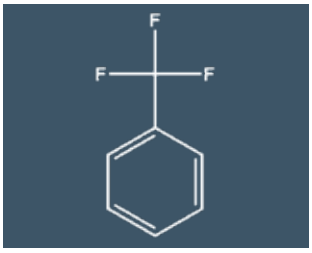
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126-68-1	Methanol	S-3705



Trifloxystrobin

Molecular Weight	408.4
Molecular Formula	$C_{20}H_{19}F_3N_2O_4$
Density	1.36 g/cm³
Melting Point	73 °C
Boiling Point	312 °C

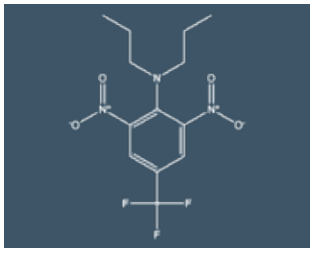
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	141517-21-7	Acetonitrile	S-4836



alpha, alpha, alpha-Trifluorotoluene

Molecular Weight	146.112
Molecular Formula	$C_7H_5F_3$
Density	1.181 g/cm³
Melting Point	-29 °C
Boiling Point	102 °C

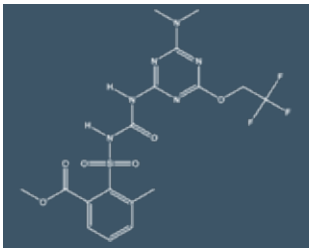
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	98-08-8	Methanol-P&T	S-3710



Trifluralin

Molecular Weight	335.283
Molecular Formula	$C_{13}H_{16}F_3N_3O_4$
Density	1.36 g/cm³
Melting Point	49 °C
Boiling Point	139 to 140 °C

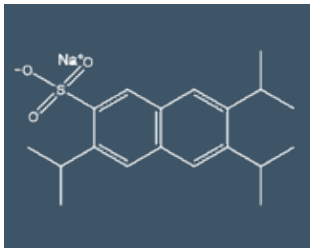
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1582-09-8	Methanol	S-3715



Triflusulfuron-methyl

Molecular Weight	492.43
Molecular Formula	$C_{17}H_{19}F_3N_6O_6S$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126535-15-7	Acetonitrile	S-3929-ACN



Triisopropylnaphthalene-sulfonic acid sodium salt

Molecular Weight	356.45
Molecular Formula	$C_{19}H_{25}NaO_3S$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1323-19-9	Methanol-P&T	S-3881

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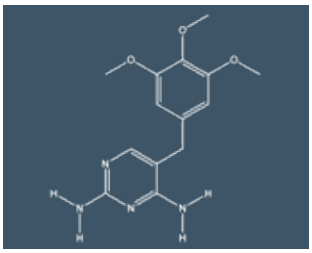
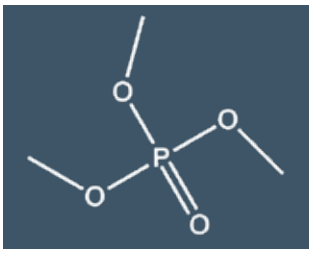
Volume for all Organic Singles is 1 mL



Trimethoprim

Molecular Weight	290.323
Molecular Formula	$C_{14}H_{18}N_4O_3$
Melting Point	200 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	738-70-5	Methanol-P&T	S-4594



Trimethyl phosphate

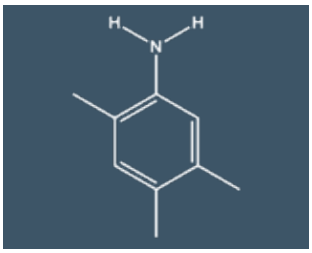
Molecular Weight	140.075
Molecular Formula	$C_3H_9O_4P$
Density	1.214 g/cm³
Melting Point	-46 °C
Boiling Point	107 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	512-56-1	Methanol-P&T	S-3740

Trimethylamine

Molecular Weight	59.112
Molecular Formula	C_3H_9N
Density	0.671 g/cm³
Melting Point	-117 °C
Boiling Point	30 °C

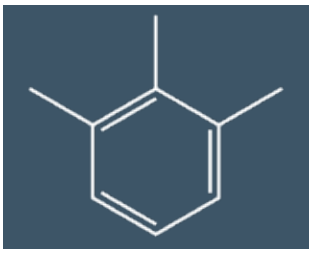
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-50-3	Methanol-P&T	S-3716



2,4,5-Trimethylaniline

Molecular Weight	135.21
Molecular Formula	$C_9H_{13}N$
Density	0.957 g/cm³
Melting Point	68 °C
Boiling Point	235 °C

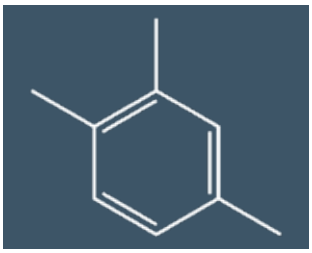
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	137-17-7	Methanol-P&T	S-3718



1,2,3-Trimethylbenzene

Molecular Weight	120.195
Molecular Formula	C_9H_{12}
Density	0.89 g/cm³
Melting Point	-25 °C
Boiling Point	176 °C

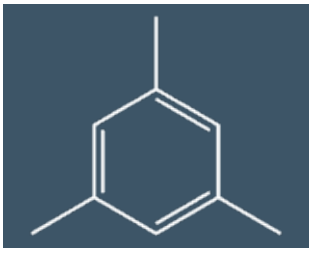
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	526-73-8	Methanol-P&T	S-3717



1,2,4-Trimethylbenzene

Molecular Weight	120.195
Molecular Formula	C_9H_{12}
Density	0.88 g/cm³
Melting Point	-44 °C
Boiling Point	169 °C

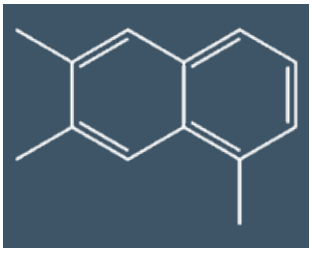
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-63-6	Methanol-P&T	S-3720



1,3,5-Trimethylbenzene

Molecular Weight	120.195
Molecular Formula	C_9H_{12}
Density	0.86 g/cm³
Melting Point	-45 °C
Boiling Point	165 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-67-8	Methanol-P&T	S-3725

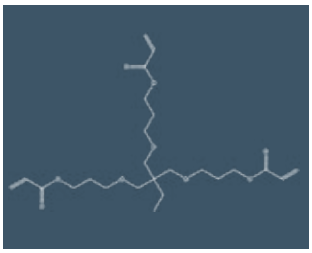


2,3,5-Trimethylnaphthalene

Molecular Weight	170.255
Molecular Formula	$C_{13}H_{14}$
Density	1.007 g/cm³
Boiling Point	285 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2245-38-7	Methanol-P&T	S-3728

Volume for all Organic Singles is 1 mL



Trimethylolpropane propoxylate triacrylate

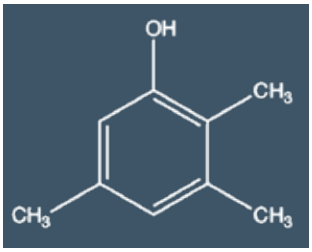
Molecular Weight	470.559
Molecular Formula	$C_{24}H_{38}O_9$

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	53879-54-2	Methanol-P&T	S-4107

2,2,4-Trimethylpentane

Molecular Weight	114.232
Molecular Formula	C_8H_{18}
Density	0.69 g/cm^3
Melting Point	-107 °C
Boiling Point	99 °C

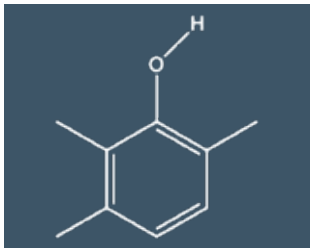
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	540-84-1	Methanol-P&T	S-3730



2,3,5-Trimethylphenol

Molecular Weight	136.194
Molecular Formula	$C_9H_{12}O$
Melting Point	94 °C
Boiling Point	230 °C

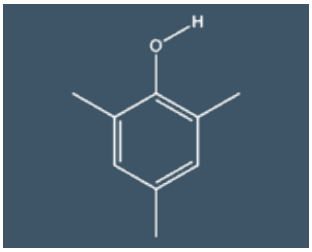
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	697-82-5	Methanol-P&T	S-3733



2,3,6-Trimethylphenol

Molecular Weight	136.194
Molecular Formula	$C_9H_{12}O$
Melting Point	58 °C
Boiling Point	226 °C

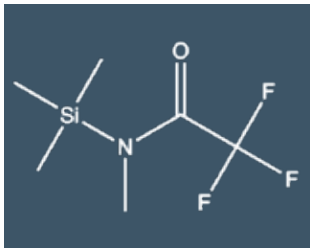
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2416-94-6	Methanol	S-4764



2,4,6-Trimethylphenol

Molecular Weight	136.194
Molecular Formula	$C_9H_{12}O$
Melting Point	73 °C
Boiling Point	220 °C

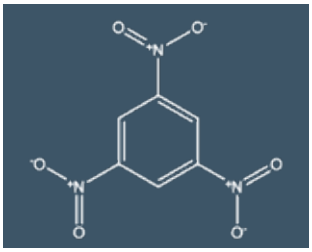
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	527-60-6	Methanol-P&T	S-3735



n-Trimethylsilyl-n-methyl trifluoroacetamide (MSTFA)

Molecular Weight	199.248
Molecular Formula	$C_6H_{12}F_3NOSi$

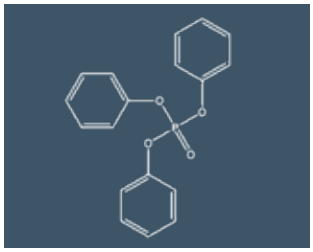
Concentration	CAS #	Matrix	Part #
5.2 mL	24589-78-4	N/A	NEAT-4419



1,3,5-Trinitrobenzene

Molecular Weight	213.105
Molecular Formula	$C_6H_3N_3O_6$
Density	1.688 g/cm^3
Melting Point	121 °C
Boiling Point	315 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	99-35-4	Methanol-P&T	S-3760



Triphenyl phosphate

Molecular Weight	326.288
Molecular Formula	$C_{18}H_{15}O_4P$
Density	1.18 g/cm^3
Boiling Point	370 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	115-86-6	Methanol-P&T	S-3765

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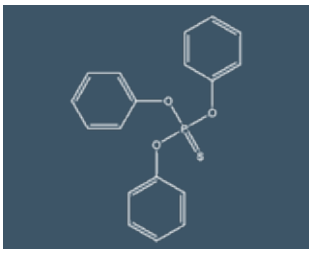
Volume for all Organic Singles is 1 mL



Triphenyl phosphorothionate

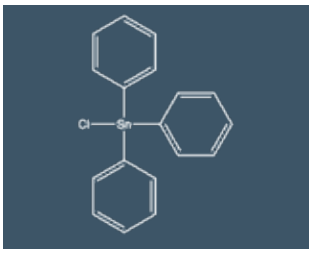
Molecular Weight	342.349
Molecular Formula	$C_{18}H_{15}O_3PS$
Density	1.3 g/cm^3
Boiling Point	423 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	597-82-0	Methanol	S-6040

Triphenylene

Molecular Weight	228.294
Molecular Formula	$C_{18}H_{12}$

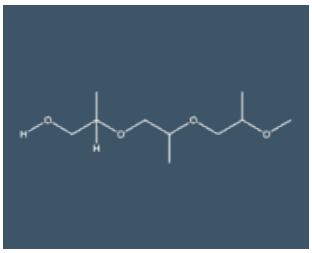
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	217-59-4	Methylene Chloride	S-3764



Triphenyltin chloride

Molecular Weight	385.478
Molecular Formula	$C_{18}H_{15}ClSn$
Melting Point	108 °C
Boiling Point	240 °C

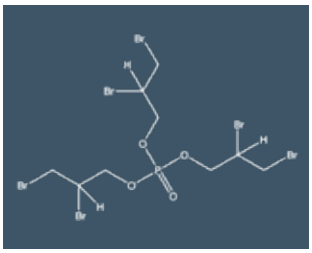
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	639-58-7	Methanol	S-4642



Tripropylene glycol

Molecular Weight	192.25
Density	1.021 g/cm^3
Boiling Point	273 °C

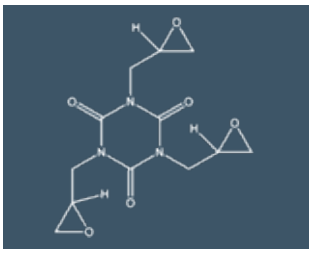
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	24800-44-0	Methanol-P&T	S-3766



Tris(2,3-dibromopropyl) phosphate

Molecular Weight	697.613
Molecular Formula	$C_9H_{15}Br_6O_4P$
Density	2.27 g/cm^3
Melting Point	6 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	126-72-7	Methylene Chloride	S-3773



Tris(2,3-Epoxypropyl) isocyanurate

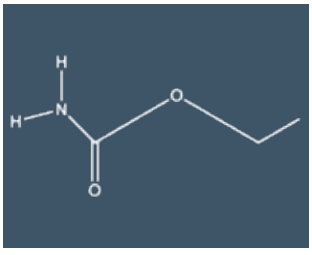
Molecular Weight	297.267
Molecular Formula	$C_{12}H_{15}N_3O_6$
Melting Point	95 °C
Boiling Point	501 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2451-62-9	HPLC Acetone	S-5930

n-Undecane

Molecular Weight	156.313
Molecular Formula	$C_{11}H_{24}$
Melting Point	25 °C
Boiling Point	196 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1120-21-4	Methanol-P&T	S-3780

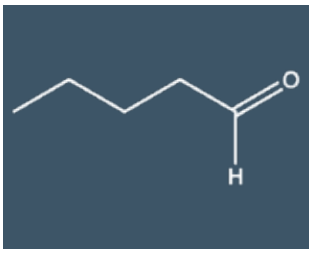


Urethane

Molecular Weight	89.094
Molecular Formula	$C_3H_7NO_2$
Density	0.986 g/cm^3
Melting Point	49 °C
Boiling Point	185 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51-79-6	Methanol-P&T	S-1926
			S-3785

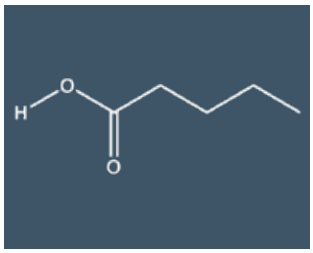
Volume for all Organic Singles is 1 mL



Valeraldehyde

Molecular Weight	86.134
Molecular Formula	$C_5H_{10}O$
Density	0.811 g/cm^3
Melting Point	-92 °C
Boiling Point	103 °C

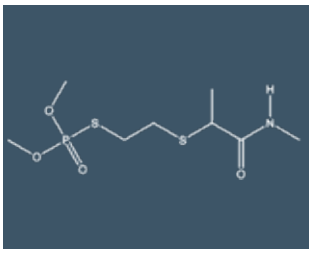
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	110-62-3	Methanol-P&T	S-3788



Valeric acid

Molecular Weight	102.133
Molecular Formula	$C_5H_{10}O_2$
Density	0.939 g/cm^3
Melting Point	-34 °C
Boiling Point	186 to 187 °C

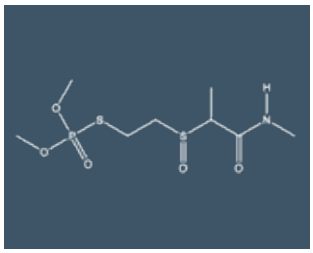
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	109-52-4	DI Water	S-3787



Vamidothion

Molecular Weight	287.329
Molecular Formula	$C_8H_{18}NO_4PS_2$
Melting Point	43 °C

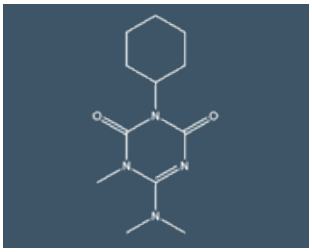
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	2275-23-2	Acetonitrile	S-4695-ACN
		Methanol	S-4695



Vamidothion-sulfoxide

Molecular Weight	303.328
Molecular Formula	$C_8H_{18}NO_5PS_2$

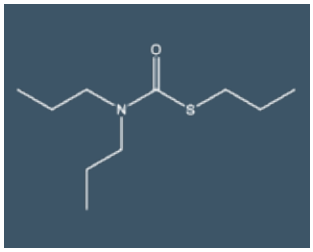
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	20300-00-9	HPLC Acetonitrile	S-5931



Velpar

Molecular Weight	252.318
Molecular Formula	$C_{12}H_{20}N_4O_2$
Density	1.25 g/cm^3
Melting Point	117 °C

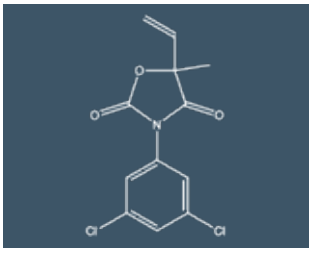
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	51235-04-2	Methanol	S-3790



Vernolate

Molecular Weight	203.344
Molecular Formula	$C_{10}H_{21}NOS$
Density	0.952 g/cm^3
Boiling Point	150 °C

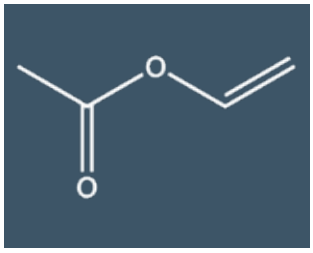
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1929-77-7	Methanol	S-3795



Vinclozolin

Molecular Weight	286.108
Molecular Formula	$C_{12}H_9Cl_2NO_3$
Density	1.51 g/cm^3
Melting Point	108 °C
Boiling Point	131 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	50471-44-8	Acetone	S-3796-AC
		Methanol	S-3796



Vinyl acetate

Molecular Weight	86.09
Molecular Formula	$C_4H_6O_2$
Density	0.93 g/cm^3
Melting Point	-100 °C
Boiling Point	72 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-05-4	Methanol-P&T	S-3800

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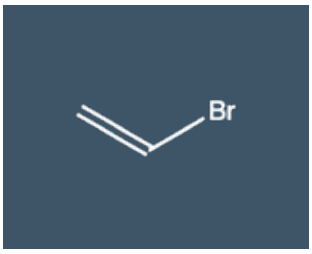
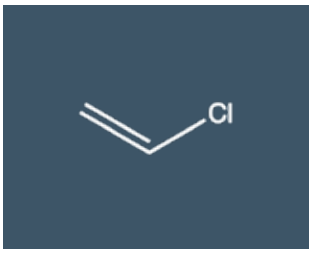
Volume for all Organic Singles is 1 mL



Vinyl bromide

Molecular Weight	106.95
Molecular Formula	C_2H_3Br
Density	1.525 g/cm^3
Melting Point	-138 °C
Boiling Point	16 °C

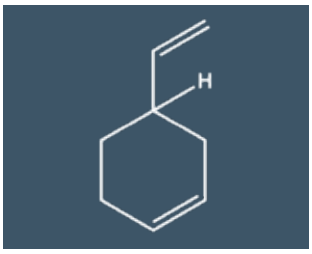
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	593-60-2	Methanol-P&T	S-4049



Vinyl chloride

Molecular Weight	62.496
Molecular Formula	C_2H_3Cl
Density	1.41 g/cm^3
Melting Point	-154 °C
Boiling Point	-13 °C

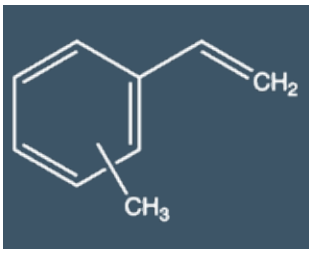
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	75-01-4	Methanol-P&T	S-3805



4-Vinyl-1-cyclohexene

Molecular Weight	108.184
Molecular Formula	C_8H_{12}
Density	0.829 g/cm^3
Melting Point	-109 °C
Boiling Point	130 °C

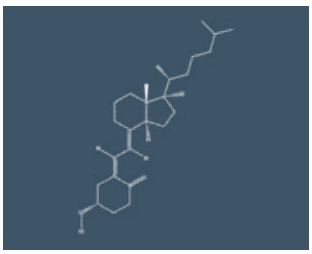
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	100-40-3	Methanol-P&T	S-3813



Vinyltoluene

Molecular Weight	118.179
Molecular Formula	C_9H_{10}
Density	0.91 g/cm^3
Boiling Point	172 °C

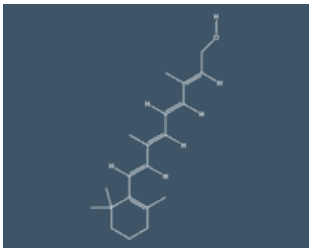
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	25013-15-4	Methanol-P&T	S-3810



Vitamin D3

Molecular Weight	384.648
Molecular Formula	$C_{27}H_{44}O$
Melting Point	85 °C

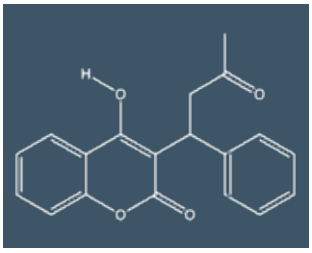
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	67-97-0	Methanol-P&T	S-3815



Vitamin-A-alcohol

Molecular Weight	286.459
Molecular Formula	$C_{20}H_{30}O$
Density	1.04 g/cm^3
Melting Point	64 °C
Boiling Point	122 °C

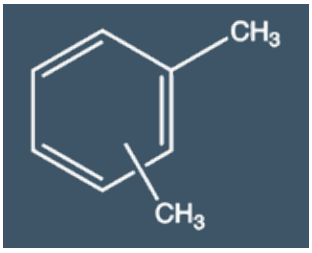
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	68-26-8	Toluene	S-3820



Warfarin

Molecular Weight	308.333
Molecular Formula	$C_{19}H_{16}O_4$
Melting Point	161 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	81-81-2	Methanol-P&T	S-3825

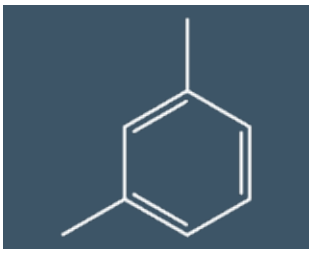


Xylenes (mixed)

Molecular Weight	318.504
Molecular Formula	$C_{24}H_{30}$
Density	0.864 g/cm^3

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	1330-20-7	Methanol-P&T	S-3845

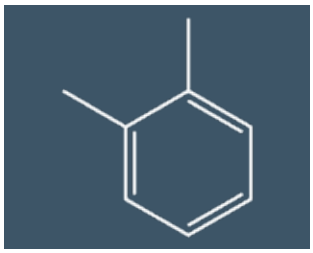
Volume for all Organic Singles is 1 mL



m-Xylene

Molecular Weight	106.168
Molecular Formula	C_8H_{10}
Density	0.86 g/cm^3
Melting Point	-48 °C
Boiling Point	139 °C

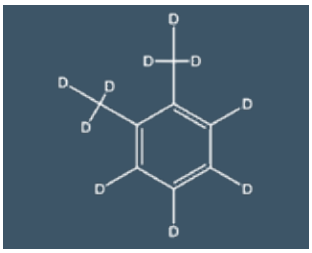
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	108-38-3	Methanol-P&T	S-3830



o-Xylene

Molecular Weight	106.168
Molecular Formula	C_8H_{10}
Density	0.88 g/cm^3
Melting Point	-25 °C
Boiling Point	144 °C

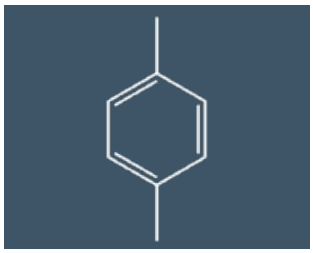
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	95-47-6	Methanol-P&T	S-3835



o-Xylene-d$_{10}$

Molecular Weight	116.229
Molecular Formula	C_8H_{10}
Density	0.953 g/cm^3
Melting Point	-25 °C
Boiling Point	142 °C

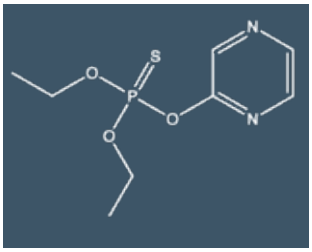
Concentration	CAS #	Matrix	Part #
1,000 µg/mL	56004-61-6	Methanol-P&T	S-3888



p-Xylene

Molecular Weight	106.168
Molecular Formula	C_8H_{10}
Density	0.861 g/cm^3
Melting Point	13 °C
Boiling Point	138 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	106-42-3	Methanol-P&T	S-3840



Zinophos

Molecular Weight	248.237
Molecular Formula	$C_8H_{13}N_2O_3PS$
Density	1.204 g/cm^3
Melting Point	-2 °C
Boiling Point	80 °C

Concentration	CAS #	Matrix	Part #
1,000 µg/mL	297-97-2	Methanol-P&T	S-3850

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section 2

Volatiles

Single & Multi-Component Standards for GC & GC/MS

US EPA Methods

US EPA Volatiles - Method 500 Series

Method 502.1 is a general analytical method for the monitoring of halogenated, portable VOCs in drinking water and raw water sources by GC with a Hall Detector.

Method 502.2 is a general analytical method for the monitoring of halogenated, purgeable VOCs in drinking water and raw water sources by GC megabore capillary column techniques and Hall and Photoionization Detectors (PID).

Method 504 is an analytical method for the monitoring of 1,2-Dibromomethane (EDB), 1,2-Dibromo-3-Chloropropane (DBCP), and 1,2,3-Trichloropropane (123TCP) in water by micro-extraction and either GC/ECD or GC/MS techniques.

Method 524.3 is a GC/MS method for the analysis of purgeable VOCs in finished drinking water. Analytes added to Methanol 524.3 in Revision 4 are supplied in a 24-component mix.

Method 551 is an analytical method for the determination of chlorinated disinfectant by-products, chlorinated solvents and halogenated pesticides and herbicides in drinking water and raw source water using MTBE extraction and GC/ECD techniques.

US EPA Volatiles - Method 600 Series

Method 601 is a general analytical method for the monitoring of halogenated VOCs in municipal and industrial wastewater by GC with a Hall Detector.

Method 602 is a general analytical method for the monitoring of halogenated aromatic compounds in municipal and industrial wastewater by GC/PID.

Method 603 is a general analytical method for the separation of acrolein and acrylonitrile in municipal and industrial wastewater by GC/FID.

Method 624 is a general analytical method for the monitoring of VOCs in municipal and industrial wastewater by GC/MS.

US EPA Volatiles - Method 8000 Series

Method 8011 is an analytical method for the monitoring of EDB and DBCP in drinking water and ground water by GC/MS.

Method 8015 is a general analytical method for the monitoring of certain non-halogenated VOCs and SVOCs by GC/FID.

Method 8021 is a general analytical method for the monitoring of VOCs by GC megabore capillary column techniques and Hall and Photoionization Detectors (PID).

Method 8260 is a general analytical method for the monitoring of VOCs by GC/MS.

CLP Series

The US EPA retains analytical services through the Contract Laboratory Program (CLP). The CLP follows detailed SOPs derived from EPA methods and SW-846. The CLP Volatile Organic Analysis Method is an analytical method for the analysis of aqueous or solid samples for VOCs by GC/MS.

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Methods 502.1, 502.2, 601, 624, 8021, 8260, and CLP Series (see page 169 for details).

Purgeable Gases, Mix B in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Bromomethane	74-83-9	Dichlorodifluoromethane	75-71-8
Chloroethane	75-00-3	Trichlorofluoromethane	75-69-4
Chloromethane	74-87-3	Vinyl chloride	75-01-4

Concentration	Part #	Concentration	Part #
200 µg/mL	5022-B	2,000 µg/mL	5022-BH

Applicable Methods: US EPA Method 502.2 (see page 169 for details).

Trihalomethanes in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Bromodichloromethane	75-27-4	Chloroform	67-66-3
Bromoform	75-25-2	Dibromochloromethane	124-48-1

Concentration	Part #	Concentration	Part #
200 µg/mL	THM-X	2,000 µg/mL	THM-XH

Applicable Methods: US EPA Methods 502.2 and 8021 (see page 169 for details).

Internal Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
2-Bromo-1-chloropropane	3017-95-6	Fluorobenzene	462-06-6

Concentration	Part #
1,000 µg/mL	5022-I

Applicable Methods: US EPA Methods 504 and 8011 (see page 169 for details).

EDB/DBCP Analytes Mix (High Level) in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	1,2-Dibromoethane (EDB)	106-93-4

Concentration	Part #
2,000 µg/mL	504-AH

Applicable Methods: US EPA Method 504 (see page 169 for details).

Method 504.1 Analytes Mix (High Level) in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	1,2,3-Trichloropropane	96-18-4
1,2-Dibromoethane (EDB)	106-93-4		

Concentration	Part #
2,000 µg/mL	5041-AH

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Methods 502.2, 524 and 8260 (see page 169 for details).

Analyte Mix C (High Level) in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Bromobenzene	108-86-1	1,2-Dichlorobenzene	95-50-1	Isopropylbenzene	98-82-8
Bromochloromethane	74-97-5	1,3-Dichlorobenzene	541-73-1	Styrene	100-42-5
Bromodichloromethane	75-27-4	cis-1,2-Dichloroethene	156-59-2	1,1,1,2-Tetrachloroethane	630-20-6
n-Butylbenzene	104-51-8	1,3-Dichloropropane	142-28-9	1,1,1-Trichloroethane	71-55-6
2-Chlorotoluene	95-49-8	1,1-Dichloropropene	563-58-6	1,2,3-Trichloropropane	96-18-4
4-Chlorotoluene	106-43-4	cis-1,3-Dichloropropene	10061-01-5	p-Xylene	106-42-3
1,2-Dibromoethane	106-93-4	trans-1,3-Dichloropropene	10061-02-6		
Dibromomethane	74-95-3	Ethylbenzene	100-41-4		

Concentration	Part #
2,000 µg/mL	5242-CH

Applicable Methods: US EPA Method 524.3 (see page 169 for details).

Fortification Solution in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
4-Bromofluorobenzene	460-00-4	Fluorobenzene	462-06-6
1,2-Dichlorobenzene-d_4	2199-69-1		

Concentration	Part #
1,000 µg/mL	5242-F

Applicable Methods: US EPA Method 524.3 (see page 169 for details).

Internal Standard in Methanol-P&T	
Component	**CAS #**
Fluorobenzene	462-06-6

Concentration	Part #
2,000 µg/mL	5242-I

Internal/Alternate Internal Standards

Additional Internal and Alternate Internal Standards are available for US EPA Method 502.2. Parts include S-935, S-580, S-1365, and S-2040 (see pages 9-167 for individual component details).

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Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Methods 502.2, 524, 8021, and 8260 (see page 169 for details).

Volatile Organics Combination Mix in Methanol-P&T

Components	CAS #	Components	CAS #	Components	CAS #
Benzene	71-43-2	1,2-Dichlorobenzene	95-50-1	Naphthalene	91-20-3
Bromobenzene	108-86-1	1,3-Dichlorobenzene	541-73-1	n-Propylbenzene	103-65-1
Bromochloromethane	74-97-5	1,4-Dichlorobenzene	106-46-7	Styrene	100-42-5
Bromodichloromethane	75-27-4	Dichlorodifluoromethane *	75-71-8	1,1,1,2-Tetrachloroethane	630-20-6
Bromoform	75-25-2	1,1-Dichloroethane	75-34-3	1,1,2,2-Tetrachloroethane	79-34-5
Bromomethane *	74-83-9	1,2-Dichloroethane	107-06-2	Tetrachloroethene	127-18-4
n-Butylbenzene	104-51-8	1,1-Dichloroethene	75-35-4	Toluene	108-88-3
sec-Butylbenzene	135-98-8	cis-1,2-Dichloroethene	156-59-2	1,2,3-Trichlorobenzene	87-61-6
tert-Butylbenzene	98-06-6	trans-1,2-Dichloroethene	156-60-5	1,2,4-Trichlorobenzene	120-82-1
Carbon tetrachloride	56-23-5	1,2-Dichloropropane	78-87-5	1,1,1-Trichloroethane	71-55-6
Chlorobenzene	108-90-7	1,3-Dichloropropane	142-28-9	1,1,2-Trichloroethane	79-00-5
Chloroethane *	75-00-3	2,2-Dichloropropane	594-20-7	Trichloroethene	79-01-6
Chloroform	67-66-3	1,1-Dichloropropene	563-58-6	Trichlorofluoromethane *	75-69-4
Chloromethane *	74-87-3	cis-1,3-Dichloropropene	10061-01-5	1,2,3-Trichloropropane	96-18-4
2-Chlorotoluene	95-49-8	trans-1,3-Dichloropropene	10061-02-6	1,2,4-Trimethylbenzene	95-63-6
4-Chlorotoluene	106-43-4	Ethylbenzene	100-41-4	1,3,5-Trimethylbenzene	108-67-8
1,2-Dibromo-3-chloropropane	96-12-8	Hexachlorobutadiene	87-68-3	Vinyl chloride *	75-01-4
Dibromochloromethane	124-48-1	Isopropylbenzene	98-82-8	m-Xylene **	108-38-3
1,2-Dibromoethane	106-93-4	p-Isopropyltoluene	99-87-6	o-Xylene	95-47-6
Dibromomethane	74-95-3	Methylene chloride	75-09-2	p-Xylene **	106-42-3

Concentration	Part #
200 µg/mL	5242-VCX-200

Concentration	Part #
200 µg/mL	5242-VCX-200G

Concentration	Part #
2,000 µg/mL	5242-VCX

Concentration	Part #
2,000 µg/mL	HICAL-VOC

* Component is only included in part # 5242-VCX-200G and are only applicable to method 524.

** NOTE: HICAL-VOC components m-Xylene and p-Xylene are at 1,000 µg/mL concentration and are applicable only for methods 502.2 and 524.

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 524.3 (see page 169 for details).

Method 524.2 Revision 4 Mix in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Acetone	67-64-1	1,1-Dichloropropanone	513-88-2	Methyl acrylate	96-33-3
Acrylonitrile	107-13-1	Ether	60-29-7	Methyl methacrylate	80-62-6
Allyl chloride	107-05-1	Ethyl methacrylate	97-63-2	Methyl tertiary-butyl ether	1634-04-4
2-Butanone	78-93-3	Hexachloroethane	67-72-1	Nitrobenzene	98-95-3
Carbon disulfide	75-15-0	2-Hexanone	591-78-6	2-Nitropropane	79-46-9
Chloroacetonitrile	107-14-2	Iodomethane	74-88-4	Pentachloroethane	76-01-7
1-Chlorobutane	109-69-3	Methacrylonitrile	126-98-7	Propionitrile	107-12-0
trans-1,4-Dichloro-2-butene	110-57-6	4-Methyl-2-pentanone	108-10-1	Tetrahydrofuran	109-99-9

Concentration	Part #
200 µg/mL	5242-R4200

Concentration	Part #
2,000 µg/mL	5242-R4

Applicable Methods: US EPA Method 524.3 (see page 169 for details).

Surrogate Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
4-Bromofluorobenzene	460-00-4	1,2-Dichlorobenzene-d_4	2199-69-1

Concentration	Part #
1,000 µg/mL	5242-S

UCMR-3

This GC/MS standard covers the nine volatile organic compounds included in the Unregulated Contaminant Monitoring Rule 3 (UCMR 3), which requires monitoring of all public drinking water systems with 10,000 or more customers.

Applicable Methods: US EPA Method 524.3 (see page 169 for details).

UCMR-3 in Methanol-P&T					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Bromochloromethane	74-97-5	600 µg/mL	Chloromethane	74-87-3	2,000 µg/mL
Bromomethane	74-83-9	2,000 µg/mL	1,1-Dichloroethane	75-34-3	300 µg/mL
1,3-Butadiene	106-99-0	1,000 µg/mL	n-Propylbenzene	103-65-1	300 µg/mL
sec-Butylbenzene	135-98-8	400 µg/mL	1,2,3-Trichloropropane	96-18-4	300 µg/mL
Chlorodifluoromethane	75-45-6	800 µg/mL			

Part #
UCMR-3

524.3 Internal Standard Singles

Additional Organic Singles are available for
US EPA Method 524.3. Parts include S-815 and S-1310
(see pages 9-167 for individual component details).

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 551 (see page 169 for details).

Chlorinated Disinfectant By-Products Mix in Acetone					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Bromodichloromethane	75-27-4	1,2-Dibromo-3-chloropropane	96-12-8	Dichloroacetonitrile	3018-12-0
Bromoform	75-25-2	Dibromoacetonitrile	3252-43-5	Tetrachloroethene	127-18-4
Carbon tetrachloride	56-23-5	Dibromochloromethane	124-48-1	Trichloroacetonitrile	545-06-2
Chloroform	67-66-3	1,2-Dibromoethane (EDB)	106-93-4	1,1,1-Trichloroethane	71-55-6
Chloropicrin	76-06-2	1,1-Dichloroacetone	513-88-2	Trichloroethene	79-01-6

Concentration	Part #
2,000 µg/mL	5511-A

Applicable Methods: US EPA Method 551 (see page 169 for details).

Internal Standard in Acetone	
Component	**CAS #**
1-Bromo-4-fluorobenzene	460-00-4

Concentration	Part #
10,000 µg/mL	5511-I

Applicable Methods: US EPA Method 551 (see page 169 for details).

Laboratory Performance Check Standard in Methyl Tertiary-Butyl Ether					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Alachlor	15972-60-8	83 µg/mL	Endrin	72-20-8	30 µg/mL
gamma-BHC (Lindane)	58-89-9	0.2 µg/mL	Hexachlorocyclopentadiene	77-47-4	20 µg/mL
Bromacil	314-40-9	83 µg/mL	Trichloroethene	79-01-6	30 µg/mL
Bromodichloromethane	75-27-4	30 µg/mL			

Part #
5511-PC

Applicable Methods: US EPA Method 551 (see 169 for details).

Surrogate Standard in Methanol	
Component	**CAS #**
Decafluorobiphenyl	434-90-2

Concentration	Part #
1,000 µg/mL	S-1103

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 601 (see page 169 for details).

Volatile Organics Combination Mix in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Bromodichloromethane	75-27-4	1,3-Dichlorobenzene	541-73-1	trans-1,3-Dichloropropene	10061-02-6
Bromoform	75-25-2	1,4-Dichlorobenzene	106-46-7	Methylene chloride	75-09-2
Carbon tetrachloride	56-23-5	1,1-Dichloroethane	75-34-3	1,1,2,2-Tetrachloroethane	79-34-5
Chlorobenzene	108-90-7	1,2-Dichloroethane	107-06-2	Tetrachloroethene	127-18-4
2-Chloroethyl vinyl ether	110-75-8	1,1-Dichloroethene	75-35-4	1,1,1-Trichloroethane	71-55-6
Chloroform	67-66-3	trans-1,2-Dichloroethene	156-60-5	1,1,2-Trichloroethane	79-00-5
Dibromochloromethane	124-48-1	1,2-Dichloropropane	78-87-5	Trichloroethene	79-01-6
1,2-Dichlorobenzene	95-50-1	cis-1,3-Dichloropropene	10061-01-5		

Concentration	Part #
200 µg/mL	601-A

Applicable Methods: US EPA Method 602 (see page 169 for details).

BTEX Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	m-Xylene	108-38-3
Ethylbenzene	100-41-4	o-Xylene	95-47-6
Toluene	108-88-3	p-Xylene	106-42-3

Concentration	Part #	Concentration	Part #
200 µg/mL	BTEX	2,000 µg/mL	BTEX-H

Applicable Methods: US EPA Method 602 (see page 169 for details).

Alternate BTEX Standard in Methanol-P&T					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Benzene	71-43-2	2,000 µg/mL	m-Xylene	108-38-3	1,000 µg/mL
Ethylbenzene	100-41-4	2,000 µg/mL	o-Xylene	95-47-6	2,000 µg/mL
Toluene	108-88-3	2,000 µg/mL	p-Xylene	106-42-3	1,000 µg/mL

Part #
BTEX-2-1H

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Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 602 (see page 169 for details).

Purgeable Aromatics for Gasoline Identification in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	1,4-Dichlorobenzene	106-46-7	m-Xylene	108-38-3
Chlorobenzene	108-90-7	Ethylbenzene	100-41-4	o-Xylene	95-47-6
1,2-Dichlorobenzene	95-50-1	Methyl tertiary-butyl ether	1634-04-4	p-Xylene	106-42-3
1,3-Dichlorobenzene	541-73-1	Toluene	108-88-3		

Concentration	Part #
2,000 µg/mL	P-GAS

Applicable Methods: US EPA Method 603 (see page 169 for details).

Acrolein and Acrylonitrile in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Acrolein	107-02-8	Acrylonitrile	107-13-1

Concentration	Part #
2,000 µg/mL	603-XM

Applicable Methods: US EPA Method 624 (see page 169 for details).

Volatile Organics Combination Analyte Mix in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	1,3-Dichlorobenzene	541-73-1	Ethylbenzene	100-41-4
Bromodichloromethane	75-27-4	1,4-Dichlorobenzene	106-46-7	Methylene chloride	75-09-2
Bromoform	75-25-2	1,1-Dichloroethane	75-34-3	1,1,2,2-Tetrachloroethane	79-34-5
Carbon tetrachloride	56-23-5	1,2-Dichloroethane	107-06-2	Tetrachloroethene	127-18-4
2-Chloroethyl vinyl ether	110-75-8	1,1-Dichloroethene	75-35-4	Toluene	108-88-3
Chlorobenzene	108-90-7	trans-1,2-Dichloroethene	156-60-5	1,1,1-Trichloroethane	71-55-6
Chloroform	67-66-3	1,2-Dichloropropane	78-87-5	1,1,2-Trichloroethane	79-00-5
Dibromochloromethane	124-48-1	cis-1,3-Dichloropropene	10061-01-5	Trichloroethene	79-01-6
1,2-Dichlorobenzene	95-50-1	trans-1,3-Dichloropropene	10061-02-6		

Concentration	Part #
2,000 µg/mL	624-A

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 624 (see page 169 for details).

Purgeable Gases, Mix B in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Bromomethane	74-83-9	Trichlorofluoromethane	75-69-4
Chloroethane	75-00-3	Vinyl chloride	75-01-4
Chloromethane	74-87-3		

Concentration	Part #	Concentration	Part #
200 µg/mL	624-B	2,000 µg/mL	624-BH

Applicable Methods: US EPA Method 624 (see page 169 for details).

Volatiles Mix C in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	trans-1,3-Dichloropropene	10061-02-6
Bromodichloromethane	75-27-4	Ethylbenzene	100-41-4
2-Chloroethyl vinyl ether	110-75-8	Toluene	108-88-3
cis-1,3-Dichloropropene	10061-01-5	1,1,1-Trichloroethane	71-55-6

Concentration	Part #	Concentration	Part #
200 µg/mL	624-C	2,000 µg/mL	624-CH

Applicable Methods: US EPA Method 624 (see page 169 for details).

Volatiles Mix D in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
1,2-Dichlorobenzene	95-50-1	1,4-Dichlorobenzene	106-46-7
1,3-Dichlorobenzene	541-73-1		

Concentration	Part #	Concentration	Part #
200 µg/mL	624-D	2,000 µg/mL	624-DH

Applicable Methods: US EPA Method 624 (see page 169 for details).

Internal Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
2-Bromo-1-chloropropane	3017-95-6	1,4-Difluorobenzene	540-36-3
Bromochloromethane	74-97-5		

Concentration	Part #
1,000 µg/mL	624-I

624 Alternate Internal/Surrogate Standard Singles

Additional Alternate Internal/Surrogate Standards are available for US EPA Method 624. Parts include S-550 and S-1385 (see pages 9-167 for individual component details).

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Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 624 (see page 169 for details).

Surrogate Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
4-Bromofluorobenzene	460-00-4	Pentafluorobenzene	363-72-4
Fluorobenzene	462-06-6		

Concentration	Part #
1,000 µg/mL	624-S

Applicable Methods: US EPA Method 8015 (see page 169 for details).

Alcohols Mix in DI Water			
Components	**CAS #**	**Components**	**CAS #**
Allyl alcohol	107-18-6	Methanol	67-56-1
1-Butanol	71-36-3	2-Methyl-1-propanol	78-83-1
tert-Butyl alcohol	75-65-0	1-Propanol	71-23-8
Ethanol	64-17-5	2-Propanol	67-63-0
Ethylene glycol	107-21-1		

Concentration	Part #
2,000 µg/mL	8015B-A

Applicable Methods: US EPA Method 8015 (see page 169 for details).

Internal Standard for GC/FID in DI Water			
Components	**CAS #**	**Components**	**CAS #**
2-Chloroacrylonitrile	920-37-6	1,1,1,3,3,3-Hexafluoro-2-propanol	920-66-1
1,1,1,3,3,3-Hexafluoro-2-methyl-2-propanol	1515-14-6		

Concentration	Part #
5,000 µg/mL	8015B-I

Applicable Methods: US EPA Method 8015 (see page 169 for details).

8015-OX Mix in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
tert-Amyl methyl ether	994-05-8	2-Methyl-2-propanol	75-65-0
tert-Butyl ethyl ether	637-92-3	Methyl tertiary-butyl ether	1634-04-4
Isopropyl ether	108-20-3		

Concentration	Part #
2,000 µg/mL	8015-OX

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 8015 (see page 169 for details).

8015 Singles in Methanol-P&T			
Components	**CAS #**	**Concentration**	**Part #**
tert-Amyl alcohol	75-85-4	1,000 µg/mL	S-260
Triethylamine	121-44-8	1,000 µg/mL	S-3702

Applicable Methods: US EPA Method 8015 (see page 169 for details).

Diesel Range Organics Mix in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
n-Decane	124-18-5	n-Hexadecane	544-76-3
n-Docosane	629-97-0	n-Octacosane	630-02-4
n-Dodecane	112-40-3	n-Octadecane	593-45-3
n-Eicosane	112-95-8	n-Tetracosane	646-31-1
n-Hexacosane	630-01-3	n-Tetradecane	629-59-4

Concentration	Part #
1,000 µg/mL	DRO-1000

Applicable Methods: US EPA Method 8015 (see page 169 for details).

Gasoline Range Organics Mix in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4	2,2,4-Trimethylpentane	540-84-1
3-Methylpentane	96-14-0	m-Xylene	108-38-3
Naphthalene	91-20-3	o-Xylene	95-47-6
Toluene	108-88-3		

Concentration	Part #
1,000 µg/mL	GRO-1000

Applicable Methods: US EPA Method 8021 (see page 169 for details).

Mix A for GC/PID in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	Ethylbenzene	100-41-4
Chlorobenzene	108-90-7	Toluene	108-88-3
1,2-Dichlorobenzene	95-50-1	m-Xylene	108-38-3
1,3-Dichlorobenzene	541-73-1	o-Xylene	95-47-6
1,4-Dichlorobenzene	106-46-7	p-Xylene	106-42-3

Concentration	Part #
2,000 µg/mL	8020-A

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 8260 (see page 169 for details).

Volatile Organics Combination Mix in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	1,1-Dichloroethene	75-35-4	Tetrachloroethene	127-18-4
Bromodichloromethane	75-27-4	trans-1,2-Dichloroethene	156-60-5	Toluene	108-88-3
Bromoform	75-25-2	1,2-Dichloropropane	78-87-5	Trichloroethene	79-01-6
Carbon tetrachloride	56-23-5	cis-1,3-Dichloropropene	10061-01-5	1,1,1-Trichloroethane	71-55-6
Chlorobenzene	108-90-7	trans-1,3-Dichloropropene	10061-02-6	1,1,2-Trichloroethane	79-00-5
Chloroform	67-66-3	Ethylbenzene	100-41-4	m-Xylene	108-38-3
Dibromochloromethane	124-48-1	Methylene chloride	75-09-2	o-Xylene	95-47-6
1,1-Dichloroethane	75-34-3	Styrene	100-42-5	p-Xylene	106-42-3
1,2-Dichloroethane	107-06-2	1,1,2,2-Tetrachloroethane	79-34-5		

Concentration	Part #
2,000 µg/mL	8240-25

Applicable Methods: US EPA Method 8260 (see page 169 for details).

Alternate Internal Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Chlorobenzene-d_5	3114-55-4	Fluorobenzene	462-06-6
1,4-Dichlorobenzene-d_4	3855-82-1		

Concentration	Part #
2,000 µg/mL	8260A-I

Applicable Methods: US EPA Method 8260 (see page 169 for details).

Alternate Surrogate Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
4-Bromofluorobenzene	460-00-4	1,2-Dichloroethane-d_4	17060-07-0
Dibromofluoromethane	1868-53-7	Toluene-d_8	2037-26-5

Concentration	Part #
2,000 µg/mL	8260A-S

Applicable Methods: US EPA Method 8260 (see page 169 for details).

Internal Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Chlorobenzene-d_5	3114-55-4	1,4-Difluorobenzene	540-36-3
1,4-Dichlorobenzene-d_4	3855-82-1	Pentafluorobenzene	363-72-4

Concentration	Part #
2,000 µg/mL	8260-I

Volume for all Volatiles is 1 mL

Applicable Methods: US EPA Method 8260 (see page 169 for details).

Surrogate Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
4-Bromofluorobenzene	460-00-4	Toluene-d_8	2037-26-5
Dibromofluoromethane	1868-53-7		

Concentration	Part #
2,000 µg/mL	8260-S

"Long List" Appendix IX Compounds for 8260B

Applicable Methods: US EPA Method 8260B and CLP Series (see page 169 for details).

Mix E in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Acetone	67-64-1	2-Hexanone	591-78-6
2-Butanone	78-93-3	4-Methyl-2-pentanone	108-10-1
Carbon disulfide	75-15-0	Vinyl acetate	108-05-4
2-Chloroethyl vinyl ether	110-75-8		

Concentration	Part #
200 µg/mL	8260-E

Concentration	Part #
2,000 µg/mL	8260-EH

Applicable Methods: US EPA Method 8260B (see page 169 for details).

Ethylene Oxide Standard in Methanol-P&T	
Component	**CAS #**
Ethylene oxide	75-21-8

Concentration	Part #
1,000 µg/mL	S-1960

Applicable Methods: US EPA Method 8260B and CLP Series (see page 169 for details).

Vinyl Acetate Standard in Methanol-P&T	
Component	**CAS #**
Vinyl acetate	108-05-4

Concentration	Part #
1,000 µg/mL	S-3800

Volume for all Volatiles is 1 mL

"Long List" Appendix IX Compounds for 8260B (continued)

Applicable Methods: US EPA Method 8260B and CLP Series (see page 169 for details).

2-Chloroethyl Vinyl Ether Standard in Methanol-P&T	
Component	**CAS #**
2-Chloroethyl vinyl ether	110-75-8

Concentration	Part #
1,000 µg/mL	S-855

Applicable Methods: US EPA Method 8260B (see page 169 for details).

Chloroprene Standard in Methanol-P&T	
Component	**CAS #**
Chloroprene (2-chloro-1,3-butadiene)	126-99-8

Concentration	Part #	Concentration	Part #
1,000 µg/mL	S-930	2,000 µg/mL	S-930-2K

CLPV Series Volatiles

Applicable Methods: US EPA Methods 502.1, 502.2, 524, 624, 8260, and CLP Series (see page 169 for details).

Volatile Analyte Mix A in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Bromoform	75-25-2	1,1-Dichloroethane	75-34-3	Methylene Chloride	75-09-2
Carbon tetrachloride	56-23-5	1,2-Dichloroethane	107-06-2	1,1,2,2-Tetrachloroethane	79-34-5
Chlorobenzene	108-90-7	1,1-Dichloroethene	75-35-4	Tetrachloroethene	127-18-4
Chloroform	67-66-3	trans-1,2-Dichloroethene	156-60-5	1,1,2-Trichloroethane	79-00-5
Dibromochloromethane	124-48-1	1,2-Dichloropropane	78-87-5	Trichloroethene	79-01-6

Concentration	Part #	Concentration	Part #
200 µg/mL	CLPV-A	2,000 µg/mL	CLPV-AH

Applicable Methods: CLP Series (see page 169 for details).

Volatiles Mix D for CLP SOW 2/88 & 3/90 (High Level) in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Acetone	67-64-1	cis-1,2-Dichloroethene	156-59-2	Styrene	100-42-5
2-Butanone	78-93-3	2-Hexanone	591-78-6	Vinyl acetate	108-05-4
Carbon disulfide	75-15-0	4-Methyl-2-pentanone	108-10-1	p-Xylene	106-42-3

Concentration	Part #
2,000 µg/mL	CLPV-DH

Volume for all Volatiles is 1 mL

CLP Series Volatiles (continued)

Applicable Methods: CLP Series (see page 169 for details).

Volatiles Mix D (High Level) in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Acetone	67-64-1	2-Hexanone	591-78-6
2-Butanone	78-93-3	4-Methyl-2-pentanone	108-10-1
Carbon disulfide	75-15-0	Styrene	100-42-5
cis-1,2-Dichloroethene	156-59-2	p-Xylene	106-42-3

Concentration	Part #
2,000 µg/mL	CLPV-D90H

Applicable Methods: US EPA Method 8260 and CLP Series (see page 169 for details).

Volatile Matrix Spike in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	Toluene	108-88-3
Chlorobenzene	108-90-7	Trichloroethene	79-01-6
1,1-Dichloroethene	75-35-4		

Concentration	Part #
2,000 µg/mL	CLPV-MH

Applicable Methods: US EPA Method 8260 and CLP Series (see page 169 for details).

Surrogate Standard (High Level) in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
1-Bromo-4-fluorobenzene	460-00-4	Toluene-d_8	2037-26-5
1,2-Dichloroethane-d_4	17060-07-0		

Concentration	Part #
2,500 µg/mL	CLPV-SH

Applicable Methods: US EPA Methods 524.3, 8260, and CLP Series (see 169 for details).

GC/MS Tuning Standard in Methanol-P&T	
Component	**CAS #**
4-Bromofluorobenzene	460-00-4

Concentration	Part #	Concentration	Part #
1,000 µg/mL	S-550	2,500 µg/mL	CLPV-TH

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Volume for all Volatiles is 1 mL

CLP Series Volatiles (continued)

Applicable Methods: CLP Series (see page 169 for details).

Supplementary Volatiles Mix for CLP OLM 04.1 in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Methyl tertiary-butyl ether	1634-04-4	1,2-Dichlorobenzene	95-50-1	Methyl acetate	79-20-9
Cyclohexane	110-82-7	1,3-Dichlorobenzene	541-73-1	Methylcyclohexane	108-87-2
1,2-Dibromo-3-chloropropane	96-12-8	1,4-Dichlorobenzene	106-46-7	1,2,4-Trichlorobenzene	120-82-1
1,2-Dibromoethane	106-93-4	Isopropylbenzene	98-82-8	1,1,2-Trichlorotrifluoroethane	76-13-1

Concentration	Part #
200 µg/mL	CLPV-041X

Applicable Methods: CLP Series (see page 169 for details).

Volatiles Mix for CLM 04.1 in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Acetone	67-64-1	1,3-Dichlorobenzene	541-73-1	Methylene Chloride	75-09-2
Benzene	71-43-2	1,4-Dichlorobenzene	106-46-7	4-Methyl-2-pentanone	108-10-1
Bromodichloromethane	75-27-4	1,1-Dichloroethane	75-34-3	Styrene	100-42-5
Bromoform	75-25-2	1,2-Dichloroethane	107-06-2	1,1,2,2-Tetrachloroethane	79-34-5
2-Butanone	78-93-3	1,1-Dichloroethene	75-35-4	Tetrachloroethene	127-18-4
Methyl tertiary-butyl ether	1634-04-4	cis-1,2-Dichloroethene	156-59-2	Toluene	108-88-3
Carbon disulfide	75-15-0	trans-1,2-Dichloroethene	156-60-5	1,2,4-Trichlorobenzene	120-82-1
Carbon tetrachloride	56-23-5	1,2-Dichloropropane	78-87-5	1,1,1-Trichloroethane	71-55-6
Chlorobenzene	108-90-7	cis-1,3-Dichloropropene	10061-01-5	1,1,2-Trichloroethane	79-00-5
Chloroform	67-66-3	trans-1,3-Dichloropropene	10061-02-6	Trichloroethene	79-01-6
Cyclohexane	110-82-7	Ethylbenzene	100-41-4	1,1,2-Trichlorotrifluoroethane	76-13-1
1,2-Dibromo-3-chloropropane	96-12-8	2-Hexanone	591-78-6	m-Xylene	108-38-3
Dibromochloromethane	124-48-1	Isopropylbenzene	98-82-8	o-Xylene	95-47-6
1,2-Dibromoethane	106-93-4	Methyl acetate	79-20-9	p-Xylene	106-42-3
1,2-Dichlorobenzene	95-50-1	Methylcyclohexane	108-87-2		

Concentration	Part #
2,000 µg/mL	CLPV-43CH

Applicable Methods: US EPA Method 8260B and CLP Series (see page 169 for details).

Combined Stock Standard in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
2-Chloroethyl vinyl ether	110-75-8	Vinyl acetate	108-05-4

Concentration	Part #
2,000 µg/mL	CNVA

Volume for all Volatiles is 1 mL

CLP Series Volatiles (continued)

Applicable Methods: CLP Series (see page 169 for details).

Volatiles Organics Combination Standard in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Acetone	67-64-1	1,2-Dichloroethane	107-06-2	Styrene	100-42-5
Benzene	71-43-2	1,1-Dichloroethene	75-35-4	1,1,2,2-Tetrachloroethane	79-34-5
Bromodichloromethane	75-27-4	cis-1,2-Dichloroethene	156-59-2	Tetrachloroethene	127-18-4
Bromoform	75-25-2	trans-1,2-Dichloroethene	156-60-5	Toluene	108-88-3
2-Butanone	78-93-3	1,2-Dichloropropane	78-87-5	1,1,1-Trichloroethane	71-55-6
Carbon disulfide	75-15-0	cis-1,3-Dichloropropene	10061-01-5	1,1,2-Trichloroethane	79-00-5
Carbon tetrachloride	56-23-5	trans-1,3-Dichloropropene	10061-02-6	Trichloroethene	79-01-6
Chlorobenzene	108-90-7	Ethylbenzene	100-41-4	m-Xylene	108-38-3
Chloroform	67-66-3	2-Hexanone	591-78-6	o-Xylene	95-47-6
Dibromochloromethane	124-48-1	4-Methyl-2-pentanone	108-10-1	p-Xylene	106-42-3
1,1-Dichloroethane	75-34-3	Methylene chloride	75-09-2		

Concentration	Part #
2,000 µg/mL	CLPV-32CH

TCLP Series Volatiles

Applicable Methods: TCLP Series

TCLP Volatiles Spike in Methanol-P&T					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	Chloroform	67-66-3	Tetrachloroethene	127-18-4
2-Butanone	78-93-3	1,4-Dichlorobenzene	106-46-7	Trichloroethene	79-01-6
Carbon tetrachloride	56-23-5	1,2-Dichloroethane	107-06-2	Vinyl chloride	75-01-4
Chlorobenzene	108-90-7	1,1-Dichloroethene	75-35-4		

Concentration	Part #
2,000 µg/mL	TCLP-VX

Applicable Methods: TCLP Series

TCLP Volatiles Spike without Vinyl Chloride in Methanol-P&T			
Components	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	1,4-Dichlorobenzene	106-46-7
2-Butanone*	78-93-3	1,2-Dichloroethane	107-06-2
Carbon tetrachloride	56-23-5	1,1-Dichloroethene	75-35-4
Chlorobenzene	108-90-7	Tetrachloroethene	127-18-4
Chloroform	67-66-3	Trichloroethene	79-01-6

Concentration	Part #
2,000 µg/mL	TCLP-V

** 2-Butanone is at 10,000 µg/mL concentration.*

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Volume for all Volatiles is 1 mL

TCLP Series Volatiles (continued)

Applicable Methods: TCLP Series

Chlorofluorocarbon Refrigerant Standard Singles in Methanol-P&T at 1,000 µg/mL					
Component	**CAS #**	**Part #**	**Components**	**CAS #**	**Part #**
Chlorodifluoromethane	75-45-6	S-840	Dichlorofluoromethane	75-43-4	S-1405
2-Chloro-1,1,1-trifluoroethane	75-88-7	S-958	1,2-Dichlorotetrafluoroethane	76-14-2	S-1470
1,2-Dichloro-1,1-difluoroethane	1649-08-7	S-1477	1,2-Dichlorotrifluoroethane	354-23-4	S-1479
Dichlorodifluoromethane	75-71-8	S-1370	Trichlorofluoromethane	75-69-4	S-3620
1,1-Dichloro-1-fluoroethane	1717-00-6	S-1480	1,1,2-Trichlorotrifluoroethane	76-13-1	S-3675

60 BIG MIX

Applicable Methods: US EPA Methods 502.2 and 8260 (see page 169 for details).

Big Mix in Methanol-P&T Volatile Organics Mix with 60 Certified Components					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Benzene	71-43-2	1,2-Dichlorobenzene	95-50-1	Naphthalene	91-20-3
Bromobenzene	108-86-1	1,3-Dichlorobenzene	541-73-1	n-Propylbenzene	103-65-1
Bromochloromethane	74-97-5	1,4-Dichlorobenzene	106-46-7	Styrene	100-42-5
Bromodichloromethane	75-27-4	Dichlorodifluoromethane	75-71-8	1,1,1,2-Tetrachloroethane	630-20-6
Bromoform	75-25-2	1,1-Dichloroethane	75-34-3	1,1,2,2-Tetrachloroethane	79-34-5
Bromomethane	74-83-9	1,2-Dichloroethane	107-06-2	Tetrachloroethene	127-18-4
n-Butylbenzene	104-51-8	1,1-Dichloroethene	75-35-4	Toluene	108-88-3
sec-Butylbenzene	135-98-8	cis-1,2-Dichloroethene	156-59-2	1,2,3-Trichlorobenzene	87-61-6
tert-Butylbenzene	98-06-6	trans-1,2-Dichloroethene	156-60-5	1,2,4-Trichlorobenzene	120-82-1
Carbon tetrachloride	56-23-5	1,2-Dichloropropane	78-87-5	1,1,1-Trichloroethane	71-55-6
Chlorobenzene	108-90-7	1,1-Dichloropropene	563-58-6	1,1,2-Trichloroethane	79-00-5
Chloroethane	75-00-3	cis-1,3-Dichloropropene	10061-01-5	Trichloroethene	79-01-6
Chloroform	67-66-3	trans-1,3-Dichloropropene	10061-02-6	Trichlorofluoromethane	75-69-4
Chloromethane	74-87-3	1,3-Dichloropropane	142-28-9	1,2,3-Trichloropropane	96-18-4
2-Chlorotoluene	95-49-8	2,2-Dichloropropane	594-20-7	1,2,4-Trimethylbenzene	95-63-6
4-Chlorotoluene	106-43-4	Ethylbenzene	100-41-4	1,3,5-Trimethylbenzene	108-67-8
1,2-Dibromo-3-chloropropane	96-12-8	Hexachlorobutadiene	87-68-3	Vinyl chloride	75-01-4
Dibromochloromethane	124-48-1	Isopropylbenzene	98-82-8	m-Xylene	108-38-3
1,2-Dibromoethane	106-93-4	p-Isopropyltoluene	99-87-6	o-Xylene	95-47-6
Dibromomethane	74-95-3	Methylene chloride	75-09-2	p-Xylene	106-42-3

Concentration	Part #
200 µg/mL	60-BIG-MIX-200

Concentration	Part #
1,000 µg/mL	60-BIG-MIX

Concentration	Part #
2,000 µg/mL	60-BIG-MIX-2000

Volume for all Volatiles is 1 mL

8260 BIG MIX

Applicable Methods: US EPA Method 8260 and CLP Series (see page 169 for details).

Big Mix in Methanol-P&T
Volatile Organics Mix with 76 Certified Components

Components	CAS #	Components	CAS #	Components	CAS #
Acetonitrile	75-05-8	cis-1,4-Dichloro-2-butene	1476-11-5	Naphthalene	91-20-3
Acrylonitrile	107-13-1	trans-1,4-Dichloro-2-butene	110-57-6	Nitrobenzene	98-95-3
Allyl chloride	107-05-1	1,1-Dichloroethane	75-34-3	2-Nitropropane	79-46-9
Benzene	71-43-2	1,2-Dichloroethane	107-06-2	Pentachloroethane	76-01-7
Bromobenzene	108-86-1	1,1-Dichloroethene	75-35-4	Propionitrile	107-12-0
Bromochloromethane	74-97-5	cis-1,2-Dichloroethene	156-59-2	n-Propylbenzene	103-65-1
Bromodichloromethane	75-27-4	trans-1,2-Dichloroethene	156-60-5	Styrene	100-42-5
Bromoform	75-25-2	1,2-Dichloropropane	78-87-5	1,1,1,2-Tetrachloroethane	630-20-6
n-Butylbenzene	104-51-8	1,3-Dichloropropane	142-28-9	1,1,2,2-Tetrachloroethane	79-34-5
sec-Butylbenzene	135-98-8	2,2-Dichloropropane	594-20-7	Tetrachloroethene	127-18-4
tert-Butylbenzene	98-06-6	1,1-Dichloropropene	563-58-6	Tetrahydrofuran	109-99-9
Carbon disulfide	75-15-0	cis-1,3-Dichloropropene	10061-01-5	Toluene	108-88-3
Carbon tetrachloride	56-23-5	trans-1,3-Dichloropropene	10061-02-6	1,2,3-Trichlorobenzene	87-61-6
2-Chloro-1,3-butadiene	126-99-8	1,4-Dioxane	123-91-1	1,2,4-Trichlorobenzene	120-82-1
Chlorobenzene	108-90-7	Ether	60-29-7	1,1,1,-Trichloroethane	71-55-6
2-Chloroethanol	107-07-3	Ethyl methacrylate	97-63-2	1,1,2-Trichloroethane	79-00-5
Chloroform	67-66-3	Ethylbenzene	100-41-4	Trichloroethene	79-01-6
2-Chlorotoluene	95-49-8	Hexachlorobutadiene	87-68-3	1,2,3-Trichloropropane	96-18-4
4-Chlorotoluene	106-43-4	Iodomethane	74-88-4	1,1,2-Trichlorotrifluoroethane	76-13-1
1,2-Dibromo-3-chloropropane	96-12-8	Isopropylbenzene	98-82-8	1,2,4-Trimethylbenzene	95-63-6
Dibromochloromethane	124-48-1	p-Isopropyltoluene	99-87-6	1,3,5-Trimethylbenzene	108-67-8
1,2-Dibromoethane	106-93-4	Methacrylonitrile	126-98-7	m-Xylene	108-38-3
Dibromomethane	74-95-3	Methyl acrylate	96-33-3	o-Xylene	95-47-6
1,2-Dichlorobenzene	95-50-1	Methyl methacrylate	80-62-6	p-Xylene	106-42-3
1,3-Dichlorobenzene	541-73-1	Methylene chloride	75-09-2		
1,4-Dichlorobenzene	106-46-7	2-Methyl-1-propanol	78-83-1		

Concentration	Part #
2,000 µg/mL	8260-BIG-MIX

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section 3

Semivolatiles

Single & Multi-Component Standards for GC, GC/MS, LC & LC/MS

US EPA Methods

US EPA Semivolatiles - Method 500 Series

Method 506 is an analytical method for the monitoring of phthalate and adipate esters in drinking water by GC/PID.

Method 525 is an analytical method for the monitoring of semivolatiles in drinking water and raw water sources by GC/MS.

Method 535 is an analytical method for the monitoring of chloroacetanilide and other acetamide herbicide degradates in drinking water by SPE followed by LC/MS/MS.

Methods 550 and 550.1 are analytical methods for the monitoring of Polynuclear Aromatic Hydrocarbons (PAH) in drinking water by HPLC with UV and fluorescence detectors.

Method 552 is an analytical method for the monitoring of haloacetic acids and phenolic disinfectant by-products in drinking water by GC/ECD.

US EPA Semivolatiles - Method 600 Series

Method 604 is an analytical method for the monitoring of phenols in municipal and industrial wastewater by GC/FID.

Method 605 is an analytical method for the monitoring of benzidine in municipal and industrial wastewater by HPLC and an Electrochemical Detector.

Method 606 is an analytical method for the monitoring of phthalate esters in municipal and industrial wastewater by GC/ECD.

Method 612 is an analytical method for the monitoring of chlorinated hydrocarbons in municipal and industrial wastewater by GC/ECD.

Method 625 is an analytical method for the monitoring of acid and base neutral extractable fractions in municipal and industrial wastewater by GC/MS.

US EPA Semivolatiles - Method 8000 Series

Method 8041 is a general analytical method for the monitoring of phenols by GC/FID or GC/ECD.

Method 8061 is an analytical method for the monitoring of phthalate esters in aqueous and solid samples by GC/MS or GC/ECD.

Method 8100 is an analytical method for the monitoring of PNA hydrocarbons in aqueous and solid samples by GC/FID.

Method 8121 is an analytical method for the monitoring of chlorinated hydrocarbons in environmental and waste samples by GC/ECD.

Method 8270 is a general analytical method for the monitoring of semivolatiles in environmental and waste samples by GC/MS.

Method 8310 is an analytical method for the monitoring of PNA hydrocarbons in groundwater and waste samples by HPLC using UV and fluorescence detectors.

CLP Series

The US EPA retains analytical services through the Contract Laboratory Program (CLP). The CLP follows detailed SOPs derived from EPA methods and SW-846. The CLP Semivolatile Organic Analysis Method is an analytical method for the analysis of aqueous or solid samples for SVOCs by GC/MS.

TCLP Series

EPA methods 1311 and 1312 are analytical methods for the monitoring of a wide range of compounds in various samples using the Toxicity Characteristic Leaching Procedure (TCLP).

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 506 (see page 189 for details).

Method 506 Analyte Mix (High Level) in Isooctane

Components	CAS #	Components	CAS #
Butylbenzene phthalate	85-68-7	Dimethyl phthalate	131-11-3
Di-n-butyl phthalate	84-74-2	bis(2-Ethylhexyl)adipate	103-23-1
Di-n-octyl phthalate	117-84-0	bis(2-Ethylhexyl)phthalate	117-81-7
Diethyl phthalate	84-66-2		

Concentration	Part #
2,000 µg/mL	506-AH

Applicable Methods: US EPA Method 525 (see page 189 for details).

Semivolatile Organics Mix A in Acetone

Components	CAS #	Components	CAS #	Components	CAS #
Acenaphthylene	208-96-8	Chlorobenzilate	510-15-6	Fluorene	86-73-7
Anthracene	120-12-7	Chrysene	218-01-9	Hexachlorobenzene	118-74-1
Benz(a)anthracene	56-55-3	Di-n-butyl phthalate	84-74-2	Hexachlorocyclopentadiene	77-47-4
Benzo(a)pyrene	50-32-8	Diethyl phthalate	84-66-2	Indeno(1,2,3-cd)pyrene	193-39-5
Benzo(b)fluoranthene	205-99-2	Dimethyl phthalate	131-11-3	Isophorone	78-59-1
Benzo(g,h,i)perylene	191-24-2	Dibenz(a,h)anthracene	53-70-3	Pentachlorophenol*	87-65-5
Benzo(k)fluoranthene	207-08-9	bis(2-Ethylhexyl)adipate	103-23-1	Phenanthrene	85-01-8
Butylbenzyl phthalate	85-68-7	bis(2-Ethylhexyl)phthalate	117-81-7	Pyrene	129-00-0

Concentration	Part #
500 µg/mL	5252-A

** Pentachlorophenol is at 2,000 µg/mL concentration.*

Applicable Methods: US EPA Method 525 (see page 189 for details).

Fortification Solution in Methylene Chloride

Component	CAS #
p-Terphenyl-d_{14}	1718-51-0

Concentration	Part #
500 µg/mL	5252-FS

Applicable Methods: US EPA Method 525 (see page 189 for details).

Internal Standard in Acetone

Components	CAS #	Components	CAS #
Acenaphthene-d_{10}	15067-26-2	Phenanthrene-d_{10}	1517-22-2
Chrysene-d_{12}	1719-03-5		

Concentration	Part #
500 µg/mL	5252-I

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 525 (see page 189 for details).

Organochlorine Pesticides Mix A in Acetone					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Aldrin	309-00-2	p,p'-DDE	72-55-9	Endrin	72-20-8
alpha-BHC	319-84-6	p,p'-DDT	50-29-3	Endrin aldehyde	7421-93-4
beta-BHC	319-85-7	Dieldrin	60-57-1	Endrin ketone	53494-70-5
delta-BHC	319-86-8	Endosulfan I	959-98-8	Heptachlor	76-44-8
gamma-BHC	58-89-9	Endosulfan II	33213-65-9	Heptachlor epoxide (Isomer B)	1024-57-3
p,p'-DDD	72-54-8	Endosulfan sulfate	1031-07-8	Methoxychlor	72-43-5

Concentration	Part #
200 µg/mL	5252-PA

Applicable Methods: US EPA Method 525 (see page 189 for details).

Organochlorine Pesticides Mix B in Acetone					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Alachlor	15972-60-8	Chloroneb	2675-77-6	trans-Nonachlor	39765-80-5
Bladex	21725-46-2	Chlorothalonil	1897-45-6	Permethrin (cis & trans)	52645-53-1
alpha-Chlordane	5103-71-9	Chlorpyrifos	2921-88-2	Propachlor	1918-16-7
gamma-Chlordane	5103-74-2	Hexachlorobenzene	118-74-1	Terrazole	2593-15-9
Chlorobenzilate	510-15-6	Methyl dacthal	1861-32-1	Trifluralin	1582-09-8

Concentration	Part #
200 µg/mL	5252-PB

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 525 (see page 189 for details).

Performance Check Solution in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
p,p′-DDT	50-29-3	bis(Pentafluorophenyl)phenylphosphine	5074-71-5
Endrin	72-20-8		

Concentration	Part #
500 µg/mL	5252-PCS

Applicable Methods: US EPA Method 525 (see page 189 for details).

Surrogate Standard in Acetone			
Components	**CAS #**	**Components**	**CAS #**
2-Nitro-m-xylene	81-20-9	Triphenyl phosphate	115-86-6
Perylene-d_{12}	1520-96-3		

Concentration	Part #
500 µg/mL	5252-S

Applicable Methods: US EPA Method 525 (see page 189 for details).

Method 525.3 PCB Mix in Acetone					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
2-Chlorobiphenyl	2051-60-7	2,2′,3,4′,5′,6-Hexachlorobiphenyl	38380-04-0	2,2′,5,5′-Tetrachlorobiphenyl	35693-99-3
4-Chlorobiphenyl	2051-62-9	2,2′,4,4′,5,5′-Hexachlorobiphenyl	35065-27-1	2,3′,4′,5-Tetrachlorobiphenyl	32598-11-1
2,4′-Dichlorobiphenyl	34883-43-7	2,3,3′,4′,6-Pentachlorobiphenyl	38380-03-9	2,2′,5-Trichlorobiphenyl	37680-65-2
2,2′,3,4,4′,5,5′-Heptachlorobiphenyl	35065-29-3	2,3′,4,4′,5-Pentachlorobiphenyl	31508-00-6	2,4,4′-Trichlorobiphenyl	7012-37-5
2,2′,3,4,4′,5′-Hexachlorobiphenyl	35065-28-2	2,2′,3,5′-Tetrachlorobiphenyl	41464-39-5		

Concentration	Part #
200 µg/mL	5253-PCB

Applicable Methods: US EPA Method 525 (see page 189 for details).

525.3 Standard in Acetone			
Components	**CAS #**	**Components**	**CAS #**
Benzo(a)pyrene-d_{12}	63466-71-7	Triphenyl phosphate	115-86-6
2-Nitro-m-xylene	81-20-9		

Concentration	Part #
500 µg/mL	5253-S

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 550 (see page 189 for details).

PAH Analyte Mix in Acetonitrile					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Acenaphthene	83-32-9	1,000 µg/mL	Chrysene	218-01-9	50 µg/mL
Acenaphthylene	208-96-8	1,000 µg/mL	Dibenz(a,h)anthracene	53-70-3	10 µg/mL
Anthracene	120-12-7	50 µg/mL	Fluoranthene	206-44-0	5 µg/mL
Benzo(a)anthracene	56-55-3	1 µg/mL	Fluorene	86-73-7	100 µg/mL
Benzo(a)pyrene	50-32-8	5 µg/mL	Indeno(1,2,3-cd)pyrene	193-39-5	10 µg/mL
Benzo(b)fluoranthene	205-99-2	1 µg/mL	Naphthalene	91-20-3	1,000 µg/mL
Benzo(g,h,i)perylene	191-24-2	5 µg/mL	Phenanthrene	85-01-8	50 µg/mL
Benzo(k)fluoranthene	207-08-9	1 µg/mL	Pyrene	129-00-0	50 µg/mL

Part #
550-A

Applicable Methods: US EPA Method 550 (see page 189 for details).

Internal Standard in Acetonitrile	
Component	**CAS #**
4,4′-Dichlorobiphenyl	2050-68-2

Concentration	Part #
100 µg/mL	550-I

Applicable Methods: US EPA Method 552 (see page 189 for details).

Free Acids in Methyl Tertiary-Butyl Ether			
Components	**CAS #**	**Components**	**CAS #**
Bromoacetic acid	79-08-3	Dichloroacetic acid	79-43-6
Bromochloroacetic acid	5589-96-8	2,4-Dichlorophenol	120-83-2
Chloroacetic acid	79-11-8	Trichloroacetic acid	76-03-9
Dibromoacetic acid	631-64-1	2,4,6-Trichlorophenol	88-06-2

Concentration	Part #
200 µg/mL	552-A

Applicable Methods: US EPA Method 552 (see page 189 for details).

Methyl Esters Mix in Methyl Tertiary-Butyl Ether			
Components	**CAS #**	**Components**	**CAS #**
Methyl bromoacetate	96-32-2	Methyl dibromoacetate	6482-26-4
Methyl bromochloroacetate	20428-74-4	Methyl dichloroacetate	116-54-1
Methyl chloroacetate	96-34-4	Methyl trichloroacetate	598-99-2

Concentration	Part #
200 µg/mL	552-MEO

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Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 552 (see page 189 for details).

Analyte Mix A in Methyl Tertiary-Butyl Ether			
Components	**CAS #**	**Components**	**CAS #**
Bromoacetic acid	79-08-3	Dibromoacetic acid	631-64-1
Bromochloroacetic acid	5589-96-8	Dichloroacetic acid	79-43-6
Chloroacetic acid	79-11-8	Trichloroacetic acid	76-03-9
Dalapon	75-99-0		

Concentration	Part #
200 µg/mL	5521-A

Applicable Methods: US EPA Method 552 (see page 189 for details).

Free Acids Analyte Mix in Methyl Tertiary-Butyl Ether					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Bromoacetic acid	79-08-3	400 µg/mL	Dibromoacetic acid	631-64-1	200 µg/mL
Bromochloroacetic acid	5589-96-8	400 µg/mL	2,3-Dibromopropionic acid*	600-05-5	1,000 µg/mL
Bromodichloroacetic acid	71133-14-7	400 µg/mL	Dichloroacetic acid	79-43-6	600 µg/mL
Chloroacetic acid	79-11-8	600 µg/mL	Tribromoacetic acid	75-96-7	2,000 µg/mL
Chlorodibromoacetic acid	5278-95-5	1,000 µg/mL	Trichloroacetic acid	76-03-9	200 µg/mL
Dalapon	75-99-0	400 µg/mL			

Part #	Part #
5522-AS	5522-A*

** 5522-A is the same as 5522-AS but without* 2,3-Dibromopropionic acid

Applicable Methods: US EPA Method 552 (see page 189 for details).

Methyl Esters Mix in Methyl Tertiary-Butyl Ether					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Dalapon methyl ester	17640-02-7	400 µg/mL	Methyl dibromoacetate	6482-26-4	200 µg/mL
Methyl bromoacetate	96-32-2	400 µg/mL	Methyl 2,3-dibromopropionate*	1729-67-5	1,000 µg/mL
Methyl bromochloroacetate	20428-74-4	400 µg/mL	Methyl dichloroacetate	116-54-1	600 µg/mL
Methyl bromodichloroacetate	20428-76-6	400 µg/mL	Methyl tribromoacetate	3222-05-7	2,000 µg/mL
Methyl chloroacetate	96-34-4	600 µg/mL	Methyl trichloroacetate	598-99-2	200 µg/mL
Methyl chlorodibromoacetate	20428-75-5	1,000 µg/mL			

Part #	Part #
5522-MEOS	5522-MEO*

** 5522-MEO is the same as 5522-MEOS but without* Methyl 2,3-dibromopropionate.

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Methods 605, 8270 and CLP Series (see page 189 for details).

Benzidine Analytes Mix in Methanol			
Components	**CAS #**	**Components**	**CAS #**
Benzidine	92-87-5	3,3′-Dichlorobenzidine	91-94-1

Concentration	Part #
2,000 µg/mL	605-X

Applicable Methods: US EPA Methods 606 and 8061 (see page 189 for details).

Analyte Mix (High Level) in Isooctane			
Components	**CAS #**	**Components**	**CAS #**
Butylbenzyl phthalate	85-68-7	Dimethyl phthalate	131-11-3
Di-n-butyl phthalate	84-74-2	Di-n-Octyl phthalate	117-84-0
Diethyl phthalate	84-66-2	bis(2-Ethylhexyl) phthalate	117-81-7

Concentration	Part #
2,000 µg/mL	606-XH

Applicable Methods: US EPA Methods 612 and 8121 (see page 189 for details).

Chlorinated Hydrocarbons Mix in Isooctane			
Components	**CAS #**	**Components**	**CAS #**
2-Chloronaphthalene	91-58-7	Hexachlorobutadiene	87-68-3
1,2-Dichlorobenzene	95-50-1	Hexachlorocyclopentadiene	77-47-4
1,3-Dichlorobenzene	541-73-1	Hexachloroethane	67-72-1
1,4-Dichlorobenzene	106-46-7	1,2,4-Trichlorobenzene	120-82-1
Hexachlorobenzene	118-74-1		

Concentration	Part #
2,000 µg/mL	612-X

Applicable Methods: US EPA Method 625 (see page 189 for details).

3,3′-Dichlorobenzidine Standard in Methanol	
Component	**CAS #**
3,3′-Dichlorobenzidine	91-94-1

Concentration	Part #
2,000 µg/mL	625-E

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 625 (see page 189 for details).

Additional Analytes Mix in Methanol			
Components	**CAS #**	**Components**	**CAS #**
Benzidine	92-87-5	n-Nitrosodimethylamine	62-75-9

Concentration	Part #
2,000 µg/mL	625-F

Applicable Methods: US EPA Methods 625 and 8270 (see page 189 for details).

Organochlorine Pesticides Mix in Benzene					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Aldrin	309-00-2	p,p'-DDE	72-55-9	Endrin	72-20-8
alpha-BHC	319-84-6	p,p'-DDT	50-29-3	Endrin aldehyde	7421-93-4
beta-BHC	319-85-7	Dieldrin	60-57-1	Endrin ketone	53494-70-5
delta-BHC	319-86-8	Endosulfan I	959-98-8	Heptachlor	76-44-8
gamma-BHC	58-89-9	Endosulfan II	33213-65-9	Heptachlor epoxide (Isomer B)	1024-57-3
p,p'-DDD	72-54-8	Endosulfan sulfate	1031-07-8	Methoxychlor	72-43-5

Concentration	Part #
2,000 µg/mL	625-PH

Applicable Methods: US EPA Method 625 (see page 189 for details).

GC/MS Test Mix in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
bis(pentafluorophenyl)phenylphosphine	5074-71-5	Pentachlorophenol	87-86-5

Concentration	Part #
250 µg/mL	625-T2

Applicable Methods: US EPA Method 8041 (see page 189 for details).

Phenolics Mix B in Isopropanol			
Components	**CAS #**	**Components**	**CAS #**
2,6-Dichlorophenol	87-65-0	4-Methylphenol	106-44-5
Dinoseb	88-85-7	2,3,4,6-Tetrachlorophenol	58-90-2
2-Methylphenol	95-48-7	2,4,5-Tricholorophenol	95-95-4
3-Methylphenol	108-39-4		

Concentration	Part #
2,000 µg/mL	8040-B

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 8041 (see page 189 for details).

Internal Standard in Isopropanol			
Components	**CAS #**	**Components**	**CAS #**
2,5-Dibromotoluene	615-59-8	2,2′,5,5′-Tetrabromobiphenyl	59080-37-4

Concentration	Part #
1,000 µg/mL	8041-I

Applicable Methods: US EPA Method 8061 (see page 189 for details).

Internal Standard in Hexane	
Component	**CAS #**
Benzyl benzoate	120-51-4

Concentration	Part #
5,000 µg/mL	8060-I

Applicable Methods: US EPA Method 8061 (see page 189 for details).

Surrogate Standard in Hexane			
Components	**CAS #**	**Components**	**CAS #**
Dibenzyl phthalate	523-31-9	Diphenyl phthalate	84-62-8
Diphenyl isophthalate	744-45-6		

Concentration	Part #
500 µg/mL	8060-S

Applicable Methods: US EPA Method 8100 (see page 189 for details).

PAH Surrogate Standard in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
2-Fluorobiphenyl	321-60-8	1-Fluoronaphthalene	321-38-0

Concentration	Part #
2,000 µg/mL	8100-S

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 8121 (see page 189 for details).

Method 8121 Chlorinated Hydrocarbons QC Mix in Acetone					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
alpha-BHC	319-84-6	1,4-Dichlorobenzene	106-46-7	1,2,3,5-Tetrachlorobenzene	634-90-2
beta-BHC	319-85-7	alpha,alpha-Dichlorotoluene	98-87-3	1,2,4,5-Tetrachlorobenzene	95-94-3
delta-BHC	319-86-8	Hexachlorobenzene	118-74-1	1,2,3-Trichlorobenzene	87-61-6
gamma-BHC	58-89-9	Hexachlorobutadiene	87-68-3	1,2,4-Trichlorobenzene	120-82-1
Benzyl chloride	100-44-7	Hexachlorocyclopentadiene	77-47-4	1,3,5-Trichlorobenzene	108-70-3
2-Chloronaphthalene	91-58-7	Hexachloroethane	67-72-1	alpha,alpha,alpha-Trichlorotoluene	98-07-7
1,2-Dichlorobenzene	95-50-1	Pentachlorobenzene	608-93-5		
1,3-Dichlorobenzene	541-73-1	1,2,3,4-Tetrachlorobenzene	634-66-2		

Concentration	Part #
100 µg/mL	8121-B

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Chlorinated Hydrocarbons Mix in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
2-Chloronaphthalene	91-58-7	Hexachlorobutadiene	87-68-3	Pentachloroethane	76-01-7
1,2-Dichlorobenzene	95-50-1	Hexachlorocyclopentadiene	77-47-4	1,2,4,5-Tetrachlorobenzene	95-94-3
1,3-Dichlorobenzene	541-73-1	Hexachloroethane	67-72-1	1,2,4-Trichlorobenzene	120-82-1
1,4-Dichlorobenzene	106-46-7	Hexachloropropene	1888-71-7		
Hexachlorobenzene	118-74-1	Pentachlorobenzene	608-93-5		

Concentration	Part #
2,000 µg/mL	8270-AF-B

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Nitrosamines Mix in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
n-Nitrosodi-n-butylamine	924-16-3	n-Nitrosomethylethylamine	10595-95-6
n-Nitrosodiethylamine	55-18-5	n-Nitrosomorpholine	59-89-2
n-Nitrosodimethylamine	62-75-9	n-Nitrosopiperidine	100-75-4
n-Nitrosodiphenylamine	86-30-6	n-Nitrosopyrrolidine	930-55-2
n-Nitrosodi-n-propylamine	621-64-7		

Concentration	Part #
2,000 µg/mL	8270-AF-C

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Organophosphorus Pesticides Mix in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
Dimethoate	60-51-5	Phorate	298-02-2
Disulfoton	298-04-4	Tetraethyldithio pyrophosphate/Sulfotepp	3689-24-5
Famphur	52-85-7	Thionazin (Zinophos)	297-97-2
Methyl parathion	298-00-0	o,o,o-Triethylphosphorothioate	126-68-1
Parathion	56-38-2		

Concentration	Part #
2,000 µg/mL	8270-AF-I

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Phenols Mix in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
4-Chloro-3-methylphenol	59-50-7	4,6-Dinitro-2-methylphenol	534-52-1	Pentachlorophenol	87-86-5
2-Chlorophenol	95-57-8	2,4-Dinitrophenol	51-28-5	Phenol	108-95-2
2,4-Dichlorophenol	120-83-2	2-Nitrophenol	88-75-5	2,4,6-Trichlorophenol	88-06-2
2,4-Dimethylphenol	105-67-9	4-Nitrophenol	100-02-7		

Concentration	Part #
2,000 µg/mL	8270-AF-L

Applicable Methods: US EPA Method 8270 (see page 189 for details).

PAH Mix in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Acenaphthene	83-32-9	Benzo(g,h,i)perylene	191-24-2	Indeno(1,2,3-cd)pyrene	193-39-5
Acenaphthylene	208-96-8	Benzo(k)fluoranthene	207-08-9	Naphthalene	91-20-3
Anthracene	120-12-7	Chrysene	218-01-9	Phenanthrene	85-01-8
Benz(a)anthracene	56-55-3	Dibenz(a,h)anthracene	53-70-3	Pyrene	129-00-0
Benzo(a)pyrene	50-32-8	Fluoranthene	206-44-0		
Benzo(b)fluoranthene	205-99-2	Fluorene	86-73-7		

Concentration	Part #
2,000 µg/mL	8270-AF-M

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Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Appendix IX Mix B in Methylene Chloride:Acetone:Benzene			
Components	**CAS #**	**Components**	**CAS #**
2,6-Dichlorophenol	87-65-0	3-Methylphenol	108-39-4
Dinoseb	88-85-7	2,3,4,6-Tetrachlorophenol	58-90-2

Concentration	Part #
2,000 µg/mL	8270-IXB

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Appendix IX Organophosphorus/Nitrogen Pesticides and Herbicides Mix in Acetone					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Azinphos-methyl	86-50-0	Demeton (O+S)	8065-48-3	Malathion	121-75-5
Captafol	2425-06-1	Dicrotophos	141-66-2	Mevinphos	7786-34-7
Captan	133-06-2	Dioxathion	78-34-2	Monocrotophos	6923-22-4
Carbaryl	63-25-2	EPN	2104-64-5	Octamethyl pyrophosphoramide	152-16-9
Carbofuran	1563-66-2	Ethion	563-12-2	Phosalone	2310-17-0
Coumaphos	56-72-4	Fensulfothion	115-90-2	Phosphamidon	13171-21-6
Crotoxyphos	7700-17-6	Fenthion	55-38-9	Terbufos	13071-79-9

Concentration	Part #
2,000 µg/mL	8270-IXJ

Applicable Methods: US EPA Method 8310 (see page 189 for details).

PAH Surrogate Standard in Acetonitrile	
Component	**CAS #**
Decafluorobiphenyl	434-90-2

Concentration	Part #
100 µg/mL	8310-I

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Organochlorine Pesticides Mix in Acetone

Components	CAS #	Components	CAS #	Components	CAS #
Aldrin	309-00-2	p,p'-DDE	72-55-9	Endrin	72-20-8
alpha-BHC	319-84-6	p,p'-DDT	50-29-3	Endrin aldehyde	7421-93-4
beta-BHC	319-85-7	Dieldrin	60-57-1	Heptachlor	76-44-8
delta-BHC	319-86-8	Endosulfan I	959-98-8	Heptachlor epoxide (Isomer B)	1024-57-3
gamma-BHC	58-89-9	Endosulfan II	33213-65-9	Methoxychlor	72-43-5
p,p'-DDD	72-54-8	Endosulfan sulfate	1031-07-8		

Concentration	Part #
2,000 µg/mL	8270-N

Applicable Methods: US EPA Method 8310 (see page 189 for details).

PAH Combination Mix in Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Acenaphthene	83-32-9	Benzo(g,h,i)perylene	191-24-2	Indeno(1,2,3-cd)pyrene	193-39-5
Acenaphthylene	208-96-8	Benzo(k)fluoranthene	207-08-9	Naphthalene	91-20-3
Anthracene	120-12-7	Chrysene	218-01-9	Phenanthrene	85-01-8
Benz(a)anthracene	56-55-3	Dibenz(a,h)anthracene	53-70-3	Pyrene	129-00-0
Benzo(a)pyrene	50-32-8	Fluoranthene	206-44-0		
Benzo(b)fluoranthene	205-99-2	Fluorene	86-73-7		

Concentration	Part #
500 µg/mL	8310-A

Applicable Methods: US EPA Methods 525, 625 and 8270 (see page 189 for details).

Chlordane Standard in Hexane

Component	CAS #
Chlordane	57-74-9

Concentration	Part #	Concentration	Part #	Concentration	Part #
200 µg/mL	CDANE-X	1,000 µg/mL	S-780	2,000 µg/mL	CDANE-XH

Applicable Methods: US EPA Method 8270 (see page 189 for details).

PCB Screening Standard in Toluene

Component	CAS #
Decachlorobiphenyl	2051-24-3

Concentration	Part #
5,000 µg/mL	DCBP-XH

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Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 8270 and CLP Series (see page 189 for details).

HICAL-Acids Mix in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Benzoic acid	65-85-0	4,6-Dinitro-2-methylphenol	534-52-1	4-Nitrophenol	100-02-7
4-Chloro-3-methylphenol	59-50-7	2,4-Dinitrophenol	51-28-5	Pentachlorophenol	87-86-5
2-Chlorophenol	95-57-8	2-Methylphenol	95-48-7	Phenol	108-95-2
2,4-Dichlorophenol	120-83-2	4-Methylphenol	106-44-5	2,4,5-Trichlorophenol	95-95-4
2,4-Dimethylphenol	105-67-9	2-Nitrophenol	88-75-5	2,4,6-Trichlorophenol	88-06-2

Concentration	Part #
2,000 µg/mL	HICAL-ACIDS

Applicable Methods: US EPA Methods 625 and 8270 (see page 189 for details).

Aroclor Mix 1 in Hexane			
Components	**CAS #**	**Components**	**CAS #**
Aroclor 1016	12674-11-2	Aroclor 1248	12672-29-6
Aroclor 1232	11141-16-5	Aroclor 1260	11096-82-5

Concentration	Part #
200 µg/mL	PCB-M1

Applicable Methods: US EPA Methods 625 and 8270 (see page 189 for details).

Aroclor Mix 2 in Hexane			
Components	**CAS #**	**Components**	**CAS #**
Aroclor 1221	11104-28-2	Aroclor 1254	11097-69-1
Aroclor 1242	53469-21-9		

Concentration	Part #
200 µg/mL	PCB-M2

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Methods 625 and 8270 (see page 189 for details).

Individual Aroclors in Hexane			
Components	**CAS #**	**Concentration**	**Part #**
Aroclor 1016	12674-11-2	200 µg/mL	PCB-1016
		1,000 µg/mL	PCB-1016H
Aroclor 1221	11104-28-2	200 µg/mL	PCB-1221
		1,000 µg/mL	PCB-1221H
Aroclor 1232	11141-16-5	200 µg/mL	PCB-1232
		1,000 µg/mL	PCB-1232H
Aroclor 1242	53469-21-9	200 µg/mL	PCB-1242
		1,000 µg/mL	PCB-1242H
Aroclor 1248	12672-29-6	200 µg/mL	PCB-1248
		1,000 µg/mL	PCB-1248H
Aroclor 1254	11097-69-1	200 µg/mL	PCB-1254
		1,000 µg/mL	PCB-1254H
Aroclor 1260	11096-82-5	200 µg/mL	PCB-1260
		1,000 µg/mL	PCB-1260H
Aroclor 1262	37324-23-5	200 µg/mL	PCB-1262
		1,000 µg/mL	PCB-1262H
Aroclor 1268	11100-14-4	200 µg/mL	PCB-1268
		1,000 µg/mL	PCB-1268H

Applicable Methods: CLP Series (see page 189 for details).

Balance Mix, OLM04.1 in Acetone			
Components	**CAS #**	**Components**	**CAS #**
Acetophenone	98-86-2	Biphenyl	92-52-4
Atrazine	1912-24-9	Caprolactam	105-60-2
Benzaldehyde	100-52-7		

Concentration	Part #
2,000 µg/mL	SV-041

Applicable Methods: US EPA Method 8270 and CLP Series (see page 189 for details).

Balance Mix, Option A in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
Aniline	62-53-3	3-Methylphenol	108-39-4
Azobenzene	103-33-3	n-Nitrosodimethylamine	62-75-9
Carbazole	86-74-8	Pyridine	110-86-1

Concentration	Volume	Part #
2,000 µg/mL	1 mL	SV-X
2,000 µg/mL	5 mL	SV-X5

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

BIG-BN-2 - Base Neutral & Acid Combination Calibration Standard in Methylene Chloride:Benzene

Components	CAS #	Components	CAS #	Components	CAS #
Acenaphthene	83-32-9	bis(2-Chloro-1-methylethyl)ether	108-60-1	Hexachlorocyclopentadiene	77-47-4
Acenaphthylene	208-96-8	bis(2-Ethylhexyl)phthalate	117-81-7	Hexachloroethane	67-72-1
Anthracene	120-12-7	Dibenz(a,h)anthracene	53-70-3	Indeno(1,2,3-cd)pyrene	193-39-5
Benz(a)anthracene	56-55-3	Dibenzofuran	132-64-9	Isophorone	78-59-1
Benzo(a)pyrene	50-32-8	1,2-Dichlorobenzene	95-50-1	2-Methylnaphthalene	91-57-6
Benzo(b)fluoranthene	205-99-2	1,3-Dichlorobenzene	541-73-1	Naphthalene	91-20-3
Benzo(g,h,i)perylene	191-24-2	1,4-Dichlorobenzene	106-46-7	2-Nitroaniline	88-74-4
Benzo(k)fluoranthene	207-08-9	Diethyl phthalate	84-66-2	3-Nitroaniline	99-09-2
Benzyl alcohol	100-51-6	Dimethyl phthalate	131-11-3	4-Nitroaniline	100-01-6
4-Bromodiphenyl ether	101-55-3	Di-n-butyl phthalate	84-74-2	Nitrobenzene	98-95-3
Butylbenzyl phthalate	85-68-7	2,4-Dinitrotoluene	121-14-2	n-Nitro-di-n-propylamine	621-64-7
4-Chloroaniline (p-Chloroaniline)	106-47-8	2,6-Dinitrotoluene	606-20-2	n-Nitrosodiphenylamine	86-30-6
2-Chloronaphthalene	91-58-7	Di-n-octyl phthalate	117-84-0	Phenanthrene	85-01-8
4-Chlorophenyl-phenyl ether	7005-72-3	Fluoranthene	206-44-0	Pyrene	129-00-0
Chrysene	218-01-9	Fluorene	86-73-7	1,2,4-Trichlorobenzene	120-82-1
bis(2-Chloroethoxy)methane	111-91-1	Hexachlorobenzene	118-74-1		
bis(2-Chloroethyl)ether	111-44-4	Hexachlorobutadiene	87-68-3		

Concentration	Volume	Part #
2,000 µg/mL	1 mL	BIG-BN-2

Concentration	Volume	Part #
2,000 µg/mL	5 mL	BIG-BN-2-5

Applicable Methods: US EPA Methods 525, 625 and 8270 (see page 189 for details).

Toxaphene in Hexane

Component	CAS #
Toxaphene	8001-35-2

Concentration	Part #
200 µg/mL	TOX-X

Concentration	Part #
1,000 µg/mL	S-3535

Concentration	Part #
2,000 µg/mL	TOX-XH

Volume for all Semivolatiles is 1 mL

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Skinner List Acid Extractables in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
2,4-Dimethylphenol	105-67-9	4-Methylphenol	106-44-5
2,4-Dinitrophenol	51-28-5	4-Nitrophenol	100-02-7
2-Methylphenol	95-48-7	Phenol	108-95-2
3-Methylphenol	108-39-4		108-98-5

Concentration	Part #
2,000 µg/mL	SKINNER-AE

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Skinner List Semivolatiles in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Anthracene	120-12-7	Di-n-butyl phthalate	84-74-2	Fluoranthene	206-44-0
Benz(a)anthracene	56-55-3	Di-n-octyl phthalate	117-84-0	Indene	95-13-6
Benzo(a)pyrene	50-32-8	1,2-Dichlorobenzene	95-50-1	1-Methylnaphthalene	90-12-0
Benzo(b)fluoranthene	205-99-2	1,3-Dichlorobenzene	541-73-1	Naphthalene	91-20-3
Benzo(k)fluoranthene	207-08-9	1,4-Dichlorobenzene	106-46-7	Phenanthrene	85-01-8
bis(2-ethylhexyl)phthalate	117-81-7	Diethyl phthalate	84-66-2	Pyrene	129-00-0
Butylbenzyl phthalate	85-68-7	Dimethyl phthalate	131-11-3	Pyridine	110-86-1
Chrysene	218-01-9	7,12-Dimethyl-benz(a)anthracene*	57-97-6	Quinoline	91-22-5

Concentration	Part #
2,000 µg/mL	SKINNER-SV

** 7,12-Dimethyl-benz(a)anthracene is at a concentration of 1,000 µg/mL.*

Semivolatiles - Singles

Applicable Methods: US EPA Method 525 (see page 189 for details).

Internal Standard Single in Methanol-P&T			
Component	**CAS #**	**Concentration**	**Part #**
Pentachlorophenol-13C6	85380-74-1	1,000 µg/mL	S-4202

Applicable Methods: US EPA Method 552 (see page 189 for details).

Internal Standard Single in Methanol-P&T			
Component	**CAS #**	**Concentration**	**Part #**
1,2,3-Trichloropropane	96-18-4	1,000 µg/mL	S-3665

Applicable Methods: US EPA Method 552 (see page 189 for details).

552 Surrogate Standard Single in Methyl Tertiary-Butyl Ether			
Component	**CAS #**	**Concentration**	**Part #**
Methyl-2-bromopropionate	57885-43-5	1,000 µg/mL	S-2598

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Volume for all Semivolatiles is 1 mL

Semivolatiles - Singles (continued)

Applicable Methods: US EPA Method 552 (see page 189 for details).

Surrogate Standard Single in Methyl Tertiary-Butyl Ether			
Component	**CAS #**	**Concentration**	**Part #**
2,3-Dibromopropionic acid	600-05-5	1,000 µg/mL	S-3895

Applicable Methods: US EPA Methods 625 and 8270 (see page 189 for details).

Surrogate Standard Single in Methanol			
Component	**CAS #**	**Concentration**	**Part #**
2-Fluorophenol	367-12-4	1,000 µg/mL	S-2050

Applicable Methods: US EPA Method 625 (see page 189 for details).

Optional-625 Base Neutral IS/SS Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Anthracene-d_{10}	1719-06-8	1,000 µg/mL	Methylene Chloride	S-291
Benzo(a)anthracene-d_{12}	1718-53-2	1,000 µg/mL	Methanol	S-4759
Decafluorobiphenyl	434-90-2	1,000 µg/mL	Methanol	S-1103
4,4′-Dibromobiphenyl	92-86-4	1,000 µg/mL	Acetone	S-1228
4,4′-Dibromooctafluorobiphenyl	10386-84-2	1,000 µg/mL	Methyl Tertiary-Butyl Ether	S-1250
2,2′-Difluorobiphenyl	388-82-9	1,000 µg/mL	Methanol-P&T	S-1542
2-Fluoranaphthalene	323-09-1	1,000 µg/mL	Methanol-P&T	S-4308
4-Fluoroaniline	371-40-4	1,000 µg/mL	Methanol-P&T	S-4048
1-Fluoronaphthalene	321-38-0	1,000 µg/mL	Methanol-P&T	S-2047
Naphthalene-d_8	1146-65-2	1,000 µg/mL	Methanol-P&T	S-2660
Nitrobenzene-d_5	4165-60-0	1,000 µg/mL	Methanol-P&T	S-2710
Phenanthrene-d_{10}	1517-22-2	1,000 µg/mL	Methylene Chloride	S-3020
Pyridine-d_5	7291-22-7	1,000 µg/mL	Methanol-P&T	S-3937

Applicable Methods: US EPA Method 8041(see page 189 for details).

Internal Standard Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
2,5-Dibromotoluene	615-59-8	1,000 µg/mL	Methanol-P&T	S-1251
2,2′,5,5′-Tetrabromobiphenyl	59080-37-4	1,000 µg/mL	Methanol	S-4144

Applicable Methods: US EPA Method 8041 (see page 189 for details).

Surrogate Standard Single in Methanol			
Component	**CAS #**	**Concentration**	**Part #**
2,4-Dibromophenol	615-58-7	1,000 µg/mL	S-5148

Volume for all Semivolatiles is 1 mL

Semivolatiles - Singles (continued)

Applicable Methods: US EPA Method 8061 (see page 189 for details).

Non-RCRA Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
4-Chlorophenol	106-48-9	1,000 µg/mL	Methanol-P&T	S-906
2,3-Dichlorophenol	576-24-9	1,000 µg/mL	Methanol-P&T	S-1406
2,5-Dichlorophenol	583-78-8	1,000 µg/mL	Methanol-P&T	S-1412
2,3-Dimethylphenol	526-75-0	1,000 µg/mL	Methanol-P&T	S-1659
2,5-Dimethylphenol	95-87-4	1,000 µg/mL	Acetone	S-1661
2,6-Dimethylphenol	576-26-1	1,000 µg/mL	Methanol	S-1662
3,4-Dimethylphenol	95-65-8	1,000 µg/mL	Methanol	S-1664
2,3,4-Trichlorophenol	15950-66-0	1,000 µg/mL	Methanol-P&T	S-3625
2,3,5-Trichlorophenol	933-78-8	1,000 µg/mL	Methanol-P&T	S-3630
2,3,6-Trichlorophenol	933-75-5	1,000 µg/mL	Methanol-P&T	S-3635

Applicable Methods: US EPA Method 8061 (see page 189 for details).

Method 8061 Additional Analytes Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Diamyl phthalate	131-18-0	1,000 µg/mL	Methanol	S-4157
Dicyclohexyl phthalate	84-61-7	1,000 µg/mL	Methanol-P&T	S-4151
Diisobutyl phthalate	84-69-5	1,000 µg/mL	Methanol-P&T	S-4150
Di-n-hexyl phthalate	84-75-3	1,000 µg/mL	Methanol-P&T	S-4155
Dinonyl phthalate	84-76-4	1,000 µg/mL	Methanol-P&T	S-4153

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Volume for all Semivolatiles is 1 mL

Semivolatiles - Singles (continued)

Applicable Methods: US EPA Method 8270 (see page 189 for details).

Method 8270 Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Aminoazobenzene	60-09-3	1,000 µg/mL	Methanol-P&T	S-3065
4-Aminophenylether	101-80-4	1,000 µg/mL	Methanol-P&T	S-240
o-Anisidine	90-04-0	1,000 µg/mL	Methanol-P&T	S-285
Bromoxynil	1689-84-5	1,000 µg/mL	Methanol-P&T	S-575
Carbophenothion	786-19-6	1,000 µg/mL	Methanol	S-755
Chlorfenvinphos	470-90-6	1,000 µg/mL	Acetone	S-785
2,4-Diaminotoluene	95-80-7	1,000 µg/mL	Methanol	S-1160
Dibenzo(a,e)pyrene	192-65-4	1,000 µg/mL	Methylene Chloride:Benzene (50:50)	S-1200
1,2-Dibromo-3-chloropropane	96-12-8	1,000 µg/mL	Methanol-P&T	S-1255
Dichlorvos	62-73-7	1,000 µg/mL	Methanol-P&T	S-1475
Diethylstilbestrol	56-53-1	1,000 µg/mL	Methanol-P&T	S-1530
3,3'-Dimethoxybenzidine	119-90-4	1,000 µg/mL	Methanol-P&T	S-1565
2,5-Dimethylphenol	95-87-4	1,000 µg/mL	Acetone	S-1661
2-Fluorophenol	367-12-4	1,000 µg/mL	Methanol	S-2050
Hexachlorophene	70-30-4	1,000 µg/mL	Methylene Chloride	S-2160
Hydroquinone	123-31-9	1,000 µg/mL	Methanol-P&T	S-2235
Kepone	143-50-0	1,000 µg/mL	Methanol	S-2340
2-Methoxy-5-methylaniline	120-71-8	1,000 µg/mL	Methanol-P&T	S-2415
2-Methoxy-5-nitroaniline	99-59-2	1,000 µg/mL	Methanol-P&T	S-2420
Mirex	2385-85-5	1,000 µg/mL	Hexane:Toluene (50:50)	S-2635
Dibrom (Naled)	300-76-5	1,000 µg/mL	Methylene Chloride	S-2650
Nicotine	54-11-5	1,000 µg/mL	Methanol	S-2680
p-Phenylenediamine	106-50-3	1,000 µg/mL	Methanol-P&T	S-3070
Phthalic anhydride	85-44-9	1,000 µg/mL	Methanol	S-3100
Resorcinol	108-46-3	1,000 µg/mL	Methanol-P&T	S-3250
Strychnine	57-24-9	1,000 µg/mL	Methanol	S-3295
TEPP	107-49-3	1,000 µg/mL	Methanol	S-3315
Tetrachlorvinphos (Stirophos)	961-11-5	1,000 µg/mL	Acetone	S-3425
Tetraethyldithio pyrophosphate/Sulfotepp	3689-24-5	1,000 µg/mL	Methanol	S-3455
Toluene-2,4-diisocyanate	584-84-9	1,000 µg/mL	Methanol-P&T	S-3530
Trifluralin	1582-09-8	1,000 µg/mL	Methanol	S-3715
2,4,5-Trimethylaniline	137-17-7	1,000 µg/mL	Methanol-P&T	S-3718
Trimethyl phosphate	512-56-1	1,000 µg/mL	Methanol-P&T	S-3740
1,3,5-Trinitrobenzene	99-35-4	1,000 µg/mL	Methanol-P&T	S-3760
Tris(2,3-dibromopropyl)phosphate	126-72-7	1,000 µg/mL	Methylene Chloride	S-3773
Urethane	51-79-6	1,000 µg/mL	Methanol-P&T	S-3785

Volume for all Semivolatiles is 1 mL

CLP Series

Applicable Methods: CLP Series (see page 189 for details).

Anilines (Low Level) in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
2-Nitroaniline	88-74-4	4-Nitroaniline	100-01-6
3-Nitroaniline	99-09-2		

Concentration	Part #
2,000 µg/mL	ANILINE-LC-A

Applicable Methods: CLP Series (see page 189 for details).

High Concentration Acid Surrogates in Methanol			
Components	**CAS #**	**Components**	**CAS #**
2-Chlorophenol-3,4,5,6-d_4	93951-73-6	Phenol-d_6	13127-88-3
2-Fluorophenol	367-12-4	2,4,6-Tribromophenol	118-79-6

Concentration	Volume	Part #
7,500 µg/mL	1 mL	CLP90-75SA
7,500 µg/mL	5 mL	CLP90-75SA5

Applicable Methods: CLP Series (see page 189 for details).

Acid Surrogate Standard in Methanol			
Components	**CAS #**	**Components**	**CAS #**
2-Chlorophenol-3,4,5,6-d_4	93951-73-6	Phenol-d_6	13127-88-3
2-Fluorophenol	367-12-4	2,4,6-Tribromophenol	118-79-6

Concentration	Volume	Part #
2,000 µg/mL	1 mL	CLP90-SA
2,000 µg/mL	5 mL	CLP90-SA5

Applicable Methods: CLP Series (see page 189 for details).

Base/Neutrals Surrogate Standards in Methylene Chloride:Acetone			
Components	**CAS #**	**Components**	**CAS #**
1,2-Dichlorobenzene-d_4	2199-69-1	Nitrobenzene-d_5	4165-60-0
2-Fluorobiphenyl	321-60-8	p-Terphenyl-d_{14}	1718-51-0

Concentration	Volume	Part #
1,000 µg/mL	1 mL	CLP90-SB
1,000 µg/mL	5 mL	CLP90-SB5

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Volume for all Semivolatiles is 1 mL

CLP Series (continued)

Applicable Methods: CLP Series (see page 189 for details).

High Concentration Base/Neutral Surrogate Standards in Methylene Chloride:Acetone:Benzene

Components	CAS #	Components	CAS #
1,2-Dichlorobenzene-d_4	2199-69-1	Nitrobenzene-d_5	4165-60-0
2-Fluorobiphenyl	321-60-8	p-Terphenyl-d_{14}	1718-51-0

Concentration	Volume	Part #
5,000 µg/mL	5 mL	CLP90-SBH5

Applicable Methods: CLP Series (see page 189 for details).

Alternate Combination Surrogates for CLP SOW in Methylene Chloride:Acetone

Component	CAS #	Concentration	Components	CAS #	Concentration
2-Chlorophenol-3,4,5,6-d_4	93951-73-6	1,500 µg/mL	Nitrobenzene-d_5	4165-60-0	1,000 µg/mL
1,2-Dichlorobenzene-d_4	2199-69-1	1,000 µg/mL	Phenol-d_6	13127-88-3	1,500 µg/mL
2-Fluorobiphenyl	321-60-8	1,000 µg/mL	p-Terphenyl-d_{14}	1718-51-0	1,000 µg/mL
2-Fluorophenol	367-12-4	1,500 µg/mL	2,4,6-Tribromophenol	118-79-6	1,500 µg/mL

Part #
CLP90-SURR

Applicable Methods: US EPA Methods 604, 625, 8270 and CLP Series (see page 189 for details).

Phenolics Mix in Methylene Chloride

Components	CAS #	Components	CAS #	Components	CAS #
4-Chloro-3-methylphenol	59-50-7	4,6-Dinitro-2-methylphenol	534-52-1	Pentachlorophenol	87-86-5
2-Chlorophenol	95-57-8	2,4-Dinitrophenol	51-28-5	Phenol	108-95-2
2,4-Dichlorophenol	120-83-2	2-Nitrophenol	88-75-5	2,4,6-Trichlorophenol	88-06-2
2,4-Dimethylphenol	105-67-9	4-Nitrophenol	100-02-7		

Concentration	Part #
2,000 µg/mL	CLPS-A

Applicable Methods: US EPA Methods 625, 8100, 8270, and CLP Series (see page 189 for details).

PAH Analyte Mix in Methylene Chloride:Benzene

Components	CAS #	Components	CAS #	Components	CAS #
Acenaphthene	83-32-9	Benzo(g,h,i)perylene	191-24-2	Indeno(1,2,3-cd)pyrene	193-39-5
Acenaphthylene	208-96-8	Benzo(k)fluoranthene	207-08-9	Naphthalene	91-20-3
Anthracene	120-12-7	Chrysene	218-01-9	Phenanthrene	85-01-8
Benz(a)anthracene	56-55-3	Dibenz(a,h)anthracene	53-70-3	Pyrene	129-00-0
Benzo(a)pyrene	50-32-8	Fluoranthene	206-44-0		
Benzo(b)fluoranthene	205-99-2	Fluorene	86-73-7		

Concentration	Part #
2,000 µg/mL	CLPS-B

Volume for all Semivolatiles is 1 mL

CLP Series (continued)

Applicable Methods: US EPA Methods 625, 8270, and CLP Series (see page 189 for details).

Haloethers & Phthalates Mix in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
4-Bromodiphenyl ether	101-55-3	4-Chlorophenyl-phenyl ether	7005-72-3	bis(2-Ethylhexyl)phthalate	117-81-7
Butylbenzyl phthalate	85-68-7	Diethyl phthalate	84-66-2	n-Nitrosodi-n-propylamine	621-64-7
bis(2-Chloroethoxy)methane	111-91-1	Dimethyl phthalate	131-11-3	n-Nitrosodiphenylamine	86-30-6
bis(2-Chloroethyl)ether	111-44-4	Di-n-butyl phthalate	84-74-2		
bis(2-Chloro-1-methylethyl)ether	108-60-1	Di-n-octyl phthalate	117-84-0		

Concentration	Part #
2,000 µg/mL	CLPS-C

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

Chlorinated/Nitrated Hydrocarbons Mix in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
2-Chloronaphthalene	91-58-7	2,6-Dinitrotoluene	606-20-2	Isophorone	78-59-1
1,2-Dichlorobenzene	95-50-1	Hexachlorobenzene	118-74-1	Nitrobenzene	98-95-3
1,3-Dichlorobenzene	541-73-1	Hexachlorobutadiene	87-68-3	1,2,4-Trichlorobenzene	120-82-1
1,4-Dichlorobenzene	106-46-7	Hexachlorocyclopentadiene	77-47-4		
2,4-Dinitrotoluene	121-14-2	Hexachloroethane	67-72-1		

Concentration	Part #
2,000 µg/mL	CLPS-D

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

Additional Analytes Mix in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
Benzyl alcohol	100-51-6	2-Nitroaniline	88-74-4
4-Chloroaniline (p-Chloroaniline)	106-47-8	3-Nitroaniline	99-09-2
Dibenzofuran	132-64-9	4-Nitroaniline	100-01-6
2-Methylnaphthalene	91-57-6		

Concentration	Part #
2,000 µg/mL	CLPS-G

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Volume for all Semivolatiles is 1 mL

CLP Series (continued)

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

Internal Standard in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
Acenaphthene-d_{10}	15067-26-2	Naphthalene-d_8	1146-65-2
Chrysene-d_{12}	1719-03-5	Perylene-d_{12}	1520-96-3
1,4-Dichlorobenzene-d_4	3855-82-1	Phenanthrene-d_{10}	1517-22-2

Concentration	Volume	Part #
4,000 µg/mL	1 mL	CLPS-I
2,000 µg/mL	2 mL	CLPS-I2
4,000 µg/mL	5 mL	CLPS-I5

Applicable Methods: US EPA Methods 625 and CLP Series (see page 189 for details).

Internal Standard in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
Acenaphthene-d_{10}	15067-26-2	Naphthalene-d_8	1146-65-2
Chrysene-d_{12}	1719-03-5	Perylene-d_{12}	1520-96-3
1,4-Dichlorobenzene-d_4	3855-82-1	Phenanthrene-d_{10}	1517-22-2

Concentration	Part #
2,000 µg/mL	CLPS-I90

Applicable Methods: CLP Series (see page 189 for details).

Control Sample in Methanol			
Components	**CAS #**	**Components**	**CAS #**
2-Chlorophenol	95-57-8	2,4,6-Trichlorophenol	88-06-2
Phenol	108-95-2		

Concentration	Part #
2,000 µg/mL	CLPS-LC-ALCS

Volume for all Semivolatiles is 1 mL

CLP Series (continued)

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

Acids Matrix Spike in Methanol			
Components	**CAS #**	**Components**	**CAS #**
4-Chloro-3-methylphenol	59-50-7	Pentachlorophenol	87-86-5
2-Chlorophenol	95-57-8	Phenol	108-95-2
4-Nitrophenol	100-02-7		

Concentration	Part #
2,000 µg/mL	CLPS-MSA

Applicable Methods: US EPA Method 8270 and CLP Series (see page 189 for details).

Acid Extractable Matrix Spikes in Methanol					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Bromophenol blue	115-39-9	1,000 µg/mL	4-Nitrophenol	100-02-7	1,500 µg/mL
4-Chloro-3-methylphenol	59-50-7	1,500 µg/mL	Pentachlorophenol	87-86-5	1,500 µg/mL
2-Chlorophenol	95-57-8	1,500 µg/mL	Phenol	108-95-2	1,500 µg/mL

Part #
CLPS-MSA15-TI

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

Base/Neutrals Matrix Spike in Methanol			
Components	**CAS #**	**Components**	**CAS #**
Acenaphthene	83-32-9	n-Nitrosodi-n-propylamine	621-64-7
1,4-Dichlorobenzene	106-46-7	Pyrene	129-00-0
2,4-Dinitrotoluene	121-14-2	1,2,4-Trichlorobenzene	120-82-1

Concentration	Part #
1,000 µg/mL	CLPS-MSB

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

Base/Neutrals Tinted Matrix Spike in Methanol			
Components	**CAS #**	**Components**	**CAS #**
Acenaphthene	83-32-9	n-Nitrosodi-n-propylamine	621-64-7
Bromophenol blue	115-39-9	Pyrene	129-00-0
1,4-Dichlorobenzene	106-46-7	1,2,4-Trichlorobenzene	120-82-1
2,4-Dinitrotoluene	121-14-2		

Concentration	Part #
1,000 µg/mL	CLPS-MSB-TI

Volume for all Semivolatiles is 1 mL

CLP Series (continued)

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

Acid Surrogates Standards in Methanol

Components	CAS #	Components	CAS #
2-Fluorophenol	367-12-4	2,4,6-Tribromophenol	118-79-6
Phenol-d_6	13127-88-3		

Concentration	Volume	Part #
2,000 µg/mL	1 mL	CLPS-SA
2,000 µg/mL	5 mL	CLPS-SA5
10,000 µg/mL	1 mL	CLPS-SAH
10,000 µg/mL	5 mL	CLPS-SAH5

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

Base/Neutral Surrogate Standard in Methylene Chloride:Acetone

Components	CAS #	Components	CAS #
2-Fluorobiphenyl	321-60-8	p-Terphenyl-d_{14}	1718-51-0
Nitrobenzene-d_5	4165-60-0		

Concentration	Volume	Part #
1,000 µg/mL	1 mL	CLPS-SB
1,000 µg/mL	5 mL	CLPS-SB5

Applicable Methods: US EPA Method 625 and CLP series (see page 189 for details).

Base/Neutral Surrogate Standard (High Level) in Methylene Chloride:Acetone:Benzene

Components	CAS #	Components	CAS #
2-Fluorobiphenyl	321-60-8	p-Terphenyl-d_{14}	1718-51-0
Nitrobenzene-d_5	4165-60-0		

Concentration	Volume	Part #
5,000 µg/mL	1 mL	CLPS-SBH
5,000 µg/mL	5 mL	CLPS-SBH5

Applicable Methods: US EPA Method 625 and CLP Series (see page 189 for details).

Base/Neutral Tinted Surrogate Standard (High Level) in Methylene Chloride:Acetone:Benzene

Components	CAS #	Components	CAS #
2-Fluorobiphenyl	321-60-8	Methyl orange*	547-58-0
Nitrobenzene-d_5	4165-60-0	p-Terphenyl-d_{14}	1718-51-0

Concentration	Volume	Part #
5,000 µg/mL	1 mL	CLPS-SBH-TI
5,000 µg/mL	5 mL	CLPS-SBH5-TI

** Methyl orange is at a concentration of 12,500 µg/mL.*

Volume for all Semivolatiles is 1 mL

CLP Series (continued)

Applicable Methods: CLP Series (see page 189 for details).

CLP Series Semivolatiles Mix in Methylene Chloride:Benzene					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Acenaphthene	83-32-9	Dibenz(a,h)anthracene	53-70-3	2-Methylnaphthalene	91-57-6
Acenaphthylene	208-96-8	Dibenzofuran	132-64-9	2-Methylphenol	95-48-7
Acetophenone	98-86-2	3,3′-Dichlorobenzidine	91-94-1	3-Methylphenol*	108-39-4
Anthracene	120-12-7	2,4-Dichlorophenol	120-83-2	4-Methylphenol*	106-44-5
Benz(a)anthracene	56-55-3	Diethyl phthalate	84-66-2	Naphthalene	91-20-3
Benzo(a)pyrene	50-32-8	Dimethyl phthalate	131-11-3	2-Nitroaniline	88-74-4
Benzo(b)fluoranthene	205-99-2	Di-n-butyl phthalate	84-74-2	3-Nitroaniline	99-09-2
Benzo(g,h,i)perylene	191-24-2	Di-n-octyl phthalate	117-84-0	4-Nitroaniline	100-01-6
Benzo(k)fluoranthene	207-08-9	2,4-Dimethylphenol	105-67-9	Nitrobenzene	98-95-3
Biphenyl	92-52-4	4,6-Dinitro-2-methylphenol	534-52-1	2-Nitrophenol	88-75-5
4-Bromodiphenyl ether	101-55-3	2,4-Dinitrophenol	51-28-5	4-Nitrophenol	100-02-7
Butylbenzyl phthalate	85-68-7	2,4-Dinitrotoluene	121-14-2	n-Nitrosodi-n-propylamine	621-64-7
Carbazole	86-74-8	2,6-Dinitrotoluene	606-20-2	n-Nitrosodiphenylamine	86-30-6
4-Chloro-3-methylphenol	59-50-7	bis(2-Ethylhexyl)phthalate	117-81-7	Pentachlorophenol	87-86-5
bis(2-chloro-1-methylethyl) ether	108-60-1	Fluoranthene	206-44-0	Phenanthrene	85-01-8
bis(2-chloroethoxy)methane	111-91-1	Fluorene	86-73-7	Phenol	108-95-2
bis(2-chloroethyl)ether	111-44-4	Hexachlorobenzene	118-74-1	Pyrene	129-00-0
4-Chloroaniline (p-Chloroaniline)	106-47-8	Hexachlorobutadiene	87-68-3	1,2,4,5-Tetrachlorobenzene	95-94-3
2-Chloronaphthalene	91-58-7	Hexachlorocyclopentadiene	77-47-4	2,3,4,6-Tetrachlorophenol	58-90-2
2-Chlorophenol	95-57-8	Hexachloroethane	67-72-1	2,4,5-Trichlorophenol	95-95-4
4-Chlorophenyl-phenyl ether	7005-72-3	Indeno(1,2,3-cd)pyrene	193-39-5	2,4,6-Trichlorophenol	88-06-2
Chrysene	218-01-9	Isophorone	78-59-1		

Concentration	Part #
500 µg/mL	CLPS-SOM2A

** 3-Methylphenol and 4-Methylphenol are at a concentration of 250 µg/mL.*

Applicable Methods: CLP Series (see page 189 for details).

SOM 02.0 Selected Ion Monitoring Standard in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
Fluoranthene-d_{10}	93951-69-0	2-Methylnaphthalene-d_{10}	7297-45-2

Concentration	Part #
2,000 µg/mL	CLPS-SOM-ISB

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Volume for all Semivolatiles is 1 mL

CLP Series (continued)

Applicable Methods: CLP Series (see page 189 for details).

Combination Semivolatile Surrogate Standard in Methylene Chloride:Acetone					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
2-Fluorobiphenyl	321-60-8	1,000 µg/mL	Phenol-d_6	13127-88-3	2,000 µg/mL
2-Fluorophenol	367-12-4	2,000 µg/mL	p-Terphenyl-d_{14}	1718-51-0	1,000 µg/mL
Nitrobenzene-d_5	4165-60-0	1,000 µg/mL	2,4,6-Tribromophenol	118-79-6	2,000 µg/mL

Part #
CLPS-SURR

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

GC/MS Tuning Standard in Methanol	
Component	**CAS #**
bis(pentafluorophenyl)phenylphosphine	5074-71-5

Concentration	Part #
2,500 µg/mL	CLPS-T

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

4-Component GC/MS Tuning Standard in Methylene Chloride			
Components	**CAS #**	**Components**	**CAS #**
Benzidine	92-87-5	p,p'-DDT	50-29-3
bis(pentafluorophenyl)phenylphosphine	5074-71-5	Pentachlorophenol	87-86-5

Concentration	Part #
2,500 µg/mL	CLPS-T4

TCLP Series

Applicable Methods: US EPA Method 1311-TCLP Series (see page 189 for details).

TCLP Base/Neutral/Acid Extractable Spike Solution in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
1,4-Dichlorobenzene	106-46-7	2-Methylphenol	95-48-7	Pyridine	110-86-1
2,4-Dinitrotoluene	121-14-2	3-Methylphenol	108-39-4	2,4,5-Trichlorophenol	95-95-4
Hexachlorobenzene	118-74-1	4-Methylphenol	106-44-5	2,4,6-Trichlorophenol	88-06-2
Hexachlorobutadiene	87-68-3	Nitrobenzene	98-95-3		
Hexachloroethane	67-72-1	Pentachlorophenol	87-86-5		

Concentration	Part #
2,000 µg/mL	TCLP-BNA

Volume for all Semivolatiles is 1 mL

76-BIG-MIX

Applicable Methods: US EPA Methods 625, 8270 and CLP Series (see page 189 for details).

"Big-Mix" - Base Neutral & Acid Combination Calibration Standard in Methylene Chloride					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Acenaphthene	83-32-9	1,3-Dichlorobenzene	541-73-1	1-Methylnaphthalene	90-12-0
Acenaphthylene	208-96-8	1,4-Dichlorobenzene	106-46-7	2-Methylnaphthalene	91-57-6
Aniline	62-53-3	2,4-Dichlorophenol	120-83-2	2-Methylphenol	95-48-7
Anthracene	120-12-7	Diethyl phthalate	84-66-2	3-Methylphenol*	108-39-4
Azobenzene	103-33-3	Dimethyl phthalate	131-11-3	4-Methylphenol*	106-44-5
Benz(a)anthracene	56-55-3	2,4-Dimethylphenol	105-67-9	Naphthalene	91-20-3
Benzo(a)pyrene	50-32-8	1,2-Dinitrobenzene	528-29-0	2-Nitroaniline	88-74-4
Benzo(b)fluoranthene	205-99-2	1,3-Dinitrobenzene	99-65-0	3-Nitroaniline	99-09-2
Benzo(g,h,i)perylene	191-24-2	1,4-Dinitrobenzene	100-25-4	4-Nitroaniline	100-01-6
Benzo(k)fluoranthene	207-08-9	2,4-Dinitrophenol	51-28-5	Nitrobenzene	98-95-3
Benzyl alcohol	100-51-6	2,4-Dinitrotoluene	121-14-2	2-Nitrophenol	88-75-5
4-Bromodiphenyl ether	101-55-3	2,6-Dinitrotoluene	606-20-2	4-Nitrophenol	100-02-7
Butylbenzyl phthalate	85-68-7	4,6-Dinitro-2-methylphenol	534-52-1	n-Nitrosodimethylamine**	62-75-9
Carbazole	86-74-8	Diphenylamine	122-39-4	n-Nitrosodi-n-propylamine	621-64-7
4-Chloroaniline (p-Chloroaniline)	106-47-8	Di-n-butyl phthalate	84-74-2	Pentachlorophenol	87-86-5
bis(2-Chloroethoxy)methane	111-91-1	Di-n-octyl phthalate	117-84-0	Phenanthrene	85-01-8
bis(2-Chloroethyl)ether	111-44-4	bis(2-Ethylhexyl)adipate	103-23-1	Phenol	108-95-2
bis(2-Chloro-1-methylethyl)ether	108-60-1	bis(2-Ethylhexyl)phthalate	117-81-7	Pyrene	129-00-0
2-Chloronaphthalene	91-58-7	Fluoranthene	206-44-0	Pyridine	110-86-1
2-Chlorophenol	95-57-8	Fluorene	86-73-7	2,3,4,6-Tetrachlorophenol	58-90-2
4-Chlorophenyl-phenyl ether	7005-72-3	Hexachlorobenzene	118-74-1	2,3,5,6-Tetrachlorophenol	935-95-5
4-Chloro-3-methylphenol	59-50-7	Hexachlorobutadiene	87-68-3	1,2,4-Trichlorobenzene	120-82-1
Chrysene	218-01-9	Hexachlorocyclopentadiene	77-47-4	2,4,5-Trichlorophenol	95-95-4
Dibenz(a,h)anthracene	53-70-3	Hexachloroethane	67-72-1	2,4,6-Trichlorophenol	88-06-2
Dibenzofuran	132-64-9	Indeno(1,2,3-cd)pyrene	193-39-5		
1,2-Dichlorobenzene	95-50-1	Isophorone	78-59-1		

Concentration	Part #
1,000 µg/mL	76-BIG-MIX

** 3-Methylphenol and 4-Methylphenol are at a concentration of 500 µg/mL.*
*** n-Nitrosodimethylamine (8270-listed analyte) decomposes to Diphenylamine (mix component).*

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section 4

LC & LC/MS

Single & Multi-Component Standards

LC & LC/MS Single and Multi-Component Standards

Spex CertiPrep creates single and multi-component standards suitable for all HPLC detectors. Our standards are created in HPLC and LC/MS grade solvents to reduce potential interference and increase analytical accuracy.

High Performance Liquid Chromatography (HPLC) is a column-based chromatographic technique used to separate components in a mixture for identification and quantification. A pump system passes pressurized mobile phase and sample through a pre-filled column containing a packing or sorbent which aids in the separation of component peaks. As each analyte in the mixture interacts with the column material, it retards the flow of the analytes within the column. HPLC can be used for identification and quantification of compounds in a variety of fields from agriculture to medical and manufacturing uses.

A minimal HPLC instrument configuration includes a sampler, pumps, column compartment, and a detector. There are a multitude of various detectors commonly in use with a HPLC system including: Refractive Index Detector (RID), UV/Vis Detector, Photodiode Array Detector, and Mass Spectrometers. Each of these detectors have their own range of use and sensitivity, from the broad range RID detector with its higher detection limits, to the powerful and sensitive LC/MS techniques used for extremely low levels of detection.

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Volume for all LC & LC/MS Standards is 1 mL

HPLC | LC/MS Single-Component Organic Standards				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Abamectin	71751-41-2	1,000 µg/mL	HPLC Methanol	LCS-6014
Abate	3383-96-8	1,000 µg/mL	HPLC Acetonitrile	LCS-102
Acetamiprid	135410-20-7	1,000 µg/mL	HPLC Acetonitrile	LCS-4677-ACN
Aldicarb	116-06-3	1,000 µg/mL	HPLC Acetonitrile	LCS-190
Baygon (Propoxur)	114-26-1	1,000 µg/mL	HPLC Acetonitrile	LCS-3200-ACN
Baythroid (Cyfluthrin)	68359-37-5	1,000 µg/mL	HPLC Acetonitrile	LCS-376
Bromoxynil	1689-84-5	1,000 µg/mL	HPLC Acetonitrile	LCS-575-ACN
Bromuconazole	116255-48-2	1,000 µg/mL	HPLC Acetone	LCS-6007
Carbendazim	10605-21-7	100 µg/mL	HPLC Methanol	LCS-733
Chlorantraniliprole	500008-45-7	1,000 µg/mL	HPLC Acetonitrile	LCS-6127
Chlorfluazuron	71422-67-8	1,000 µg/mL	HPLC Acetonitrile	LCS-4017
Chlormequat chloride	999-81-5	1,000 µg/mL	HPLC Acetonitrile	LCS-4838
Chlorimuron-ethyl	90982-32-4	1,000 µg/mL	HPLC Acetonitrile	LCS-3927
Clethodim	99129-21-2	1,000 µg/mL	HPLC Acetonitrile	LCS-6083-ACN
Clofentezine	74115-24-5	1,000 µg/mL	HPLC Acetonitrile	LCS-5772
Clothianidin	210880-92-5	1,000 µg/mL	LC/MS Acetonitrile	LCS-6027
Cyazofamid	120116-88-3	1,000 µg/mL	HPLC Acetonitrile	LCS-6008
gamma-Cyhalothrin	76703-62-3	1,000 µg/mL	HPLC Acetone	LCS-6376
zeta-Cypermethrin	52315-07-8	1,000 µg/mL	HPLC Acetone	LCS-6401
Devrinol (Napropamide)	15299-99-7	1,000 µg/mL	HPLC Acetonitrile	LCS-1150-ACN
Dichlorprop-p	15165-67-0	1,000 µg/mL	HPLC Acetonitrile	LCS-6021
Dimethoate	60-51-5	1,000 µg/mL	HPLC Acetonitrile	LCS-1560
Dimethomorph	110488-70-5	1,000 µg/mL	HPLC Acetonitrile	LCS-3970-ACN
Dimethyl-p-nitrophenylphosphate	950-35-6	1,000 µg/mL	HPLC Acetone	LCS-1669
n-2,4-Dimethylphenyl-N'-methylformamidine	33089-74-6	1,000 µg/mL	HPLC Acetonitrile	LCS-6279
Diniconazole	83657-24-3	1,000 µg/mL	HPLC Acetonitrile	LCS-6057
Dylox	52-68-6	1,000 µg/mL	HPLC Acetone	LCS-1816
Ethiofencarb-sulfoxide	53380-22-6	1,000 µg/mL	HPLC Acetonitrile	LCS-6184
Ethoxysulfuron	126801-58-9	1,000 µg/mL	HPLC Acetonitrile	LCS-6231
Etofenprox	80844-07-1	1,000 µg/mL	HPLC Acetonitrile	LCS-6104
Famoxadone	131807-57-3	1,000 µg/mL	HPLC Acetone	LCS-5462
Fenpyroximate	111812-58-9	1,000 µg/mL	HPLC Acetonitrile	LCS-6387
Fensulfothion-oxon-sulfone	6132-17-8	1,000 µg/mL	HPLC Acetonitrile	LCS-6210
Fipronil	120068-37-3	1,000 µg/mL	HPLC Acetonitrile	LCS-4004-ACN
Fructose	57-48-7	1,000 µg/mL	HPLC Water	LCS-4189-HPLCW
Ipconazole	125225-28-7	1,000 µg/mL	HPLC Acetonitrile	LCS-6278
Iprovalicarb	140923-17-7	1,000 µg/mL	HPLC Acetone	LCS-6029
Lufenuron	103055-07-8	1,000 µg/mL	HPLC Acetonitrile	LCS-6181
Maltodextrin	9050-36-6	1,000 µg/mL	HPLC Water	LCS-5705
Mecoprop	93-65-2	1,000 µg/mL	HPLC Methanol	LCS-6372
Mesotrione	104206-82-8	1,000 µg/mL	HPLC Acetonitrile	LCS-5044

Volume for all LC & LC/MS Standards is 1 mL

HPLC | LC/MS Single-Component Organic Standards

Components	CAS #	Concentration	Matrix	Part #
Metconazole	125116-23-6	1,000 µg/mL	HPLC Acetone	LCS-6010
Methiocarb	2032-65-7	1,000 µg/mL	HPLC Acetonitrile	LCS-2385
Methoxyfenozide	161050-58-4	1,000 µg/mL	HPLC Acetonitrile	LCS-6033
Monocrotophos	6923-22-4	1,000 µg/mL	HPLC Acetonitrile	LCS-2645
Omite	2312-35-8	1,000 µg/mL	HPLC Acetone	LCS-2895
Paclobutrazol	76738-62-0	1,000 µg/mL	LC/MS Acetonitrile	LCS-4345-ACN
Perfluoro-n-octane sulfonate (PFOS)	1763-23-1	1,000 µg/mL	Methanol	LCS-4951
Piperonyl butoxide	51-03-6	1,000 µg/mL	HPLC Acetonitrile	LCS-3117-ACN
Prallethrin (mix of isomers)	23031-36-9	1,000 µg/mL	HPLC Acetonitrile	LCS-5783
Prophos	13194-48-4	1,000 µg/mL	HPLC Acetonitrile	LCS-3185
Prothioconazole	178928-70-6	1,000 µg/mL	Methanol	LCS-4904
Prothioconazole	178928-70-6	1,000 µg/mL	HPLC Acetonitrile	LCS-4904-ACN
Prothioconazole-desthio	120983-64-4	1,000 µg/mL	HPLC Acetonitrile	LCS-6189
Pyraflufen-ethyl	129630-19-9	1,000 µg/mL	HPLC Acetonitrile	LCS-6024-ACN
Spinetoram	187166-40-1	1,000 µg/mL	HPLC Acetonitrile	LCS-6012
Spinosad A&D	168316-95-8	1,000 µg/mL	HPLC Acetonitrile	LCS-6025
Spirodiclofen	148477-71-8	1,000 µg/mL	HPLC Acetonitrile	LCS-5295
Spiromesifen	283594-90-1	1,000 µg/mL	HPLC Acetonitrile	LCS-6035
Sucrose	57-50-1	1,000 µg/mL	HPLC Water	LCS-3308-HPLCW
Sulfentrazone	122836-35-5	1,000 µg/mL	HPLC Acetone	LCS-6013
Systhane (Myclobutanil)	88671-89-0	1,000 µg/mL	HPLC Acetone	LCS-3306
Tebufenozide	112410-23-8	1,000 µg/mL	HPLC Acetonitrile	LCS-6036
Tepraloxydim	149979-41-9	1,000 µg/mL	HPLC Acetonitrile	LCS-6178
Thiacloprid	111988-49-9	1,000 µg/mL	HPLC Acetonitrile	LCS-6026
Triclosan	3380-34-5	1,000 µg/mL	LC/MS Methanol	LCS-4382

LC/MS Daily Check Solution 1 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #
Caffeine	58-08-2	Reserpine	50-55-5

Concentration	Part #
10 µg/mL	LC-DC-1

LC/MS Daily Check Solution 2 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #
Caffeine	58-08-2	Reserpine	50-55-5
4-Nitrophenol	100-02-7		

Concentration	Part #
10 µg/mL	LC-DC-2

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Volume for all Pesticides Mixes is 1 mL

Pesticide Kit

Kit Contains

SPXPR-1	SPXPR-6
SPXPR-2	SPXPR-7
SPXPR-3	SPXPR-8
SPXPR-4	SPXPR-9
SPXPR-5	SPXPR-10

Concentration	Part #
100 µg/mL	SPXPR-KIT

Pesticide Mix 1 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Acetamiprid	135410-20-7	Chlorantraniliprole	500008-45-7	Pirimicarb	23103-98-2
Aldicarb	116-06-3	Fenoxycarb	79127-80-3	Tebufenpyrad	119168-77-3
Aldicarb sulfone	1646-88-4	Imazalil	35544-44-0	Thiacloprid	111988-49-9
Aldicarb sulfoxide	1646-87-3	Imidacloprid	138261-41-3	Trifloxystrobin	141517-21-7
Azoxystrobin	131860-33-8	Iprodione	36734-19-7		
Boscalid	188425-85-6	Piperonyl butoxide	51-03-6		

Concentration	Part #
100 µg/mL	SPXPR-1

Pesticide Mix 2 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Azinphos-methyl	86-50-0	Dyfonate (Fonofos)	944-22-9	Phosalone	2310-17-0
Carbophenothion	786-19-6	Ethoprophos (Prophos)	13194-48-4	Phosmet (Imidan)	732-11-6
Coumaphos	56-72-4	Hexythiazox	78587-05-0	Quinalphos	13593-03-8
Dicrotophos	141-66-2	Malathion	121-75-5	Terbufos	13071-79-9
Dimethoate	60-51-5	Methidathion	950-37-8	Triazophos	24017-47-8

Concentration	Part #
100 µg/mL	SPXPR-2

Pesticide Mix 3 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Carbaryl	63-25-2	Methamidophos	10265-92-6	Pirimiphos-methyl	29232-93-7
Dimethomorph	110488-70-5	Monocrotophos	6923-22-4	Profenofos	41198-08-7
Etofenprox	80844-07-1	Myclobutanil (Systhane)	88671-89-0	Propargite (Omite)	2312-35-8
Etoxazole	153233-91-1	Phenthoate	2597-03-7	Spirodiclofen	148477-71-8
Flonicamid	150862-67-0	Phorate	298-02-2	Thiamethoxam	153719-23-4

Concentration	Part #
100 µg/mL	SPXPR-3

Volume for all Pesticides Mixes is 1 mL

Pesticide Mix 4 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Acephate	30560-19-1	Disulfoton	298-04-4	Fenitrothion	122-14-5
Chlorothalonil	1897-45-6	EPN	2104-64-5	Fenthion	55-38-9
Chlorpyrifos	2921-88-2	Edifenphos	17109-49-8	Fipronil	120068-37-3
Diazinon	333-41-5	Ethion	563-12-2	Fludioxonil	131341-86-1
Dichlorvos	62-73-7	Ethyl parathion	56-38-2	Methyl parathion	298-00-0

Concentration	Part #
100 µg/mL	SPXPR-4

Pesticide Mix 5 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Baygon (Propoxur)	114-26-1	Metalaxyl	57837-19-1	Pencycuron	66063-05-6
Clofentezine	74115-24-5	Methomyl	16752-77-5	Prochloraz	67747-09-5
Diuron	330-54-1	Oxamyl	23135-22-0	Pymetrozine	123312-89-0
Isoproturon	34123-59-6	Oxydemeton-methyl	301-12-2	Pyraclostrobin	175013-18-0
Linuron	330-55-2	Paclobutrazol	76738-62-0		

Concentration	Part #
100 µg/mL	SPXPR-5

Pesticide Mix 6 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Alachlor	15972-60-8	Fenoprop (2,4,5-TP) (Silvex)	93-72-1	Metolachlor	51218-45-2
Bentazon	25057-89-0	Fenpropathrin	64257-84-7	Prowl (Pendimethalin)	40487-42-1
Captan	133-06-2	Fenvalerate (Sanmarton)	51630-58-1	Pyridaben	96489-71-3
Chlorpropham	101-21-3	tau-Fluvalinate	102851-06-9	Quinoxyfen	124495-18-7
Epoxiconazole	133855-98-8	Kresoxim-methyl	143390-89-0	Quintozene (pentachloronitrobenzene)	82-68-8

Concentration	Part #
100 µg/mL	SPXPR-6

Pesticide Mix 7 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #
Bifenthrin	82657-04-3	Prallethrin (mix of isomers)	23031-36-9
Cypermethrin	52315-07-8	Pyrethrins (mix of isomers)	8003-34-7
Cyfluthrin (Baythroid)	68359-37-5	Resmethrin	10453-86-8
Permethrin (mix of cis & trans)	52645-53-1	Tetramethrin	7696-12-0

Concentration	Part #
100 µg/mL	SPXPR-7

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Volume for all Pesticides Mixes is 1 mL

Pesticide Mix 8 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Abamectin (mix of isomers)	71751-41-2	Hexaconazole	79983-71-4	Spinetoram (J)	187166-40-1
Bifenazate	149877-41-8	Isoprocarb	2631-40-5	Spinosad (as Spinosyn A)	131929-60-7
Bromacil	314-40-9	Methiocarb	2032-65-7	Spiromesifen	283594-90-1
Fenobucarb (BPMC)	3766-81-2	Propazine	139-40-2	Spirotetramat	203313-25-1
Fenpyroximate	111812-58-9	Propiconazole (Tilt)	60207-90-1	Tebuconazole (Folicur)	107534-96-3

Concentration	Part #
100 µg/mL	SPXPR-8

Pesticide Mix 9 in Acetonitrile:Acetone (9:1)

Components	CAS #	Components	CAS #	Components	CAS #
Acequinocyl	57960-19-7	Fenamiphos sulfone	31972-44-8	Molinate	2212-67-1
Atrazine	1912-24-9	Fenamiphos sulfoxide	31972-43-7	Simazine	122-34-9
Atrazine-desethyl	6190-65-4	Fenhexamid	126833-17-8	Thiophanate-methyl	23564-05-8
Carbofuran	1563-66-2	Fenoxaprop	95617-90-7	Trichlorfon (Dylox)	52-68-6
Cyanazine (Bladex)	21725-46-2	Fluometuron	2164-17-2		
2,4-DB	94-82-6	3-Hydroxycarbofuran	16655-82-6		

Concentration	Part #
100 µg/mL	SPXPR-9

Pesticide Mix 10 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Aldrin	309-00-2	p-p'-DDE	72-55-9	Endrin aldehyde	7421-93-4
Chlordecone (Kepone)	143-50-0	o-p'-DDT	789-02-6	Endrin ketone	53494-70-5
o-p'-DDD	53-19-0	p-p'-DDT	50-29-3	Isodrin	465-73-6
p-p'-DDD	72-54-8	Dieldrin	60-57-1	Metribuzin	21087-64-9
o-p'-DDE	3424-82-6	Endrin	72-20-8	Mirex	2385-85-5

Concentration	Part #
100 µg/mL	SPXPR-10

Need More Helpful Hints?

A wealth of information, including technical tips and advice from our expert chemists, can be found on our website:

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section 5

Pesticides, PCBs and Herbicides

Pesticides, PCBs and Herbicides

The EPA is tasked with the monitoring of environmental systems as they pertain to contamination and human health. The methods issued by the EPA are created to respond to specific toxins or persistent organic pollutants (POPs) found in environmental samples such as soil, source water, drinking water, and waste. In particular, pollutants such as polychlorinated biphenyls (PCBs), which were in widespread industrial use up until their restriction, are of concern due to their stable and persistent nature in the environment. Another group of chemicals of high concern is the hundreds of commercial pesticides and herbicides in use in the world today. Pesticides, from algaecides to virucides, are used in large quantities in industrial and private agriculture. The concern over human pesticide exposure over the past few decades has led to extensive monitoring of these pesticides. It has been reported that over 98% of insecticides and 95% of herbicides affect areas other than their intended target product. It is essential that monitoring agencies have accurate standard mixes to measure the pesticide levels in the environment.

Many new pesticides are now being tested using highly sensitive LC/MS techniques, in addition to traditional GC techniques, to determine minute amounts of residue in environmental samples and food products.

At Spex CertiPrep, we facilitate ease of monitoring and testing of pesticides by creating pesticide test mixes to suit your monitoring needs. Spex CertiPrep is the leader in offering pesticide standards designed to work within EPA, AOAC and FDA analytical testing methods using all of the leading analytical techniques: LC, LC/MS, GC, and GC/MS. Many pesticide standard mixes are readily available in our catalog along with a large list of single pesticide standards. In addition, custom pesticide mixes can be made to your specifications to create a mix that meets your needs.

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US EPA Methods

US EPA Method 500 Series

Method 505 is an analytical method for the monitoring of organochlorine pesticides and PCBs in drinking water and raw water sources by GC/ECD.

Method 507 is an analytical method for the monitoring of nitrogen and phosphorus containing pesticides and PCBs in drinking water and ground water by GC/NPD.

Method 508 is an analytical method for the monitoring of organochlorine pesticides and PCBs in drinking water and ground water by GC/ECD.

Method 515 is an analytical method for the monitoring of chlorinated acids in drinking water by GC/ECD.

Method 531 is an analytical method for the monitoring of n-methylcarbamoyloximes and n-methylcarbamates in drinking water and ground water by HPLC and a fluorescence detector.

Method 547 is an analytical method for the monitoring of glyphosate by HPLC with a fluorescence detector.

Method 548 is an analytical method for the monitoring of endothall in drinking water by GC/ECD.

Method 549 is an analytical method for the monitoring of diquat and paraquat in drinking water by HPLC/UV.

US EPA Method 600 Series

Method 608 is an analytical method for the monitoring of organochlorine pesticides and PCBs in municipal and industrial wastewater by GC/ECD.

Method 614 is an analytical method for the monitoring of organophosphorus pesticides in municipal and industrial wastewater by GC/NPD.

Method 619 is an analytical method for the monitoring of triazine pesticides in municipal and industrial wastewater by GC/NPD.

Method 622 is an analytical method for the monitoring of organophosphorus pesticides in municipal and industrial wastewater by GC/NPD.

US EPA Method 8000 Series

Method 8081 is an analytical method for the monitoring of organochlorine pesticides and PCBs in environmental samples by GC/ECD.

Method 8082 is an analytical method for the monitoring of PCBs in environmental samples by GC/ECD or GC/ELCD.

Method 8141 is an analytical method for the monitoring of organophosphorus pesticides in environmental samples by GC/NPD or GC/FPD.

Methods 8150A, 8150B and 8151 are general analytical methods for the monitoring of herbicides in environmental samples by GC/ECD.

CLP Series

The US EPA retains analytical services through the Contract Laboratory Program (CLP). The CLP follows detailed SOPs derived from EPA methods and SW-846. The CLP Pesticides Analysis Method is an analytical method for the analysis of aqueous or solid samples for pesticides by GC/ECD.

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 505 (see page 228 for details).

Organochloride Pesticides Mix in Acetone

Components	CAS #	Concentration	Components	CAS #	Concentration
Alachlor	15972-60-8	50 µg/mL	Heptachlor	76-44-8	5 µg/mL
Aldrin	309-00-2	5 µg/mL	Heptachlor epoxide (Isomer B)	1024-57-3	5 µg/mL
Atrazine	1912-24-9	1,250 µg/mL	Hexachlorobenzene	118-74-1	5 µg/mL
gamma-BHC	58-89-9	5 µg/mL	Hexachlorocyclopentadiene	77-47-4	5 µg/mL
alpha-Chlordane	5103-71-9	5 µg/mL	Methoxychlor	72-43-5	25 µg/mL
gamma-Chlordane	5103-74-2	5 µg/mL	cis-Nonachlor	5103-73-1	5 µg/mL
Dieldrin	60-57-1	5 µg/mL	trans-Nonachlor	39765-80-5	5 µg/mL
Endrin	72-20-8	5 µg/mL	Simazine	122-34-9	1,250 µg/mL

Part #
505-A2

Applicable Methods: US EPA Methods 505, 508, 608, 8081, CLP Series and TCLP Series (see page 228 for details).

Toxaphene Standard in Hexane

Component	CAS #
Toxaphene	8001-35-2

Concentration	Part #	Concentration	Part #
200 µg/mL	TOX-X	1,000 µg/mL	S-3535

Applicable Methods: US EPA Methods 505, 508, 608, 8081, CLP Series and TCLP Series (see page 228 for details).

Chlordane Standard in Hexane

Component	CAS #
Chlordane	57-74-9

Concentration	Part #	Concentration	Part #
200 µg/mL	CDANE-X	1,000 µg/mL	S-780

Applicable Methods: US EPA Methods 505 and 508 (see page 228 for details).

Decachlorobiphenyl Standard in Toluene

Component	CAS #
Decachlorobiphenyl	2051-24-3

Concentration	Part #
5,000 µg/mL	DCBP-XH

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 505 (see page 228 for details).

Aroclor Mix 1 in Hexane			
Components	**CAS #**	**Components**	**CAS #**
Aroclor 1016	12674-11-2	Aroclor 1248	12672-29-6
Aroclor 1232	11141-16-5	Aroclor 1260	11096-82-5

Concentration	Part #
200 µg/mL	PCB-M1

Applicable Methods: US EPA Method 505 (see page 228 for details).

Aroclor Mix 2 in Hexane			
Components	**CAS #**	**Components**	**CAS #**
Aroclor 1221	11104-28-2	Aroclor 1254	11097-69-1
Aroclor 1242	53469-21-9		

Concentration	Part #
200 µg/mL	PCB-M2

Applicable Methods: US EPA Methods 505, 508, 608, 8082, and CLP Series (see page 228 for details).

Individual Aroclors in Hexane			
Components	**CAS #**	**Concentration**	**Part #**
Aroclor 1016	12674-11-2	200 µg/mL	PCB-1016
		1,000 µg/mL	PCB-1016H
Aroclor 1221	11104-28-2	200 µg/mL	PCB-1221
		1,000 µg/mL	PCB-1221H
Aroclor 1232	11141-16-5	200 µg/mL	PCB-1232
		1,000 µg/mL	PCB-1232H
Aroclor 1242	53469-21-9	200 µg/mL	PCB-1242
		1,000 µg/mL	PCB-1242H
Aroclor 1248	12672-29-6	200 µg/mL	PCB-1248
		1,000 µg/mL	PCB-1248H
Aroclor 1254	11097-69-1	200 µg/mL	PCB-1254
		1,000 µg/mL	PCB-1254H
Aroclor 1260	11096-82-5	200 µg/mL	PCB-1260
		1,000 µg/mL	PCB-1260H
Aroclor 1262	37324-23-5	200 µg/mL	PCB-1262
		1,000 µg/mL	PCB-1262H
Aroclor 1268	11100-14-4	200 µg/mL	PCB-1268
		1,000 µg/mL	PCB-1268H

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Methods 505, 608 and 8082 (see page 228 for details).

PCB Kit, High Level in Hexane

Kit Contains 1 mL of each

PCB-1016H	PCB-1248H
PCB-1221H	PCB-1254H
PCB-1232H	PCB-1260H
PCB-1242H	

Concentration	Part #
1,000 µg/mL	PCB-KH

Applicable Methods: US EPA Method 507 (see page 228 for details).

Analyte Mix A in Acetone

Components	CAS #	Components	CAS #	Components	CAS #
Alachlor	15972-60-8	Carboxin	5234-68-4	EPTC	759-94-4
Ametryn	834-12-8	Chlorpropham	101-21-3	Fenarimol	60168-88-9
Atraton	1610-17-9	Cycloate	1134-23-2	Phenamiphos	22224-92-6
Atrazine	1912-24-9	Diazinon	333-41-5	Prophos	13194-48-4
Bromacil	314-40-9	Dichlorvos	62-73-7	Sonar/Fluoridone	59756-60-4
Butachlor	23184-66-9	Diphenamid	957-51-7	Tributylphosphoro-trithioite	150-50-5
Butylate	2008-41-5	Disulfoton	298-04-4	Velpar	51235-04-2

Concentration	Part #
1,000 µg/mL	507-A

Applicable Methods: US EPA Method 507 (see page 228 for details).

Analyte Mix B in Acetone

Components	CAS #	Components	CAS #	Components	CAS #
Beam	41814-78-2	Norflurazon	27314-13-2	Tebuthiuron	34014-18-1
Dimethyl-p-nitrophenyl phosphate	950-35-6	Pebulate	1114-71-2	Terbacil	5902-51-2
Metolachlor	51218-45-2	Prometon	1610-18-0	Terbufos	13071-79-9
Metribuzin	21087-64-9	Prometryn	7287-19-6	Terbutryn	886-50-0
Mevinphos	7786-34-7	Propazine	139-40-2	Tetrachlorvinphos	961-11-5
MGK 264™	113-48-4	Propyzamide	23950-58-5	Triadimefon	43121-43-3
Molinate	2212-67-1	Simazine	122-34-9	Vernolate	1929-77-7
Napropamide (Devrinol)	15299-99-7	Simetryn	1014-70-6		

Concentration	Part #
1,000 µg/mL	507-B

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 507 (see page 228 for details).

Internal Standard in Methyl Tertiary-Butyl Ether	
Component	**CAS #**
Triphenyl phosphate	115-86-6

Concentration	Part #
500 µg/mL	507-I

Applicable Methods: US EPA Method 508 (see page 228 for details).

Reformulated Chlorinated Pesticides Mix in Methyl Tertiary-Butyl Ether					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Aldrin	309-00-2	p,p′-DDE	72-55-9	Endrin	72-20-8
alpha-BHC	319-84-6	p,p′-DDT	50-29-3	Endrin aldehyde	7421-93-4
beta-BHC	319-85-7	Dieldrin	60-57-1	Endrin ketone	53494-70-5
delta-BHC	319-86-8	Endosulfan I	959-98-8	Heptachlor	76-44-8
gamma-BHC	58-89-9	Endosulfan II	33213-65-9	Heptachlor epoxide (Isomer B)	1024-57-3
p,p′-DDD	72-54-8	Endosulfan sulfate	1031-07-8	Methoxychlor	72-43-5

Concentration	Part #
1,000 µg/mL	508-A

Applicable Methods: US EPA Method 508 (see page 228 for details).

PCNB Internal Standard in Methyl Tertiary-Butyl Ether	
Component	**CAS #**
Pentachloronitrobenzene	82-68-8

Concentration	Part #
100 µg/mL	508-I

Applicable Methods: US EPA Method 508 (see page 228 for details).

GC Degradation Check Solution in Methyl Tertiary-Butyl Ether			
Components	**CAS #**	**Components**	**CAS #**
p,p′-DDT	50-29-3	Endrin	72-20-8

Concentration	Part #
10 µg/mL	508-DC

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 508 (see page 228 for details).

Method 508 Analyte Mix A in Acetone					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Alachlor	15972-60-8	p,p'-DDD	72-54-8	Endrin	72-20-8
Aldrin	309-00-2	p,p'-DDE	72-55-9	Endrin aldehyde	7421-93-4
alpha-BHC	319-84-6	p,p'-DDT	50-29-3	Endrin ketone	53494-70-5
beta-BHC	319-85-7	Dieldrin	60-57-1	Heptachlor	76-44-8
delta-BHC	319-86-8	Endosulfan I	959-98-8	Heptachlor epoxide (Isomer B)	1024-57-3
gamma-BHC	58-89-9	Endosulfan II	33213-65-9	Methoxychlor	72-43-5
Butachlor	23184-66-9	Endosulfan sulfate	1031-07-8		

Concentration	Part #
500 µg/mL	5081-A

Applicable Methods: US EPA Method 508 (see page 228 for details).

NPD Analytes in Acetone			
Components	**CAS #**	**Components**	**CAS #**
Atrazine	1912-24-9	Simazine	122-34-9

Concentration	Part #
200 µg/mL	8141-D

Applicable Methods: US EPA Methods 508 and 8081 (see page 228 for details).

Internal Standard in Methanol	
Component	**CAS #**
Pentachloronitrobenzene	82-68-8

Concentration	Part #
1,000 µg/mL	S-2945

Applicable Methods: US EPA Method 508 (see page 228 for details).

Performance Check Solution in Methyl Tertiary-Butyl Ether:Ethyl Acetate					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
delta-BHC	319-86-8	40 ng/mL	Chlorpyrifos	2921-88-2	2 ng/mL
Chlorothalonil	1897-45-6	50 ng/mL	Methyl dacthal	1861-32-1	50 ng/mL

Part #
5081-PC

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Methods 515 and 8151 (see page 228 for details).

Internal Standard in Methyl Tertiary-Butyl Ether	
Component	**CAS #**
4,4′-Dibromooctafluorobiphenyl (DBOB)	10386-84-2

Concentration	Part #
1,000 µg/mL	S-1250

Applicable Methods: US EPA Method 531 (see page 228 for details).

Method 531 Analyte Mix A in HPLC Acetonitrile			
Components	**CAS #**	**Components**	**CAS #**
Aldicarb	116-06-3	Carbofuran	1563-66-2
Aldicarb sulfoxide	1646-87-3	3-Hydroxycarbofuran	16655-82-6
Aldoxycarb	1646-88-4	Methiocarb	2032-65-7
Baygon (Propoxur)	114-26-1	Methomyl	16752-77-5
Carbaryl	63-25-2	Oxamyl	23135-22-0

Concentration	Part #
100 µg/mL	5311-A10

Applicable Methods: US EPA Method 531 (see page 228 for details).

Phosphorus Pesticide Calibration Mix in HPLC Acetonitrile					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Aldicarb	116-06-3	Carbaryl	63-25-2	Methomyl	16752-77-5
Aldicarb sulfoxide	1646-87-3	Carbofuran	1563-66-2	1-Naphthol	90-15-3
Aldoxycarb	1646-88-4	3-Hydroxycarbofuran	16655-82-6	Oxamyl	23135-22-0
Baygon (Propoxur)	114-26-1	Methiocarb	2032-65-7		

Concentration	Part #
100 µg/mL	5312-A

Applicable Methods: US EPA Method 531 (see page 228 for details).

Internal Standard/Surrogate in HPLC Acetonitrile	
Component	**CAS #**
4-Bromo-3,5-dimethylphenyl-N-methylcarbamate (BDMC)	672-99-1

Concentration	Part #
100 µg/mL	531-I

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 531 (see page 228 for details).

Performance Check Solution in Methanol

Components	CAS #	Concentration	Components	CAS #	Concentration
Aldicarb sulfoxide	1646-87-3	100 µg/mL	3-Hydroxycarbofuran	16655-82-6	2 µg/mL
4-Bromo-3,5-dimethylphenyl-N-methylcarbamate	672-99-1	10 µg/mL	Methiocarb	2032-65-7	20 µg/mL

Part #
531-PCS

Applicable Methods: US EPA Method 547 (see page 228 for details).

Glyphosate Standard in HPLC Water

Component	CAS #
Glyphosate	1071-83-6

Concentration	Part #
2,000 µg/mL	547-A

Applicable Methods: US EPA Method 548 (see page 228 for details).

Endothall Standard in DI Water

Component	CAS #
Endothall monohydrate	62059-43-2

Concentration	Part #
2,000 µg/mL	548-A

Applicable Methods: US EPA Method 548 (see page 228 for details).

Endothall-PFPH Standard in Methyl Tertiary-Butyl Ether

Component	CAS #
Endothall-PFPH	N/A

Concentration	Part #
2,000 µg/mL	548-APFPH

Applicable Methods: US EPA Method 548 (see page 228 for details).

Internal Standard in Methyl Tertiary-Butyl Ether

Component	CAS #
Endosulfan I	959-98-8

Concentration	Part #
200 µg/mL	548-IS

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 548 (see page 228 for details).

Endothall Standard in Methanol	
Component	**CAS #**
Endothall monohydrate	62059-43-2

Concentration	Part #
2,000 µg/mL	5481-A

Applicable Methods: US EPA Method 548 (see page 228 for details).

Derivatized Endothall Standard in Methanol	
Component	**CAS #**
Endothall dimethyl ester	145-73-3

Concentration	Part #
2,000 µg/mL	5481-MEO

Applicable Methods: US EPA Method 548 (see page 228 for details).

Internal Standard in Methanol	
Component	**CAS #**
Acenaphthene-d_{10}	15067-26-2

Concentration	Part #
2,000 µg/mL	5481-IS

Applicable Methods: US EPA Method 548 (see page 228 for details).

GC/MS Tuning Standard in Methanol	
Component	**CAS #**
bis(pentafluorophenyl)phenylphosphine	5074-71-5

Concentration	Part #
2,500 µg/mL	CLPS-T

Applicable Methods: US EPA Method 549 (see page 228 for details).

Method 549 Analyte Mix in DI Water			
Components	**CAS #**	**Components**	**CAS #**
Diquat dibromide monohydrate	6385-62-2	Paraquat dichloride tetrahydrate	1910-42-5

Concentration	Part #
1,000 µg/mL	5491-A

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 608 (see page 228 for details).

Method 608 Analyte Mix in Methanol					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Aldrin	309-00-2	100 µg/mL	Dieldrin	60-57-1	200 µg/mL
alpha-BHC	319-84-6	100 µg/mL	Endosulfan I	959-98-8	200 µg/mL
beta-BHC	319-85-7	100 µg/mL	Endosulfan II	33213-65-9	200 µg/mL
delta-BHC	319-86-8	100 µg/mL	Endosulfan sulfate	1031-07-8	600 µg/mL
gamma-BHC	58-89-9	100 µg/mL	Endrin	72-20-8	200 µg/mL
p,p'-DDD	72-54-8	600 µg/mL	Endrin aldehyde	7421-93-4	600 µg/mL
p,p'-DDE	72-55-9	200 µg/mL	Heptachlor	76-44-8	100 µg/mL
p,p'-DDT	50-29-3	600 µg/mL	Heptachlor epoxide (Isomer B)	1024-57-3	100 µg/mL

Part #
608-A

Applicable Method: US EPA Method 614 (see page 228 for details).

Method 614 Kit in Acetone Kit contains single-component standards of each of the analytes listed below			
Components	**CAS #**	**Matrix**	**Part #**
Azinphos-methyl	86-50-0	Acetone	S-2085
Demeton (O+S)	8065-48-3	Methanol	S-1140
Diazinon	333-41-5	Acetone	S-1175
Disulfoton	298-04-4	Methanol	S-1755
Ethion	563-12-2	Methanol-P&T	S-1905
Malathion	121-75-5	Methanol	S-2355
Methyl parathion	298-00-0	Methanol	S-2920
Parathion	56-38-2	Methanol	S-2445

Concentration	Part #
1,000 µg/mL	614-SK

Applicable Methods: US EPA Method 619 (see page 228 for details).

Method 619 Analyte Compound Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Ametryn	834-12-8	1,000 µg/mL	Methanol-P&T	S-215
Atraton	1610-17-9	1,000 µg/mL	Methanol	S-360
Atrazine	1912-24-9	1,000 µg/mL	Acetone	S-365
Prometon	1610-18-0	1,000 µg/mL	Acetone	S-3130
Propazine	139-40-2	1,000 µg/mL	Methanol	S-3170
Simazine	122-34-9	1,000 µg/mL	Acetone	S-3280
Terbuthylazine	5915-41-3	1,000 µg/mL	Methanol	S-3330
Terbutryne	886-50-0	1,000 µg/mL	Methanol-P&T	S-3335

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 622 (see page 228 for details).

Method 622 Analyte Compound Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Azinphos-methyl	86-50-0	1,000 µg/mL	Acetone	S-2085
Coumaphos	56-72-4	1,000 µg/mL	Acetone	S-980
Chlorpyrifos	2921-88-2	1,000 µg/mL	Methanol	S-965
Demeton (O+S)	8065-48-3	1,000 µg/mL	Methanol	S-1140
Disulfoton	298-04-4	1,000 µg/mL	Methanol	S-1755
Diazinon	333-41-5	1,000 µg/mL	Acetone	S-1175
Dichlorvos	62-73-7	1,000 µg/mL	Methanol-P&T	S-1475
Dimethoate	60-51-5	1,000 µg/mL	Methanol-P&T	S-1560
EPN	2104-64-5	1,000 µg/mL	Methanol	S-1865
Fensulfothion	115-90-2	1,000 µg/mL	Acetone	S-2005
Fenthion	55-38-9	1,000 µg/mL	Acetone	S-2010
Malathion	121-75-5	1,000 µg/mL	Methanol	S-2355
Methyl parathion	298-00-0	1,000 µg/mL	Methanol	S-2445
Mevinphos	7786-34-7	1,000 µg/mL	Methanol-P&T	S-2625
Monocrotophos	6923-22-4	1,000 µg/mL	Acetone	S-2645
Dibrom (Naled)	300-76-5	1,000 µg/mL	Methylene Chloride	S-2650
Parathion	56-38-2	1,000 µg/mL	Methanol	S-2920
Phorate	298-02-2	1,000 µg/mL	Methanol	S-3080
Prophos	13194-48-4	1,000 µg/mL	Acetone	S-3185
Ronnel (Fenchlorphos)	299-84-3	1,000 µg/mL	Methanol	S-2000
TEPP	107-49-3	1,000 µg/mL	Methanol	S-3315
Tetrachlorvinphos	961-11-5	1,000 µg/mL	Acetone	S-3425
Tetraethyldithio pyrophosphate/Sulfotepp	3689-24-5	1,000 µg/mL	Methanol	S-3455
Tokuthion (Prothiofos)	34643-46-4	1,000 µg/mL	Acetone	S-3225
Tributyl phosphorotrithioate	150-50-5	1,000 µg/mL	Acetone	S-3565
Trichloronate	327-98-0	1,000 µg/mL	Acetone	S-3570

Applicable Methods: US EPA Method 8081 (see page 228 for details).

Method 8081 Organochlorine Pesticides Mix in Benzene					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Aldrin	309-00-2	p,p'-DDE	72-55-9	Endrin	72-20-8
alpha-BHC	319-84-6	p,p'-DDT	50-29-3	Endrin aldehyde	7421-93-4
beta-BHC	319-85-7	Dieldrin	60-57-1	Endrin ketone	53494-70-5
delta-BHC	319-86-8	Endosulfan I	959-98-8	Heptachlor	76-44-8
gamma-BHC	58-89-9	Endosulfan II	33213-65-9	Heptachlor epoxide (Isomer B)	1024-57-3
p,p'-DDD	72-54-8	Endosulfan sulfate	1031-07-8	Methoxychlor	72-43-5

Concentration	Part #
2,000 µg/mL	625-PH

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 8081 (see page 228 for details).

Internal Standard in Methanol	
Component	**CAS #**
Pentachloronitrobenzene	82-68-8

Concentration	Part #
1,000 µg/mL	S-2945

Applicable Methods: US EPA Methods 8081 and 8141 (see page 228 for details).

Alternate Internal Standard in Methanol-P&T	
Component	**CAS #**
1-Bromo-2-nitrobenzene	577-19-5

Concentration	Part #
1,000 µg/mL	S-590

Applicable Methods: US EPA Method 8081 and CLP Series (see page 228 for details).

3/90 SOW Surrogate Spike in Acetone			
Components	**CAS #**	**Components**	**CAS #**
Decachlorobiphenyl	2051-24-3	2,4,5,6-Tetrachloro-m-xylene	877-09-8

Concentration	Part #
200 µg/mL	CLPP-S90

Applicable Methods: US EPA Methods 8081 and 8141 (see page 228 for details).

Alternate Surrogate Standard in Methanol-P&T	
Component	**CAS #**
4-Chloro-3-nitrobenzotrifluoride	121-17-5

Concentration	Part #
1,000 µg/mL	S-947

Applicable Methods: US EPA Method 8082 and CLP Series (see page 228 for details).

Initial Combination Calibration Standard in Hexane			
Components	**CAS #**	**Components**	**CAS #**
Aroclor 1016	12674-11-2	Aroclor 1260	11096-82-5

Concentration	Part #
1,000 µg/mL	8082-IC

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 8082 (see page 228 for details).

Decachlorobiphenyl Standard in Hexane

Component	CAS #
Decachlorobiphenyl	2051-24-3

Concentration	Part #
1,000 µg/mL	S-1100

Applicable Methods: US EPA Method 8082 (see page 228 for details).

Method 8082 Calibration Mix in Isooctane

Components	CAS #	Components	CAS #	Components	CAS #
2-Chlorobiphenyl	2051-60-7	2,2′,3,4,5′-Pentachlorobiphenyl	38380-02-8	2,2′,3,3′,4,4′,5-Heptachlorobiphenyl	35065-30-6
2,3-Dichlorobiphenyl	16605-91-7	2,2′,4,5,5′-Pentachlorobiphenyl	37680-73-2	2,2′,3,4,4′,5,5′-Heptachlorobiphenyl	35065-29-3
2,2′,5-Trichlorobiphenyl	37680-65-2	2,3,3′,4′,6-Pentachlorobiphenyl	38380-03-9	2,2′,3,4,4′,5′,6-Heptachlorobiphenyl	52663-69-1
2,4′,5-Trichlorobiphenyl	16606-02-3	2,2′,3,4,4′,5′-Hexachlorobiphenyl	35065-28-2	2,2′,3,4′,5,5′,6-Heptachlorobiphenyl	52663-68-0
2,2′,3,5′-Tetrachlorobiphenyl	41464-39-5	2,2′,3,4,5,5′-Hexachlorobiphenyl	52712-04-6	2,2′,3,3′,4,4′,5,5′,6-Nonachlorobiphenyl	40186-72-9
2,2′,5,5′-Tetrachlorobiphenyl	35693-99-3	2,2′,3,5,5′,6-Hexachlorobiphenyl	52663-63-5		
2,3′,4,4′-Tetrachlorobiphenyl	32598-10-0	2,2′,4,4′,5,5′-Hexachlorobiphenyl	35065-27-1		

Concentration	Part #
100 µg/mL	8082-C

Applicable Methods: US EPA Method 8082 (see page 228 for details).

Internal Standard for Individual PCB-Congener Analysis in Acetone

Component	CAS #
2,4,5,6-Tetrachloro-m-xylene	877-09-8

Concentration	Part #
1,000 µg/mL	S-3420

Applicable Methods: US EPA Method 8082 (see page 228 for details).

Alternate Internal/Surrogate Standard in Hexane

Component	CAS #
2,2′,4,4′,5,5′-Hexabromobiphenyl	59080-40-9

Concentration	Part #
100 µg/mL	8082-I

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 8081 (see page 228 for details).

Method 8081 Individual Analyte Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Alachlor	15972-60-8	1,000 µg/mL	Methanol	S-185
Captafol	2425-06-1	1,000 µg/mL	Acetone	S-715
Carbophenothion	786-19-6	1,000 µg/mL	Methanol	S-755
alpha-Chlordane	5103-71-9	1,000 µg/mL	Methanol	S-770
gamma-Chlordane	5103-74-2	1,000 µg/mL	Methanol	S-775
Chlorothalonil	1897-45-6	1,000 µg/mL	Methanol	S-915
Di-allate (mix of isomers)	2303-16-4	1,000 µg/mL	Acetone	S-1155
1,2-Dibromo-3-chloropropane	96-12-8	1,000 µg/mL	Methanol-P&T	S-1255
Hexachlorobenzene	118-74-1	1,000 µg/mL	Benzene	S-2140
Hexachlorocyclopentadiene	77-47-4	1,000 µg/mL	Methanol-P&T	S-2150
Isodrin	465-73-6	1,000 µg/mL	Methanol	S-2285
Kelthane (1.5% o,p'-95% p,p')	115-32-2	1,000 µg/mL	Methanol	S-2335
Methyl dacthal	1861-32-1	1,000 µg/mL	Methanol	S-1065
Mirex	2385-85-5	1,000 µg/mL	Hexane:Toluene (50:50)	S-2635
trans-Nonachlor	39765-80-5	1,000 µg/mL	Methanol	S-2770
Octachloronaphthalene	2234-13-1	1,000 µg/mL	Methylene Chloride:Hexane	S-4200
Pentachloronitrobenzene	82-68-8	1,000 µg/mL	Methanol	S-2945
Permethrin (cis & trans)	52645-53-1	1,000 µg/mL	Acetone	S-3000
Propachlor	1918-16-7	1,000 µg/mL	Acetone	S-3140
Terrazole	2593-15-9	1,000 µg/mL	Methanol-P&T	S-3360
Trifluralin	1582-09-8	1,000 µg/mL	Methanol	S-3715

Applicable Methods: US EPA Method 8141 (see page 228 for details).

8140 Analyte Mix in Hexane:Acetone					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Azinphos-methyl	86-50-0	Fenchlorphos	299-84-3	Sulprofos	35400-43-2
Chlorpyrifos	2921-88-2	Fensulfothion	115-90-2	Tetrachlorvinphos	961-11-5
Coumaphos	56-72-4	Fenthion	55-38-9	Tokuthion/Prothiophos	34643-46-4
Demeton (O+S)	8065-48-3	Methyl parathion	298-00-0	Tributylphosphoro-trithioite	150-50-5
Diazinon	333-41-5	Mevinphos	7786-34-7	Trichloronate	327-98-0
Dichlorvos	62-73-7	Phorate	298-02-2		
Disulfoton	298-04-4	Prophos	13194-48-4		

Concentration	Part #
100 µg/mL	8140-A

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 8141 (see page 228 for details).

8141 Analyte Mix in Hexane:Acetone

Components	CAS #	Components	CAS #	Components	CAS #
Aspon	3244-90-4	Dioxathion	78-34-2	Malathion	121-75-5
Azinphos-ethyl	2642-71-9	Dylox	52-68-6	Monocrotophos	6923-22-4
Carbophenothion	786-19-6	EPN	2104-64-5	Phosphamidon	13171-21-6
Chlorfenvinphos	470-90-6	Ethion	563-12-2	TEPP	107-49-3
Chlorpyrifos-methyl	5598-13-0	Ethyl parathion	56-38-2	Terbufos	13071-79-9
Crotoxyphos	7700-17-6	Fenitrothion	122-14-5	Tetraethyldithio pyrophosphate/Sulfotepp	3689-24-5
Dichlorfenthion	97-17-6	Fonofos (Dyfonate)	944-22-9	Zinophos	297-97-2
Dicrotophos	141-66-2	Imidan (Phosmet)	732-11-6		
Dimethoate	60-51-5	Leptophos	21609-90-5		

Concentration	Part #
200 µg/mL	8141-AB

Applicable Methods: US EPA Method 8141 (see page 228 for details).

Method 8141 Carbamate Singles

Components	CAS #	Concentration	Matrix	Part #
Bendiocarb	22781-23-3	1,000 µg/mL	Methanol	S-379
Butylate	2008-41-5	1,000 µg/mL	Methanol	S-660
EPTC	759-94-4	1,000 µg/mL	Methanol	S-1870
Methiocarb	2032-65-7	1,000 µg/mL	Acetonitrile	S-2385
Molinate	2212-67-1	1,000 µg/mL	Methanol	S-2640
Pebulate	1114-71-2	1,000 µg/mL	Methanol	S-2925
Prosulfocarb	52888-80-9	1,000 µg/mL	Methanol	S-3223

Applicable Methods: US EPA Method 8141 (see page 228 for details).

Dibrom (Naled) Single in Methylene Chloride

Component	CAS #
Dibrom (Naled)	300-76-5

Concentration	Part #
1,000 µg/mL	S-2650

Applicable Methods: US EPA Method 8141 (see page 228 for details).

Famphur Single in Methanol

Component	CAS #
Famphur	52-85-7

Concentration	Part #
1,000 µg/mL	S-1995

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 8141 (see page 228 for details).

NPD/FPD Surrogate Single in Methanol-P&T	
Component	**CAS #**
Triphenyl phosphate	115-86-6

Concentration	Part #
1,000 µg/mL	S-3765

Applicable Methods: US EPA Method 8141 (see page 228 for details).

NPD Surrogate in Methanol-P&T	
Component	**CAS #**
4-Chloro-3-nitrobenzotrifluoride	121-17-5

Concentration	Part #
1,000 µg/mL	S-947

Applicable Methods: US EPA Method 8141 (see page 228 for details).

Internal Standard in Methanol-P&T	
Component	**CAS #**
1-Bromo-2-nitrobenzene	577-19-5

Concentration	Part #
1,000 µg/mL	S-590

Applicable Methods: US EPA Method 8151 (see page 228 for details).

Method 8151 Single in Acetone	
Component	**CAS #**
Tetrachloroterephthalate acid	2136-79-0

Concentration	Part #
1,000 µg/mL	S-1067

Applicable Methods: US EPA Method 8151 (see page 228 for details).

Surrogate Standard in Acetone	
Component	**CAS #**
2,4-Dichlorophenylacetic acid	19719-28-9

Concentration	Part #
1,000 µg/mL	S-1420

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: US EPA Method 8151 (see page 228 for details).

Internal Standard in Methyl Tertiary-Butyl Ether	
Component	**CAS #**
4,4-Dibromooctafluorobiphenyl	10386-84-2

Concentration	Part #
1,000 µg/mL	S-1250

Applicable Methods: CLP Series (see page 228 for details).

Individual Standard Mix A for 3/90 & 7/91 SOW in Hexane:Toluene					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
alpha-BHC	319-84-6	5 µg/mL	Endosulfan I	959-98-8	5 µg/mL
gamma-BHC	58-89-9	5 µg/mL	Endrin	72-20-8	10 µg/mL
p,p'-DDD	72-54-8	10 µg/mL	Heptachlor	76-44-8	5 µg/mL
p,p'-DDT	50-29-3	10 µg/mL	Methoxychlor	72-43-5	50 µg/mL
Dieldrin	60-57-1	10 µg/mL			

Part #
CLPP-A90

Applicable Methods: CLP Series (see page 228 for details).

3/90 SOW Surrogate Spike in Acetone			
Components	**CAS #**	**Components**	**CAS #**
Decachlorobiphenyl	2051-24-3	2,4,5,6-Tetrachloro-m-xylene	877-09-8

Concentration	Part #
200 µg/mL	CLPP-S90

Applicable Methods: CLP Series (see page 228 for details).

91/80W Surrogate Spike in Acetone					
Components	**CAS #**	**Concentration**	**Components**	**CAS #**	**Concentration**
Decachlorobiphenyl	2051-24-3	200 µg/mL	2,4,5,6-Tetrachloro-m-xylene	877-09-8	100 µg/mL

Part #
CLPP-S91

Applicable Methods: CLP Series (see page 228 for details).

2/88 SOW Surrogate Spike in Acetone	
Component	**CAS #**
Dibutyl chlorendate	1770-80-5

Concentration	Part #
200 µg/mL	DBC-X

Volume for all Pesticides/PCBs/Herbicides is 1 mL

Applicable Methods: CLP Series (see page 228 for details).

91/SOW Matrix Spike in Methanol

Components	CAS #	Concentration	Components	CAS #	Concentration
Aldrin	309-00-2	50 µg/mL	Dieldrin	60-57-1	100 µg/mL
gamma-BHC	58-89-9	50 µg/mL	Endrin	72-20-8	100 µg/mL
p,p'-DDT	50-29-3	100 µg/mL	Heptachlor	76-44-8	50 µg/mL

Part #
CLPP-MS91

Applicable Methods: CLP Series (see page 228 for details).

91/SOW Matrix Spike, High Level in Methanol

Components	CAS #	Concentration	Components	CAS #	Concentration
Aldrin	309-00-2	500 µg/mL	Dieldrin	60-57-1	1,000 µg/mL
gamma-BHC	58-89-9	500 µg/mL	Endrin	72-20-8	1,000 µg/mL
p,p'-DDT	50-29-3	1,000 µg/mL	Heptachlor	76-44-8	500 µg/mL

Part #
CLPP-MS91H

Applicable Methods: TCLP Series

TCLP Pesticide Spike without Chlordane Isomers in Methanol

Components	CAS #	Components	CAS #
gamma-BHC	58-89-9	Heptachlor epoxide (Isomer B)	1024-57-3
Endrin	72-20-8	Methoxychlor	72-43-5
Heptachlor	76-44-8		

Concentration	Part #
2,000 µg/mL	TCLP-PNC

Volume for all Pesticides/PCBs/Herbicides is 1 mL

PCB Congeners in Hexane				
Components	**Description**	**CAS #**	**Concentration**	**Part #**
2,4′-Dichlorobiphenyl	PCB Congener BZ-8	34883-43-7	100 µg/mL	PCB-BZ-8
3,4-Dichlorobiphenyl	PCB Congener BZ-12	2974-92-7	100 µg/mL	PCB-BZ-12
2,3,3′-Trichlorobiphenyl	PCB Congener BZ-20	38444-84-7	100 µg/mL	PCB-BZ-20
2,4,4′-Trichlorobiphenyl	PCB Congener BZ-28	7012-37-5	100 µg/mL	PCB-BZ-28
3,3′,4-Trichlorobiphenyl	PCB Congener BZ-35	37680-69-6	100 µg/mL	PCB-BZ-35
2,2′,4,4′-Tetrachlorobiphenyl	PCB Congener BZ-47	2437-79-8	100 µg/mL	PCB-BZ-47
2,2′,4,6′-Tetrachlorobiphenyl	PCB Congener BZ-51	68194-04-7	100 µg/mL	PCB-BZ-51
2,2′,5,5′-Tetrachlorobiphenyl	PCB Congener BZ-52	35693-99-3	100 µg/mL	PCB-BZ-52
2,3′,4,5′-Tetrachlorobiphenyl	PCB Congener BZ-68	73575-52-7	100 µg/mL	PCB-BZ-68
3,3′,5,5′-Tetrachlorobiphenyl	PCB Congener BZ-80	33284-52-5	100 µg/mL	PCB-BZ-80
2,3,4,4′,5-Pentachlorobiphenyl	PCB Congener BZ-114	74472-37-0	100 µg/mL	PCB-BZ-114
2,2′,4,4′,5,5′-Hexachlorobiphenyl	PCB Congener BZ-153	35065-27-1	100 µg/mL	PCB-BZ-153
2,2′,3,3′,4,5,5′,6-Octachlorobiphenyl	PCB Congener BZ-198	68194-17-2	100 µg/mL	PCB-BZ-198
Decachlorobiphenyl	PCB Congener BZ-209	2051-24-3	100 µg/mL	PCB-BZ-209

Did You Know?

If you can't find your SDS, you can download a SDS for a specific part number at **spex.com//AdvancedSearch/SDSSearch**.

Premixed Pesticide Multi-Compound CRMs

Chemical pesticides have become an integral part of the agricultural toolbox, offering protection to crops from destructive pests. However, an unfortunate side effect of their use is the potential leaching of these, oftentimes, harmful chemicals into the environment leading to their eventual presence in the human food chain. As a result, pesticide residue analysis has become a critical testing process for many different types of laboratories.

Unfortunately, pesticide residue testing is a long, expensive and complicated process, covering hundreds of different compounds. As the leader in GC, GC/MS, HPLC, and LC/MS pesticide CRMs, Spex CertiPrep is happy to assist you with all of your pesticide CRM needs.

For your convenience, we have designed a pesticide residue testing kit which includes 144 of the most commonly analyzed pesticides per EPA, AOAC, FDA, and other international testing methods. The kit is structured to maximize stability and solubility while minimizing unwanted analyte interaction and interference; enjoy shorter calibration times, fewer injections and money savings, as compared to purchasing individual pesticide standards.

GUIDE TO SOLUBILITY

As a companion piece, we have assembled a solubility guide, which covers all 144 pesticides included in the kit (Spex CertiPrep part number SPXPR-KIT). We hope that you will find this information helpful and use it in order to assist you with your sample preparation and analysis.

SOLUBILITY

Solubility is defined as a chemical property referring to the ability of a given substance, the solute, to dissolve into a solvent. It is measured in terms of the maximum amount of solute dissolved in a solvent at equilibrium. The resulting solution is called a saturated solution. The Guide to Solubility shows the solubility of pesticide kit compounds in some of the most popular solvents.

You can download our Guide to Solubility at **spex.com** and click on Knowledge Base | Downloads | Catalogs & Product Literature or contact us at **spexsales@spex.com** for a hard copy guide.

Volume for all Pesticides Mixes is 1 mL

Pesticide Kit

Kit Contains	
SPXPR-1	SPXPR-6
SPXPR-2	SPXPR-7
SPXPR-3	SPXPR-8
SPXPR-4	SPXPR-9
SPXPR-5	SPXPR-10

Concentration	Part #
100 µg/mL	SPXPR-KIT

Pesticide Mix 1 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Acetamiprid	135410-20-7	Chlorantraniliprole	500008-45-7	Pirimicarb	23103-98-2
Aldicarb	116-06-3	Fenoxycarb	79127-80-3	Tebufenpyrad	119168-77-3
Aldicarb sulfone	1646-88-4	Imazalil	35544-44-0	Thiacloprid	111988-49-9
Aldicarb sulfoxide	1646-87-3	Imidacloprid	138261-41-3	Trifloxystrobin	141517-21-7
Azoxystrobin	131860-33-8	Iprodione	36734-19-7		
Boscalid	188425-85-6	Piperonyl butoxide	51-03-6		

Concentration	Part #
100 µg/mL	SPXPR-1

Pesticide Mix 2 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Azinphos-methyl	86-50-0	Dyfonate (Fonofos)	944-22-9	Phosalone	2310-17-0
Carbophenothion	786-19-6	Ethoprophos (Prophos)	13194-48-4	Phosmet (Imidan)	732-11-6
Coumaphos	56-72-4	Hexythiazox	78587-05-0	Quinalphos	13593-03-8
Dicrotophos	141-66-2	Malathion	121-75-5	Terbufos	13071-79-9
Dimethoate	60-51-5	Methidathion	950-37-8	Triazophos	24017-47-8

Concentration	Part #
100 µg/mL	SPXPR-2

Pesticide Mix 3 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Carbaryl	63-25-2	Methamidophos	10265-92-6	Pirimiphos-methyl	29232-93-7
Dimethomorph	110488-70-5	Monocrotophos	6923-22-4	Profenofos	41198-08-7
Etofenprox	80844-07-1	Myclobutanil (Systhane)	88671-89-0	Propargite (Omite)	2312-35-8
Etoxazole	153233-91-1	Phenthoate	2597-03-7	Spirodiclofen	148477-71-8
Flonicamid	150862-67-0	Phorate	298-02-2	Thiamethoxam	153719-23-4

Concentration	Part #
100 µg/mL	SPXPR-3

Volume for all Pesticides Mixes is 1 mL

Pesticide Mix 4 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Acephate	30560-19-1	Disulfoton	298-04-4	Fenitrothion	122-14-5
Chlorothalonil	1897-45-6	EPN	2104-64-5	Fenthion	55-38-9
Chlorpyrifos	2921-88-2	Edifenphos	17109-49-8	Fipronil	120068-37-3
Diazinon	333-41-5	Ethion	563-12-2	Fludioxonil	131341-86-1
Dichlorvos	62-73-7	Ethyl parathion	56-38-2	Methyl parathion	298-00-0

Concentration	Part #
100 µg/mL	SPXPR-4

Pesticide Mix 5 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Baygon (Propoxur)	114-26-1	Metalaxyl	57837-19-1	Pencycuron	66063-05-6
Clofentezine	74115-24-5	Methomyl	16752-77-5	Prochloraz	67747-09-5
Diuron	330-54-1	Oxamyl	23135-22-0	Pymetrozine	123312-89-0
Isoproturon	34123-59-6	Oxydemeton-methyl	301-12-2	Pyraclostrobin	175013-18-0
Linuron	330-55-2	Paclobutrazol	76738-62-0		

Concentration	Part #
100 µg/mL	SPXPR-5

Pesticide Mix 6 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Alachlor	15972-60-8	Fenoprop (2,4,5-TP) (Silvex)	93-72-1	Metolachlor	51218-45-2
Bentazon	25057-89-0	Fenpropathrin	64257-84-7	Prowl (Pendimethalin)	40487-42-1
Captan	133-06-2	Fenvalerate (Sanmarton)	51630-58-1	Pyridaben	96489-71-3
Chlorpropham	101-21-3	tau-Fluvalinate	102851-06-9	Quinoxyfen	124495-18-7
Epoxiconazole	133855-98-8	Kresoxim-methyl	143390-89-0	Quintozene (pentachloronitrobenzene)	82-68-8

Concentration	Part #
100 µg/mL	SPXPR-6

Pesticide Mix 7 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #
Bifenthrin	82657-04-3	Prallethrin (mix of isomers)	23031-36-9
Cypermethrin	52315-07-8	Pyrethrins (mix of isomers)	8003-34-7
Cyfluthrin (Baythroid)	68359-37-5	Resmethrin	10453-86-8
Permethrin (mix of cis & trans)	52645-53-1	Tetramethrin	7696-12-0

Concentration	Part #
100 µg/mL	SPXPR-7

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Volume for all Pesticides Mixes is 1 mL

Pesticide Mix 8 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Abamectin (mix of isomers)	71751-41-2	Hexaconazole	79983-71-4	Spinetoram (J)	187166-40-1
Bifenazate	149877-41-8	Isoprocarb	2631-40-5	Spinosad (as Spinosyn A)	131929-60-7
Bromacil	314-40-9	Methiocarb	2032-65-7	Spiromesifen	283594-90-1
Fenobucarb (BPMC)	3766-81-2	Propazine	139-40-2	Spirotetramat	203313-25-1
Fenpyroximate	111812-58-9	Propiconazole (Tilt)	60207-90-1	Tebuconazole (Folicur)	107534-96-3

Concentration	Part #
100 µg/mL	SPXPR-8

Pesticide Mix 9 in Acetonitrile:Acetone (9:1)

Components	CAS #	Components	CAS #	Components	CAS #
Acequinocyl	57960-19-7	Fenamiphos sulfone	31972-44-8	Molinate	2212-67-1
Atrazine	1912-24-9	Fenamiphos sulfoxide	31972-43-7	Simazine	122-34-9
Atrazine-desethyl	6190-65-4	Fenhexamid	126833-17-8	Thiophanate-methyl	23564-05-8
Carbofuran	1563-66-2	Fenoxaprop	95617-90-7	Trichlorfon (Dylox)	52-68-6
Cyanazine (Bladex)	21725-46-2	Fluometuron	2164-17-2		
2,4-DB	94-82-6	3-Hydroxycarbofuran	16655-82-6		

Concentration	Part #
100 µg/mL	SPXPR-9

Pesticide Mix 10 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Aldrin	309-00-2	p-p'-DDE	72-55-9	Endrin aldehyde	7421-93-4
Chlordecone (Kepone)	143-50-0	o-p'-DDT	789-02-6	Endrin ketone	53494-70-5
o-p'-DDD	53-19-0	p-p'-DDT	50-29-3	Isodrin	465-73-6
p-p'-DDD	72-54-8	Dieldrin	60-57-1	Metribuzin	21087-64-9
o-p'-DDE	3424-82-6	Endrin	72-20-8	Mirex	2385-85-5

Concentration	Part #
100 µg/mL	SPXPR-10

Volume for all Pesticides Mixes is 1 mL

European Pesticide Mix

Addresses European Commission's Regulation 2017/170

Spex CertiPrep introduces a new pesticide mix to address the European Commission's Regulation 2017/170. The Commission amended Annexes II, III and V to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards to maximum residue levels for bifenthrin, carbetamide, cinidon-ethyl, fenpropimorph, and triflusulfuron-methyl in or on certain products.

European Pesticide Mix in LC/MS Acetonitrile

Components	CAS #	Components	CAS #
Bifenthrin	82657-04-3	Fenpropimorph	67564-91-4
Carbetamide	16118-49-3	Triflusulfuron-methyl	126535-15-7
Cinidon-ethyl	142891-20-1		

Concentration	Part #
100 µg/mL	EU-2017-170

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section 6

CannStandards®

Analytical Standards for Medicinal & Recreational Cannabis Testing and DEA Controlled Substances

Analytical Standards for Medicinal and Recreational Cannabis Testing

While the legalization of cannabis for both medicinal and recreational purposes has been gaining speed, legislation and regulation has not necessarily kept pace. Out of a drive for self-regulation and significant consumer safety concerns, many producers and manufacturers are turning to testing labs in order to ensure that their products are of high quality and free of chemical contaminants.

Spex CertiPrep offers ISO/IEC 17025 and ISO 17034 Certified Reference Materials (CRMs) for all of the common contaminants such as pesticide residues, residual solvents and heavy metals, as well as qualitative analysis CRMs, such as terpenes. As the industry demands change and regulations are put into place, we continually update our product offering.

Designed for methods: state specific pesticide regulations:

- OAR 333-008-11
- HB 3460
- AOAC 2007-01
- EN 15662

Volume for all Cannabis Standards is 1 mL

Pesticide Residues

Organochlorine Pesticides Mix A in Acetone

Components	CAS #	Components	CAS #	Components	CAS #
Aldrin	309-00-2	p,p'-DDE	72-55-9	Endrin	72-20-8
alpha-BHC	319-84-6	p,p'-DDT	50-29-3	Endrin aldehyde	7421-93-4
beta-BHC	319-85-7	Dieldrin	60-57-1	Endrin ketone	53494-70-5
delta-BHC	319-86-8	Endosulfan I	959-98-8	Heptachlor	76-44-8
gamma-BHC	58-89-9	Endosulfan II	33213-65-9	Heptachlor epoxide (Isomer B)	1024-57-3
p,p'-DDD	72-54-8	Endosulfan sulfate	1031-07-8	Methoxychlor	72-43-5

Concentration	Part #
200 µg/mL	5252-PA

Organochlorine Pesticides Mix B in Acetone

Components	CAS #	Components	CAS #	Components	CAS #
Alachlor	15972-60-8	Chloroneb	2675-77-6	trans-Nonachlor	39765-80-5
Bladex	21725-46-2	Chlorothalonil	1897-45-6	Permethrin (mix of cis & trans)	52645-53-1
alpha-Chlordane	5103-71-9	Chlorpyrifos	2921-88-2	Propachlor	1918-16-7
gamma-Chlordane	5103-74-2	Hexachlorobenzene	118-74-1	Terrazole	2593-15-9
Chlorobenzilate	510-15-6	Methyl dacthal	1861-32-1	Trifluralin	1582-09-8

Concentration	Part #
200 µg/mL	5252-PB

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Volume for all Cannabis Standards is 1 mL

Pesticide Residues (continued)

Nitrogen-Phosphorus Pesticides Mix D in Acetone			
Components	**CAS #**	**Components**	**CAS #**
Beam	41814-78-2	Tebuthiuron	34014-18-1
Fenarimol	60168-88-9	Tetrachlorvinphos	961-11-5
Norflurazon	27314-13-2	Triadimefon	43121-43-3
Phenamiphos	22224-92-6	Velpar	51235-04-2
Sonar/Fluridone	59756-60-4		

Concentration	Part #
200 µg/mL	5252-PD

Nitrogen-Phosphorus Pesticides Mix E in Acetone			
Components	**CAS #**	**Components**	**CAS #**
Carboxin	5234-68-4	Tributylphosphoro-trithioite	150-50-5
Disulfoton	298-04-4		

Concentration	Part #
200 µg/mL	5252-E

Terpenes

Terpenes in a sample of cannabis help identify the strain and have an effect on the medical efficacy.

Terpenes				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Linalool	78-70-6	1,000 µg/mL	Methanol	S-5133
Borneol	507-70-0	1,000 µg/mL	Methanol-P&T	S-4570
Eucalyptol	470-82-6	1,000 µg/mL	Methanol	S-4352
(R)-(+)-Limonene	5989-27-5	1,000 µg/mL	Methanol-P&T	S-4021
alpha-Pinene	80-56-8	1,000 µg/mL	Methanol-P&T	S-4172
beta-Pinene	127-91-3	1,000 µg/mL	Methanol-P&T	S-3142

Volume for all Cannabis Standards is 1 mL

Residual Solvents

Residual Solvent Mix in Dimethyl Sulfoxide					
Components	**CAS #**	**Components**	**CAS #**	**Components**	**CAS #**
Acetone	67-64-1	Ether	60-29-7	3-Methyl-1-butanol	123-51-3
Anisole	100-66-3	Ethyl acetate	141-78-6	4-Methyl-2-pentanone	108-10-1
1-Butanol	71-36-3	Ethyl formate	109-94-4	2-Methyl-1-propanol	78-83-1
2-Butanol	78-92-2	n-Heptane	142-82-5	n-Pentane	109-66-0
2-Butanone	78-93-3	Isobutyl acetate	110-19-0	1-Pentanol	71-41-0
Butyl acetate	123-86-4	Isopropyl acetate	108-21-4	1-Propanol	71-23-8
methyl tertiary-Butyl ether	1634-04-4	Isopropylbenzene	98-82-8	2-Propanol	67-63-0
Ethanol	64-17-5	Methyl acetate	79-20-9	Propyl acetate	109-60-4

Concentration	Part #
1,000 µg/mL	USP-RS-C3A

Residual Solvent Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Acetone	67-64-1	1,000 µg/mL	Methanol-P&T	S-140
n-Butane	106-97-8	1,000 µg/mL	Methanol-P&T	S-605
Ethane	74-84-0	1,000 µg/mL	Methanol-P&T	S-1880
Ethanol	64-17-5	1,000 µg/mL	Methanol-P&T	S-1885
n-Hexane	110-54-3	1,000 µg/mL	Methanol-P&T	S-2190
Methane	74-82-8	1,000 µg/mL	Methanol-P&T	S-2379
2-Methylbutane	78-78-4	1,000 µg/mL	Methanol-P&T	S-2462
2-Methylpropane	75-28-5	1,000 µg/mL	Methanol-P&T	S-2555
n-Pentane	109-66-0	1,000 µg/mL	Methanol-P&T	S-2975
Propane	74-98-6	1,000 µg/mL	Methanol-P&T	S-3145
2-Propanol	67-63-0	1,000 µg/mL	Methanol-P&T	S-3165

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Volume for all Cannabis Standards is 1 mL

Can-Terp Mixes

CAN-TERP Mix 1 in Methanol

Components	CAS #	Components	CAS #	Components	CAS #
(-)-alpha-Bisabolol	23089-26-1	Eucalyptol	470-82-6	Linalool	78-70-6
Camphene	79-92-5	Farnesene (mix of isomers)	502-61-4	p-Mentha-1,5-diene	99-83-2
Camphor	76-22-2	(+)-Fenchone	4695-62-9	beta-Myrcene	123-35-3
(1S)-(+)-3-Carene	498-15-7	Geranyl acetate	105-87-3	Nerol	106-25-2
trans-Caryophyllene	87-44-5	Hexahydrothymol	89-78-1	cis-Nerolidol	3790-78-1
(-)-Caryophyllene oxide	1139-30-6	Isoborneol	124-76-5	Ocimene (mix of isomers)	13877-91-3
(+)-Cedrol	77-53-2	(-)-Isopulegol	89-79-2	Valencene	4630-07-3

Concentration	Part #
100 µg/mL	CAN-TERP-MIX1

Concentration	Part #
1,000 µg/mL	CAN-TERP-MIX1H

CAN-TERP Mix 2 in Methanol

Components	CAS #	Components	CAS #	Components	CAS #
(+)-Borneol	464-43-7	Geraniol	106-24-1	(+)-Pulegone	89-82-7
(-)-Borneol	464-45-9	Guaiol	489-86-1	Sabinene	3387-41-5
(1R)-(+)-Camphor	464-49-3	alpha-Humulene	6753-98-6	Sabinene hydrate	546-79-2
(1S)-(-)-Camphor	464-48-2	(R)-(+)-Limonene	5989-27-5	alpha-Terpinene	99-86-5
alpha-Cedrene	469-61-4	trans-Nerolidol	40716-66-3	gamma-Terpinene	99-85-4
(1R)-Endo-(+)-fenchyl alcohol	2217-02-9	alpha-Pinene	80-56-8	Terpineol (mix of isomers)	8000-41-7
L(-)-Fenchone	7787-20-4	beta-Pinene	127-91-3	Terpinolene	586-62-9

Concentration	Part #
100 µg/mL	CAN-TERP-MIX2

Concentration	Part #
1,000 µg/mL	CAN-TERP-MIX2H

CAN-TERP Kit in Methanol

Kit Contains	
CAN-TERP-MIX1	CAN-TERP-MIX2

Concentration	Part #
100 µg/mL	CAN-TERP-KIT

CAN-TERP Kit (High Level) in Methanol

Kit Contains	
CAN-TERP-MIX1H	CAN-TERP-MIX2H

Concentration	Part #
1,000 µg/mL	CAN-TERP-KIT-H

Volume for all Cannabis Standards is 1 mL

Canadian Pesticide Mixes

For your convenience, we have designed cannabis pesticide mixes and a kit which contains the 95 compounds that are required to be tested based on regulations set by the Government of Canada. This requirement for mandatory testing for the presence of unauthorized pesticides will help ensure that Canadians can continue to have confidence in obtaining safe, quality-controlled medical cannabis from licensed producers.

Canadian Pesticide Naled Standard in LC/MS Acetonitrile

Components	CAS #
Dibrom (Naled)	300-76-5

Concentration	Part #
1,000 µg/mL	LCS-2650

Canadian Pesticide Mix 1 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Aldicarb	116-06-3	Imazalil	35554-44-0	Novaluron	116714-46-6
Baygon (Propoxur)	114-26-1	Imidacloprid	138261-41-3	Oxamyl	23135-22-0
Carbaryl	63-25-2	Iprodione	36734-19-7	Pirimicarb	23103-98-2
Carbofuran	1563-66-2	Methiocarb	2032-65-7	Thiacloprid	111988-49-9
Fenoxycarb	72490-01-8	Methomyl	16752-77-5		

Concentration	Part #
100 µg/mL	CAN-CAN-1

Canadian Pesticide Mix 2 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Allethrin	584-79-2	Methoprene	40596-69-8	Pyrethrins (mix of isomers)	8003-34-7
Baythroid (Cyfluthrin)	68359-37-5	MGK 264™	113-48-4	Resmethrin	10453-86-8
Bifenthrin	82657-04-3	Permethrin (mix of cis & trans)	52645-53-1	Sanmarton	51630-58-1
Cypermethrin	52315-07-8	d-Phenothrin (mix of cis & trans)	26002-80-2	Tetramethrin	7696-12-0
Deltamethrin	52918-63-5	Piperonyl butoxide	51-03-6		
Kinoprene	42588-37-4	Prallethrin (mix of isomers)	23031-36-9		

Concentration	Part #
100 µg/mL	CAN-CAN-2

Canadian Pesticide Mix 3 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Azadirachtin	11141-17-6	Endosulfan II	33213-65-9	Pentachloronitrobenzene	82-68-8
Benzovindiflupyr	1072957-71-1	Endosulfan sulfate	1031-07-8	Trifloxystrobin	141517-21-7
Endosulfan I	959-98-8	Fipronil	120068-37-3		

Concentration	Part #
100 µg/mL	CAN-CAN-3

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Volume for all Cannabis Standards is 1 mL

Canadian Pesticide Mixes (continued)

Canadian Pesticide Mix 4 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Acephate	30560-19-1	Etoxazole	153233-91-1	Prophos	13194-48-4
Chlorpyrifos	2921-88-2	Fensulfothion	115-90-2	Spiroxamine	118134-30-8
Coumaphos	56-72-4	Fenthion	55-38-9	Terrazole	2593-15-9
Diazinon	333-41-5	Imidan (Phosmet)	732-11-6	Tetrachlorvinphos (Z)	22248-79-9
Dichlorvos	62-73-7	Malathion	121-75-5	Thiophanate-methyl	23564-05-8
Dimethoate	60-51-5	Methyl parathion	298-00-0		
Etofenprox	80844-07-1	Mevinphos	7786-34-7		

Concentration	Part #
100 µg/mL	CAN-CAN-4

Canadian Pesticide Mix 5 in LC/MS Acetonitrile

Components	CAS #	Components	CAS #	Components	CAS #
Acequinocyl	57960-19-7	Clothianidin	210880-92-5	Hexythiazox	78587-05-0
Acetamiprid	135410-20-7	Cyantraniliprole	736994-63-1	Paclobutrazol	76738-62-0
Azoxystrobin	131860-33-8	Cyprodinil	121552-61-2	Propiconazole (Tilt)	60207-90-1
Bifenazate	149877-41-8	Dinotefuran	165252-70-0	Pyraclostrobin	175013-18-0
Boscalid	188425-85-6	(E)-Fenpyroximate	134098-61-6	Systhane (Myclobutanil)	88671-89-0
Buprofezin	69327-76-0	Flonicamid	158062-67-0	Tebufenozide	112410-23-8
Chlorantraniliprole	500008-45-7	Fludioxonil	131341-86-1	Teflubenzuron	83121-18-0
Chlorfenapyr	122453-73-0	Fluopyram	658066-35-4	Thiamethoxam	153719-23-4
Clofentezine	74115-24-5	Folicur	107534-96-3		

Concentration	Part #
100 µg/mL	CAN-CAN-5

Canadian Pesticide Mix 6 in LC/MS Acetonitrile:LC/MS Methanol (50:50)

Components	CAS #	Components	CAS #	Components	CAS #
Abamectin	71751-41-2	Metalaxyl	57837-19-1	Spirodiclofen	148477-71-8
Daminozide	1596-84-5	Pyridaben	96489-71-3	Spiromesifen	283594-90-1
Dodemorph	1593-77-7	Spinetoram	187166-40-1	Spirotetramat	203313-25-1
Kresoxim-methyl	143390-89-0	Spinosad	168316-95-8		

Concentration	Part #
100 µg/mL	CAN-CAN-6

Volume for all Cannabis Standards is 1 mL

Canadian Pesticide Mixes (continued)

Canadian Pesticide Kit	
Kit Contains 1 mL of each	
CAN-CAN-1	CAN-CAN-5
CAN-CAN-2	CAN-CAN-6
CAN-CAN-3	LCS-2650
CAN-CAN-4	

Concentration	Part #
100 µg/mL	CAN-CAN-KIT

DEA Controlled Substances

DEA Controlled Substances				
Components	CAS #	Concentration	Matrix	Part #
Cannabidiol (CBD)	13956-29-1	1,000 µg/mL	Methanol	S-10241
Cannabinol (CBN)	521-35-7	1,000 µg/mL	Methanol	S-10242
Cannabidivarin (CBDV)	24274-48-4	1,000 µg/mL	Methanol	S-10245
Cannabigerol (CBG)	2808-33-5	1,000 µg/mL	Methanol	S-10246
Cannabigerolic acid (CBGA)	25555-57-1	1,000 µg/mL	Acetonitrile	S-10247
Cannabichromene (CBC)	20675-51-8	1,000 µg/mL	Methanol	S-10248
Cannabichromenic acid (CBCA)	20408-52-0	1,000 µg/mL	Acetonitrile	S-11059
Cannabidiolic acid (CBDA)	1244-58-2	1,000 µg/mL	Acetonitrile	S-10249
Cannabidivarinic acid (CBDVA)	31932-13-5	1,000 µg/mL	Acetonitrile	S-11055
(-)-delta8-THC	5957-75-5	1,000 µg/mL	Methanol	S-10261
(-)-delta9-THC	1972-08-3	1,000 µg/mL	Methanol	S-10260
Tetrahydrocannabinolic acid (THCA)	23978-85-0	1,000 µg/mL	Acetonitrile	S-11056
Tetrahydrocannabivarin (THCV)	31262-37-0	1,000 µg/mL	Methanol	S-11057
Tetrahydrocannabivarin acid (THCVA)	28172-17-0	1,000 µg/mL	Acetonitrile	S-11058

Heavy Metals

Heavy Metals				
Components	Concentration	Volume	Matrix	Part #
Heavy Metals Mix, 4 Metals	Multiple	125 mL	5% HNO_3	USP-TXM2 *
Arsenic	1,000 µg/mL	125 mL	2% HNO_3	PLAS2-2Y
Cadmium	1,000 µg/mL	125 mL	2% HNO_3	PLCD2-2Y
Chromium	1,000 µg/mL	125 mL	2% HNO_3	PLCR2-2Y
Lead	1,000 µg/mL	125 mL	2% HNO_3	PLPB2-2Y
Mercury	1,000 µg/mL	125 mL	10% HNO_3	PLHG4-2Y
Nickel	1,000 µg/mL	125 mL	2% HNO_3	PLNI2-2Y
Silver	1,000 µg/mL	125 mL	2% HNO_3	PLAG2-2Y
Thallium	1,000 µg/mL	125 mL	2% HNO_3	PLTL2-2Y

** For complete details, see Inorganic Section 10, page 91.*

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section 6

Consumer Safety

Analytical Standards for Wine • Pharmaceutical Residual Solvent Standards • Phthalates in Polyethylene (PE) QC Standards • Polyvinyl Chloride (PVC) QC Standards

Analytical Standards for Wine

Wine is a complex combination of water, alcohol and other substances such as organic acids, phenols, sugars, carbon dioxide, and sulfur dioxide. The chemical interactions of these compounds, combined with the aging process, determine the quality of the color, taste and aroma of the wine. However, during this process, the chemical interactions can also play key roles in spoiling the wine. For instance, cork taint transpires when naturally occurring airborne fungi are in the presence of chlorophenol compounds to form 2,4,6-trichloranisole (TCA) in the wine. When this occurs, the wine's aroma is reduced significantly and is replaced by an undesirable smell and taste.

To help regulate the spoilage of wine, the wine industry tests for several compounds that are known to cause this. For this industry, Spex CertiPrep offers Certified Reference Materials (CRMs) for wine that are designed for GC, GC/MS, HPLC and LC/MS analysis. These standards are manufactured from the highest purity starting materials and the highest grade of solvents available in order to guarantee superior quality. Each standard is supplied with a detailed comprehensive Certificate of Analysis.

Volume for all Wine Standards is 1 mL

Organic Wine Standard Set 1

Components	CAS #	Concentration	Matrix	Part #
Pentachloroanisole-d_3	1219804-52-0	100 µg/mL	Methanol	WINE-1
2,4,6-Tribromoanisole-d_5	1219795-33-1			
2,4,6-Trichloroanisole-d_5	352439-08-8			

Organic Wine Standard Set 2

Components	CAS #	Concentration	Matrix	Part #
2,3,4,5,6-Pentachloroanisole	1825-21-4	100 µg/mL	Methanol-P&T	WINE-2
2,3,4,6-Tetrachloroanisole	938-22-7			
2,4,6-Trichloroanisole	87-40-1			

Organic Wine Standard Set 3

Components	CAS #	Concentration	Matrix	Part #
Carbon disulfide	75-15-0	10,000 µg/mL	Methanol-P&T	WINE-3
Ethanethiol	75-08-1			
Ethyl disulfide	110-81-6			
Ethyl methyl sulfide	624-89-5			
Ethyl sulfide	352-93-2			
2-Ethylthiophene	872-55-9			
Methanethiol	74-93-1			
Methyl disulfide	624-92-0			
Methyl sulfide	75-18-3			
2-Methyl-2-propanethiol	75-66-1			
2-Methylthiophene	554-14-3			
1-Pentanethiol	110-66-7			
2-Propanethiol	75-33-2			
Thiophene	110-02-1			

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Volume for all Wine Standards is 1 mL

Analytical Standards for Wine, Singles				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Acetic acid	64-19-7	1,000 µg/mL	Methanol-P&T	S-133
2,3-Butanedione	431-03-8	1,000 µg/mL	Methanol-P&T	S-609
2-Chlorophenol-3,4,5,6-d_4	93951-73-6	1,000 µg/mL	Methanol-P&T	S-905
Dextrose anhydrous	50-99-7	1,000 µg/mL	Methanol-P&T	S-5005
Ethanol	64-17-5	1,000 µg/mL	Methanol-P&T	S-1885
Ethanol	64-17-5	2,000 µg/mL	DI Water	S-1885-W2K
4-Ethyl-2-methoxyphenol	2785-89-9	1,000 µg/mL	Methanol-P&T	S-4183
2-Ethylphenol	90-00-6	1,000 µg/mL	Methanol-P&T	S-1983
4-Ethylphenol	123-07-9	1,000 µg/mL	Methanol-P&T	S-1985
2-Fluorophenol	367-12-4	1,000 µg/mL	Methanol	S-2050
Malic acid	636-61-3	1,000 µg/mL	Methanol-P&T	S-4168
2,3,4,5,6-Pentachloroanisole	1825-21-4	1,000 µg/mL	Methanol	S-2930
Pentachlorophenol	87-86-5	1,000 µg/mL	Methanol	S-2950
Phenol-d_6	13127-88-3	1,000 µg/mL	Methanol-P&T	S-3035
2,4,6-Tribromoanisole	607-99-8	1,000 µg/mL	Methanol	S-4309
2,4,6-Tribromophenol	118-79-6	1,000 µg/mL	Methanol-P&T	S-3555
2,4,6-Tribromoanisole-d_5	1219795-33-1	1,000 µg/mL	Methanol-P&T	S-4335
2,4,6-Tribromoanisole-d_5	1219795-33-1	100 µg/mL	Methanol	S-4335-100
2,4,6-Trichloroanisole	87-40-1	1,000 µg/mL	Methanol	S-3586
2,4,6-Trichloroanisole-d_5	352439-08-8	20 ng/mL	Methanol-P&T	S-4336-20*
2,4,6-Trichloroanisole-d_5	352439-08-8	46 µg/L	Ethanol	S-4336-46**
2,4,6-Trichloroanisole-d_5	352439-08-8	100 µg/mL	Methanol-P&T	S-4336-100
2,4,6-Trichlorophenol	88-06-2	1,000 µg/mL	Methanol-P&T	S-3645

** S-4336-20 is 5 mL volume*
*** S-4336-46 is 10 mL volume*

Pharmaceutical Residual Solvent Standards

In the pharmaceutical industry, the guidelines set by the International Conference on Harmonization (ICH), and by United States Pharmacopeia (USP) and European Pharmacopeia (EP), mandate that manufacturing solvents have to be regulated due to their toxic and/or environmentally hazardous nature.

Volume for all USP <467> Residual Solvent Standards is 1 mL

5 Organic Volatile Impurities, Class 1 Solvents in Dimethyl Sulfoxide

Components	CAS #	Concentration	Components	CAS #	Concentration
Benzene	71-43-2	10,000 µg/mL	1,1-Dichloroethene	75-35-4	40,000 µg/mL
Carbon tetrachloride	56-23-5	20,000 µg/mL	1,1,1-Trichloroethane	71-55-6	50,000 µg/mL
1,2-Dichloroethane	107-06-2	25,000 µg/mL			

Part #
USP-RS-C1

15 Organic Volatile Impurities, Class 2 Solvents in Dimethyl Sulfoxide

Components	CAS #	Concentration	Components	CAS #	Concentration	Components	CAS #	Concentration
Acetonitrile	75-05-8	2,050 µg/mL	1,4-Dioxane	123-91-1	1,900 µg/mL	Tetrahydrofuran	109-99-9	3,450 µg/mL
Chlorobenzene	108-90-7	1,800 µg/mL	Ethylbenzene	100-41-4	1,840 µg/mL	Toluene	108-88-3	4,450 µg/mL
Cyclohexane	110-82-7	19,400 µg/mL	Methanol	67-56-1	15,000 µg/mL	m-Xylene	108-38-3	6,510 µg/mL
cis-1,2-Dichloroethene	156-59-2	4,700 µg/mL	Methylcyclohexane	108-87-2	5,900 µg/mL	o-Xylene	95-47-6	980 µg/mL
trans-1,2-Dichloroethene	156-60-5	4,700 µg/mL	Methylene chloride	75-09-2	3,000 µg/mL	p-Xylene	106-42-3	1,520 µg/mL

Part #
USP-RS-C2A

8 Organic Volatile Impurities, Class 2 Solvents in Dimethyl Sulfoxide

Components	CAS #	Concentration	Components	CAS #	Concentration
Chloroform	67-66-3	60 µg/mL	Nitromethane	75-52-5	50 µg/mL
1,2-Dimethoxyethane	110-71-4	100 µg/mL	Pyridine	110-86-1	200 µg/mL
n-Hexane	110-54-3	290 µg/mL	1,2,3,4-Tetrahydronaphthalene	119-64-2	100 µg/mL
2-Hexanone	591-78-6	50 µg/mL	Trichloroethene	79-01-6	80 µg/mL

Part #
USP-RS-C2B

9 Component Mix in Dimethyl Sulfoxide

Components	CAS #	Concentration	Components	CAS #	Concentration
Chloroform	67-66-3	60 µg/mL	Nitromethane	75-52-5	50 µg/mL
1,2-Dimethoxyethane	110-71-4	100 µg/mL	Pyridine	110-86-1	200 µg/mL
n-Hexane	110-54-3	290 µg/mL	1,2,3,4-Tetrahydronaphthalene	119-64-2	100 µg/mL
2-Hexanone	591-78-6	50 µg/mL	Trichloroethene	79-01-6	80 µg/mL
Isopropylbenzene	98-82-8	70 µg/mL			

Part #
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USP <467> Residual Solvent Standards

Volume for all USP <467> Residual Solvent Standards is 1 mL

8 Organic Volatile Impurities, Class 2 Solvents in Dimethyl Sulfoxide

Components	CAS #	Concentration	Components	CAS #	Concentration
N,N-Dimethylacetamide	127-19-5	5,450 µg/mL	Formamide	75-12-7	1,100 µg/mL
N,N-Dimethylformamide	68-12-2	4,400 µg/mL	2-Methoxyethanol	109-86-4	250 µg/mL
2-Ethoxyethanol	110-80-5	800 µg/mL	1-Methyl-2-pyrrolidinone	872-50-4	2,650 µg/mL
Ethylene glycol	107-21-1	3,100 µg/mL	Tetramethylene sulfone	126-33-0	800 µg/mL

Part #
USP-RS-C2C

24 Organic Volatile Impurities, Class 3 Solvents in Dimethyl Sulfoxide

Components	CAS #	Components	CAS #	Components	CAS #	Components	CAS #
Acetone	67-64-1	methyl tertiary-Butyl ether	1634-04-4	Isobutyl acetate	110-19-0	2-Methyl-1-propanol	78-83-1
Anisole	100-66-3	Ethanol	64-17-5	Isopropyl acetate	108-21-4	n-Pentane	109-66-0
1-Butanol	71-36-3	Ether	60-29-7	Isopropylbenzene	98-82-8	1-Pentanol	71-41-0
2-Butanol	78-92-2	Ethyl acetate	141-78-6	Methyl acetate	79-20-9	1-Propanol	71-23-8
2-Butanone	78-93-3	Ethyl formate	109-94-4	3-Methyl-1-butanol	123-51-3	2-Propanol	67-63-0
Butyl acetate	123-86-4	n-Heptane	142-82-5	4-Methyl-2-pentanone	108-10-1	Propyl acetate	109-60-4

Concentration	Part #
1,000 µg/mL	USP-RS-C3A

23 Component Mix in Dimethyl Sulfoxide

Components	CAS #	Components	CAS #	Components	CAS #	Components	CAS #
Acetone	67-64-1	methyl tertiary-Butyl ether	1634-04-4	Isobutyl acetate	110-19-0	n-Pentane	109-66-0
Anisole	100-66-3	Ethanol	64-17-5	Isopropyl acetate	108-21-4	1-Pentanol	71-41-0
1-Butanol	71-36-3	Ether	60-29-7	Methyl acetate	79-20-9	1-Propanol	71-23-8
2-Butanol	78-92-2	Ethyl acetate	141-78-6	3-Methyl-1-butanol	123-51-3	2-Propanol	67-63-0
2-Butanone	78-93-3	Ethyl formate	109-94-4	4-Methyl-2-pentanone	108-10-1	Propyl acetate	109-60-4
Butyl acetate	123-86-4	n-Heptane	142-82-5	2-Methyl-1-propanol	78-83-1		

Concentration	Part #
1,000 µg/mL	USP-RS-C3A-R1

2 Organic Volatile Impurities, Class 3 Solvents in Dimethyl Sulfoxide

Components	CAS #	Components	CAS #
Acetic acid	64-19-7	Formic acid	64-18-6

Concentration	Part #
1,000 µg/mL	USP-RS-C3B

USP <467> Residual Solvent Standards (continued)

Volume for all USP <467> Residual Solvent Standards is 1 mL

Pharmaceutical Residual Solvents A in Methanol-P&T							
Components	CAS #	Components	CAS #	Components	CAS #	Components	CAS #
Acetone	67-64-1	Dimethylformamide	68-12-2	Isopropyl acetate	108-21-4	1-Propanol	71-23-8
Acetonitrile	75-05-8	1,4-Dioxane	123-91-1	Methyl acetate	79-20-9	2-Propanol	67-63-0
Anisole	100-66-3	Ethanol	64-17-5	2-Methyl-1-butanol	137-32-6	Propyl acetate	109-60-4
1-Butanol	71-36-3	Ether	60-29-7	3-Methyl-1-butanol	123-51-3	Pyridine	110-86-1
2-Butanol	78-92-2	2-Ethoxyethanol	110-80-5	4-Methyl-2-pentanone	108-10-1	Tetrahydrofuran	109-99-9
2-Butanone	78-93-3	Ethyl acetate	141-78-6	1-Methyl-2-pyrrolidinone	872-50-4	Tetramethylene sulfone	126-33-0
Butyl acetate	123-86-4	Ethyl formate	109-94-4	Methyl sulfoxide	67-68-5		
1,2-Dimethoxyethane	110-71-4	2-Hexanone	591-78-6	Nitromethane	75-52-5		
N,N-Dimethylacetamide	127-19-5	Isobutyl acetate	110-19-0	1-Pentanol	71-41-0		

Concentration	Part #
1,000 µg/mL	USP-SOL-A

USP <467> Residual Solvent Singles in Dimethyl Sulfoxide			
Components	CAS #	Concentration	Part #
Chlorobenzene	108-90-7	1,800 µg/mL	USP-S810-DMSO
Cyclohexane	110-82-7	19,400 µg/mL	USP-S1015-DMSO
1,4-Dioxane	123-91-1	1,900 µg/mL	USP-S1715-DMSO
Ethylene glycol	107-21-1	3,100 µg/mL	USP-S1952-DMSO
Methanol	67-56-1	15,000 µg/mL	USP-S2380-DMSO
Nitromethane	75-52-5	250 µg/mL	USP-S2722-DMSO
Tetrahydrofuran	109-99-9	3,600 µg/mL	USP-S3460-DMSO
1,1,1-Trichloroethane	71-55-6	50,000 µg/mL	USP-S3605-DMSO

Phthalates in Polyethylene QC Standards

Polyethylene (PE) is one of the world's most common plastics. PE is used in a variety of common consumer products including children's toys and care items. Current US regulations limit the concentrations of certain phthalates in childcare articles and children's toys. Laboratories are tasked with the analysis of children's toys for these potentially hazardous phthalates.

Phthalates Standard in Medium Density Polyethylene					
Components	CAS #	Concentration	Components	CAS #	Concentration
Butylbenzyl phthalate	85-68-7	3,000 µg/g	Diisononyl phthalate	28553-12-0	30,000 µg/g
Di-n-butyl phthalate	84-74-2	3,000 µg/g	Dimethyl phthalate	131-11-3	3,000 µg/g
Diethyl phthalate	84-66-2	3,000 µg/g	Di-n-octyl phthalate	117-84-0	3,000 µg/g
Diisodecyl phthalate	26761-40-0	30,000 µg/g	bis(2-Ethylhexyl)phthalate	117-81-7	3,000 µg/g

Volume	Part #
5 g	CRM-PE001

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Phthalates in Polyethylene QC Standards (continued)

Medium Density Polyethylene QC Standard Blank		
Matrix	**Volume**	**Part #**
Polyethylene	5 g	CRM-PEBLK

9 Regulated Phthalates and BPA in Medium Density Polyethylene

Components	CAS #	Concentration	Components	CAS #	Concentration
Bisphenol A	80-05-7	3,000 µg/g	Diisononyl phthalate	28553-12-0	30,000 µg/g
Butylbenzyl phthalate	85-68-7	3,000 µg/g	Dimethyl phthalate	131-11-3	3,000 µg/g
Di-n-butyl phthalate	84-74-2	3,000 µg/g	Di-n-octyl phthalate	117-84-0	3,000 µg/g
Diethyl phthalate	84-66-2	3,000 µg/g	bis(2-Ethylhexyl)phthalate	117-81-7	3,000 µg/g
Diisodecyl phthalate	26761-40-0	30,000 µg/g			

Volume	Part #
5 g	CRM-PE002

Phthalates in Polyvinyl Chloride QC Standards

Polyvinyl chloride, or PVC, is a very common plastic used in a wide range of common consumer products from children's toys and care items to building and construction materials. In the US, ASTM (American Society for Testing and Materials) and CPSC (Consumer Product Safety Commission) have designed methods for testing children's toys and childcare articles for compliance with the restriction of use for eight designated phthalates.

Phthalates Standard in Polyvinyl Chloride

Components	CAS #	Concentration	Components	CAS #	Concentration
Butylbenzyl phthalate	85-68-7	3,000 µg/g	Dimethyl phthalate	131-11-3	3,000 µg/g
Diethyl phthalate	84-66-2	3,000 µg/g	Di-n-butyl phthalate	84-74-2	3,000 µg/g
Diisodecyl phthalate	26761-40-0	30,000 µg/g	Di-n-octyl phthalate	117-84-0	3,000 µg/g
Diisononyl phthalate	28553-12-0	30,000 µg/g	bis(2-Ethylhexyl)phthalate	117-81-7	3,000 µg/g

Volume	Part #
1.5 g	CRM-PVC001

Polyvinyl Chloride Phthalate Blank		
Matrix	**Volume**	**Part #**
Polyvinyl Chloride	1.5 g	CRM-PVCBLK

Calibration Standard Phthalates in Isooctane

Components	CAS #	Components	CAS #
Butylbenzyl phthalate	85-68-7	Di-n-butyl phthalate	84-74-2
Diisodecyl phthalate	26761-40-0	Di-n-octyl phthalate	117-84-0
Diisononyl phthalate	28553-12-0	bis(2-Ethylhexyl)phthalate	117-81-7

Volume	Concentration	Part #
1 mL	1,000 µg/mL	C1001-09

Acetaldehyde

Acetaldehyde is one of the most common aldehydes that occur in nature and industrial processes. Naturally occurring, acetaldehyde is found as a product of ethanol fermentation in alcoholic beverages, yeast products such as bread, and ripe fruit. Acetaldehyde forms by degradation of PET (polyethylene terephthalate) exposed to high temperatures or high pressure.

Acetaldehyde in Water, 1.8 mL				
Component	**CAS #**	**Concentration**	**Matrix**	**Part #**
Acetaldehyde	75-07-0	1,000 µg/mL	DI Water	S-125-W1.8

Plastic Additives

Plastic additives, or plasticizers, are chemicals added to increase the plasticity or fluidity of many polymer materials. Additives for plastic can be used to change the physical properties of polymers, add colorants or fragrances, or provide a finish to the final product. These plastic additives are most commonly found as phthalate esters. The safety of the use of phthalate esters or phthalates has been a topic of great discussion and regulation. Many phthalates are under governmental restriction for use in a wide variety of consumer products. The use of phthalates in the consumer world is ubiquitous and many analytical labs are now tasked to quantify the regulated plasticizers while ruling out the presence of other similar plasticizers.

Standards are a critical part of the analysis of plasticizers in order for a laboratory to determine the concentration of the truly regulated plasticizer from a similar type or form of plasticizer. Spex CertiPrep's line of plasticizer compound standards can assist the analytical laboratory with all of their plasticizer analyses by all of the current analytical methods including GC/MS and LC/MS.

Individual Phthalates, 1 mL				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Butylbenzyl phthalate	85-68-7	1,000 µg/mL	Methylene Chloride	S-680-MECL
Diallyl phthalate	131-17-9	1,000 µg/mL	Methanol-P&T	S-4931
Diamyl phthalate	131-18-0	1,000 µg/mL	Methanol	S-4157
Dicyclohexyl phthalate	84-61-7	1,000 µg/mL	Methanol-P&T	S-4151
Diethyl phthalate	84-66-2	1,000 µg/mL	Methanol-P&T	S-1515
Diisobutyl phthalate	84-69-5	1,000 µg/mL	Methanol-P&T	S-4150
Diisodecyl phthalate	26761-40-0	1,000 µg/mL	Methanol-P&T	S-4464
Diisoheptyl phthalate	71888-89-6	1,000 µg/mL	Methylene Chloride	S-1553
Diisononyl phthalate	28553-12-0	1,000 µg/mL	Acetone	S-1559
Di-iso-octyl phthalate	27554-26-3	1,000 µg/mL	Methanol	S-5738
Dimethoxyethyl phthalate	117-82-8	1,000 µg/mL	Methanol-P&T	S-1575
Dimethyl phthalate	131-11-3	1,000 µg/mL	Methanol-P&T	S-1590
Di-n-butyl phthalate	84-74-2	1,000 µg/mL	Methanol-P&T	S-1770
Di-n-hexyl phthalate	84-75-3	1,000 µg/mL	Methanol-P&T	S-4155
Di-n-octyl phthalate	117-84-0	1,000 µg/mL	Methanol-P&T	S-1775
Dinonyl phthalate	84-76-4	1,000 µg/mL	Methanol-P&T	S-4153
Dipropyl phthalate	131-16-8	1,000 µg/mL	Methanol-P&T	S-4491
bis(2-Ethylhexyl)isophthalate	137-89-3	1,000 µg/mL	Methanol-P&T	S-4928
bis(2-Ethylhexyl)phthalate	117-81-7	1,000 µg/mL	Methanol	S-1970
bis(2-Ethylhexyl)terephthalate	6422-86-2	1,000 µg/mL	Methanol	S-5459
Isopentyl pentyl phthalate	776297-69-9	1,000 µg/mL	Methylene Chloride	S-6109

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section 8

Petroleum, Petrochemical & Biodiesel Standards

Petroleum, Petrochemical & Biodiesel Standards

Petroleum is a naturally occurring complex mixture of various molecular weight hydrocarbons that includes products created from unprocessed and refined crude oil. Petrochemicals are the products derived from petroleum and include a variety of chemical compounds. Petrochemicals may also include products derived from petroleum sources other than fossil fuels, including renewable sources such as agricultural products (corn, soy and sugar cane).

Testing using petroleum standards is necessary throughout the entire lifespan of a petroleum product; from its creation in the refinery through environmental monitoring of potential contamination of soil and groundwater sources, to waste disposal and leaking storage facilities.

Spex Certiprep's petroleum and petrochemical standards supply our customers with the reference materials for the entire life cycle of the petroleum products; from standards to characterize various fuel types, to standards that monitor the potential contamination from Leaking Underground Storage Tanks (LUST) and Leaking Underground Fuel Tanks (LUFT) sources.

Did You Know?

Spex CertiPrep offers a Loyal Customer Discount Program to reward you with an automatic discount ranging from 5% to 20% off of all of our qualified products. There is no need to apply! If you purchase a minimum of $2,000 in any calendar year and are in good payment standing with us, we will enroll you into the program automatically at the beginning of the next year so you can receive these discounts.

Another way we show our appreciation for your continued business is through our Loyal Customer Rewards Program, SPoints. In addition to receiving the highest quality Certified Reference Materials, every time you make a purchase with Spex CertiPrep, you will earn 1 SPoint (or credit) for every $10 spent. There is no limit on how many SPoints you can earn and they are good for up to one year after your order has shipped. There is no need to register for this rewards program; if you place a direct order of any qualifying product, you will automatically earn SPoints rewards!

To get your total available SPoints, you can email us at **spexsales@spex.com**, visit your account in our Customer Center, or call us at 1.800.LAB.SPEX. SPoints can be redeemed for valuable merchandise such as gift cards, electronics, and even gift certificates towards your next Spex CertiPrep purchase. You can redeem your SPoints at any time by emailing us at **spexsales@spex.com** or calling us at 1.800.LAB. SPEX.

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Petrochemical and LUST Standards

The EPA regulates the monitoring and testing of underground storage tanks (USTs), that were or are used to store petroleum or other hazardous substances, which could impact the environment and human health. Currently, there are over half a million registered underground storage tanks in the US alone. Many tanks installed prior to the mid-80s were composed of steel, which can corrode over time allowing for leakage into the surrounding groundwater and soil.

The Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act (RCRA), passed in 1984, required the US Environmental Protection Agency (EPA) to develop regulations for the underground storage of motor fuels. The EPA requires owners and operators of USTs to maintain and clean up sites damaged by petroleum contamination.

Spex CertiPrep provides standards designed to meet the testing requirements set up by the EPA and many individual state regulations for LUST and LUFT.

Volume for all Petroleum, Petrochemical and Biodiesel Standards is 1 mL

BTEX Standard in Methanol-P&T

Components	CAS #	Components	CAS #
Benzene	71-43-2	m-Xylene	108-38-3
Ethylbenzene	100-41-4	o-Xylene	95-47-6
Toluene	108-88-3	p-Xylene	106-42-3

Concentration	Part #	Concentration	Part #
200 µg/mL	BTEX	2,000 µg/mL	BTEX-H

Alternate BTEX Standard Formulations (High Level) in Methanol-P&T

Components	CAS #	Components	CAS #
Benzene	71-43-2	m-Xylene*	108-38-3
Ethylbenzene	100-41-4	o-Xylene	95-47-6
Toluene	108-88-3	p-Xylene*	106-42-3

Concentration	Part #
2,000 µg/mL	BTEX-100H

** o-Xylene and p-Xylene are at a concentration of 1,000 µg/mL.*

State of Pennsylvania BTEX Standard (High Level) in Methanol-P&T

Components	CAS #	Components	CAS #
Benzene	71-43-2	Toluene	108-88-3
Ethylbenzene	100-41-4	m-Xylene	108-38-3
Isopropylbenzene	98-82-8	o-Xylene	95-47-6
Methyl tertiary-butyl ether	1634-04-4	p-Xylene	106-42-3
Naphthalene	91-20-3		

Concentration	Part #
2,000 µg/mL	PA-BTEX-H

Volume for all Petroleum, Petrochemical and Biodiesel Standards is 1 mL

Purgeable Aromatics for Gasoline Identification in Methanol-P&T

Components	CAS #	Components	CAS #
Benzene	71-43-2	Methyl tertiary-butyl ether	1634-04-4
Chlorobenzene	108-90-7	Toluene	108-88-3
1,2-Dichlorobenzene	95-50-1	m-Xylene	108-38-3
1,3-Dichlorobenzene	541-73-1	o-Xylene	95-47-6
1,4-Dichlorobenzene	106-46-7	p-Xylene	106-42-3
Ethylbenzene	100-41-4		

Concentration	Part #
2,000 µg/mL	P-GAS

Gasoline Range Organics in Methanol-P&T

Components	CAS #	Components	CAS #
Benzene	71-43-2	1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4	2,2,4-Trimethylpentane	540-84-1
3-Methylpentane	96-14-0	m-Xylene	108-38-3
Naphthalene	91-20-3	o-Xylene	95-47-6
Toluene	108-88-3		

Concentration	Part #
1,000 µg/mL	GRO-1000

Gasoline Range Organics (EPA) Alternative Formulation in Methanol-P&T

Components	CAS #	Concentration	Components	CAS #	Concentration
Benzene	71-43-2	500 µg/mL	1,2,4-Trimethylbenzene	95-63-6	1,000 µg/mL
Ethylbenzene	100-41-4	500 µg/mL	2,2,4-Trimethylpentane	540-84-1	1,500 µg/mL
n-Heptane	142-82-5	500 µg/mL	m-Xylene	108-38-3	1,000 µg/mL
2-Methylpentane	107-83-5	1,500 µg/mL	o-Xylene	95-47-6	1,000 µg/mL
Toluene	108-88-3	1,500 µg/mL	p-Xylene	106-42-3	1,000 µg/mL

Part #
GRO-EPA-2

Diesel Range Organics Mix in Methylene Chloride

Components	CAS #	Components	CAS #
n-Decane	124-18-5	n-Hexadecane	544-76-3
n-Docosane	629-97-0	n-Octacosane	630-02-4
n-Dodecane	112-40-3	n-Octadecane	593-45-3
n-Eicosane	112-95-8	n-Tetracosane	646-31-1
n-Hexacosane	630-01-3	n-Tetradecane	629-59-4

Concentration	Part #
1,000 µg/mL	DRO-1000

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For all Alkanes below, volume is 1 mL and concentration is 1,000 µg/mL

Alkanes Reference Table				
Components	**CAS #**	**Formula**	**Matrix**	**Part #**
n-Butane	106-97-8	C_4H_{10}	Methanol-P&T	S-605
n-Decane	124-18-5	$C_{10}H_{22}$	Methylene Chloride	S-1112
n-Docosane	629-97-0	$C_{22}H_{46}$	Methylene Chloride	S-1790
n-Dodecane	112-40-3	$C_{12}H_{26}$	Methylene Chloride	S-1795
n-Dotetracontane	7098-20-6	$C_{42}H_{86}$	Carbon Disulfide	S-1809
n-Dotriacontane	544-85-4	$C_{32}H_{66}$	Methylene Chloride	S-1810
n-Eicosane	112-95-8	$C_{20}H_{42}$	Methylene Chloride	S-1820
Ethane	74-84-0	C_2H_6	Methanol-P&T	S-1880
n-Heneicosane	629-94-7	$C_{21}H_{44}$	Methanol-P&T	S-2090
n-Hentriacontane	630-04-6	$C_{31}H_{64}$	Methylene Chloride	S-2095
n-Heptacosane	593-49-7	$C_{27}H_{56}$	Methylene Chloride	S-2115
n-Heptadecane	629-78-7	$C_{17}H_{36}$	Methanol-P&T	S-2120
n-Heptane	142-82-5	C_7H_{16}	Methanol-P&T	S-2125
n-Hexacontane	7667-80-3	$C_{60}H_{122}$	p-Xylene	S-2166
n-Hexacosane	630-01-3	$C_{26}H_{54}$	Methylene Chloride	S-2170
n-Hexadecane	544-76-3	$C_{16}H_{34}$	Methylene Chloride	S-2175
n-Hexane	110-54-3	C_6H_{14}	Methanol-P&T	S-2190
n-Hexatriacontane	630-06-8	$C_{36}H_{74}$	p-Xylene	S-2210
Methane	74-82-8	CH_4	Methanol-P&T	S-2379
n-Nonane	111-84-2	C_9H_{20}	Methanol-P&T	S-2785
n-Octacosane	630-02-4	$C_{28}H_{58}$	Methylene Chloride	S-2845
n-Octadecane	593-45-3	$C_{18}H_{38}$	Methanol-P&T	S-2850
n-Octane	111-65-9	C_8H_{18}	Methanol-P&T	S-2870
n-Octatriacontane	7194-85-6	$C_{38}H_{78}$	Hexane	S-2886
n-Pentacontane	6596-40-3	$C_{50}H_{102}$	Carbon Disulfide/Pentane/Methylene Chloride	S-2953
n-Pentadecane	629-62-9	$C_{15}H_{32}$	Methanol-P&T	S-2960
n-Pentane	109-66-0	C_5H_{12}	Methanol-P&T	S-2975
n-Pentatriacontane	630-07-9	$C_{35}H_{72}$	Hexane	S-2990
Propane	74-98-6	C_3H_8	Methanol-P&T	S-3145
n-Tetracosane	646-31-1	$C_{24}H_{50}$	1,1,2-Trichloro-1,2,2-trifluoroethane	S-3435
n-Tetracontane	4181-95-7	$C_{40}H_{82}$	Hexane	S-3430
n-Tetradecane	629-59-4	$C_{14}H_{30}$	Methylene Chloride	S-3440
n-Tetratetracontane	7098-22-8	$C_{44}H_{90}$	Cyclohexane:Methylene Chloride (50:50)	S-3480
n-Tetratriacontane	14167-59-0	$C_{37}H_{70}$	Methylene Chloride	S-3485
n-Triacontane	638-68-6	$C_{30}H_{62}$	Methylene Chloride	S-3540
n-Undecane	1120-21-4	$C_{11}H_{24}$	Methanol-P&T	S-3780

Volume for all Petroleum, Petrochemical and Biodiesel Standards is 1 mL

C_{11} through C_{18} Alkanes Mix in Methylene Chloride

Components	CAS #	Components	CAS #
n-Dodecane	112-40-3	n-Pentadecane	629-62-9
n-Heptadecane	629-78-7	n-Tetradecane	629-59-4
n-Hexadecane	544-76-3	n-Tridecane	629-50-5
n-Octadecane	593-45-3	n-Undecane	1120-21-4

Concentration	Part #
1,000 µg/mL	C11-18

C_{15} through C_{35} Odd Alkanes Mix in Methylene Chloride

Components	CAS #	Components	CAS #
n-Heneicosane	629-94-7	n-Pentacosane	629-99-2
n-Hentriacontane	630-04-6	n-Pentadecane	629-62-9
n-Heptacosane	593-49-7	n-Pentatriacontane	630-07-9
n-Heptadecane	629-78-7	n-Tricosane	638-67-5
n-Nonacosane	630-03-5	n-Tritriacontane	630-05-7
n-Nonadecane	629-92-5		

Concentration	Part #
1,000 µg/mL	ENC-ODD-1K

C_{16} through C_{36} Even Alkanes Mix in Methylene Chloride

Components	CAS #	Components	CAS #
n-Docosane	629-97-0	n-Octacosane	630-02-4
n-Dotriacontane	544-85-4	n-Octadecane	593-45-3
n-Eicosane	112-95-8	n-Tetracosane	646-31-1
n-Hexacosane	630-01-3	n-Tetratriacontane	14167-59-0
n-Hexadecane	544-76-3	n-Triacontane	638-68-6
n-Hexatriacontane	630-06-8		

Concentration	Part #
1,000 µg/mL	ENC-EVEN-1K

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Volume for all Petroleum, Petrochemical and Biodiesel Standards is 1 mL

State of TX, C_6 through C_{35} Alkanes in Pentane

Components	CAS #	Components	CAS #	Components	CAS #
n-Decane	124-18-5	n-Hexane	110-54-3	n-Pentacosane	629-99-2
n-Dodecane	112-40-3	n-Nonadecane	629-92-5	n-Pentadecane	629-62-9
n-Eicosane	112-95-8	n-Nonane	111-84-2	n-Pentatriacontane	630-07-9
n-Heptadecane	629-78-7	n-Octacosane	630-02-4	n-Tetradecane	629-59-4
n-Heptane	142-82-5	n-Octadecane	593-45-3	n-Tridecane	629-50-5
n-Hexadecane	544-76-3	n-Octane	111-65-9	n-Undecane	1120-21-4

Concentration	Part #
1,000 µg/mL	TX-HC-18

Single-Component Petrochemical Fuel Standards

Components	CAS #	Concentration	Matrix	Part #
Regular Unleaded Gasoline	86290-81-5	1,000 µg/mL	Methylene Chloride	S-RG-1000
		20,000 µg/mL	Methanol-P&T	S-RG-20K
Premium Unleaded Gasoline (High Level)	8006-61-9	20,000 µg/mL	Methanol-P&T	S-PG-20K
Motor Oil, SAW 30W	N/A	20,000 µg/mL	Methylene Chloride	S-030W-20K
#2 Diesel Fuel Oil	68476-34-6	1,000 µg/mL	Methanol-P&T	S-DF2-1000
		20,000 µg/mL	Methanol	S-DF2-20K
Kerosene (High Level)	8008-20-6	20,000 µg/mL	Methanol-P&T	S-K-20K
Mineral Spirits (High Level)	9072-35-9	20,000 µg/mL	Methanol-P&T	S-MS-20K

Weathered Fuel Standards

Components	CAS #	Concentration	Matrix	Part #
Regular Unleaded Gasoline	86290-81-5	25% Weathered, 5,000 µg/mL	Methanol-P&T	S-WG-25
		50% Weathered, 5,000 µg/mL		S-WG-50
#2 Diesel Fuel Oil	68476-34-6	25% Weathered, 5,000 µg/mL	Methanol-P&T	S-WDF-25
		50% Weathered, 5,000 µg/mL		S-WDF-50
Kerosene	8008-20-6	25% Weathered, 5,000 µg/mL	Methanol-P&T	S-WK-25
		75% Weathered, 5,000 µg/mL		S-WK-75

Surrogate Standard in Methylene Chloride

Component	CAS #
o-Terphenyl	84-15-1

Concentration	Part #
5,000 µg/mL	DIESEL-I

NJDEP Extractable Petroleum Hydrocarbon Method

These products were developed to comply with health-based criteria for site remediation efforts, and includes procedures to separate the petroleum content into specific carbon ranges.

Method OQA-QAM-025-02/8
NJDEP EPH

Aliphatics Calibration Standard in Hexane:Carbon Disulfide

Components	CAS #	Components	CAS #	Components	CAS #
n-Decane	124-18-5	n-Hexadecane	544-76-3	n-Octatriacontane	7194-85-6
n-Docosane	629-97-0	n-Hexatriacontane	630-06-8	n-Tetracontane	4181-95-7
n-Dodecane	112-40-3	2-Methylnaphthalene	91-57-6	n-Tetracosane	646-31-1
n-Dotriacontane	544-85-4	Naphthalene	91-20-3	n-Tetradecane	629-59-4
n-Eicosane	112-95-8	n-Nonane	111-84-2	n-Tetratriacontane	14167-59-0
n-Heneicosane	629-94-7	n-Octacosane	630-02-4	n-Triacontane	638-68-6
n-Hexacosane	630-01-3	n-Octadecane	593-45-3		

Concentration	Volume	Part #
2,000 µg/mL	1 mL	NJDEP-EPH-ALCS

Aliphatics Fractionation Check Mix in Hexane

Components	CAS #	Components	CAS #	Components	CAS #
n-Decane	124-18-5	n-Hexacosane	630-01-3	n-Octatriacontane	7194-85-6
n-Docosane	629-97-0	n-Hexadecane	544-76-3	n-Tetracontane	4181-95-7
n-Dodecane	112-40-3	n-Hexatriacontane	630-06-8	n-Tetracosane	646-31-1
n-Dotriacontane	544-85-4	n-Nonane	111-84-2	n-Tetradecane	629-59-4
n-Eicosane	112-95-8	n-Octacosane	630-02-4	n-Tetratriacontane	14167-59-0
n-Heneicosane	629-94-7	n-Octadecane	593-45-3	n-Triacontane	638-68-6

Concentration	Volume	Part #
400 µg/mL	5 mL	NJDEP-EPH-ALFC

Aliphatics Matrix Spike Mix in Pentane

Components	CAS #	Components	CAS #	Components	CAS #
n-Decane	124-18-5	n-Hexacosane	630-01-3	n-Octatriacontane	7194-85-6
n-Docosane	629-97-0	n-Hexadecane	544-76-3	n-Tetracontane	4181-95-7
n-Dodecane	112-40-3	n-Hexatriacontane	630-06-8	n-Tetracosane	646-31-1
n-Dotriacontane	544-85-4	n-Nonane	111-84-2	n-Tetradecane	629-59-4
n-Eicosane	112-95-8	n-Octacosane	630-02-4	n-Tetratriacontane	14167-59-0
n-Heneicosane	629-94-7	n-Octadecane	593-45-3	n-Triacontane	638-68-6

Concentration	Volume	Part #
200 µg/mL	5 mL	NJDEP-EPH-ALMS

EPH Surrogate Spike Mix in Acetone

Components	CAS #	Components	CAS #
1-Chlorooctadecane	3386-33-2	o-Terphenyl	84-15-1

Concentration	Volume	Part #
4,000 µg/mL	1 mL	NJDEP-EPH-SS

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Method OQA-QAM-025-02/8 (continued)
NJDEP EPH

Aromatics Calibration Standards in Methylene Chloride

Components	CAS #	Components	CAS #	Components	CAS #
Acenaphthene	83-32-9	Benzo(g,h,i)perylene	191-24-2	Indeno(1,2,3-cd)pyrene	193-39-5
Acenaphthylene	208-96-8	Benzo(k)fluoranthene	207-08-9	2-Methylnaphthalene	91-57-6
Anthracene	120-12-7	Chrysene	218-01-9	Naphthalene	91-20-3
Benz(a)anthracene	56-55-3	Dibenz(a,h)anthracene	53-70-3	Phenanthrene	85-01-8
Benzo(a)pyrene	50-32-8	Fluoranthene	206-44-0	Pyrene	129-00-0
Benzo(b)fluoranthene	205-99-2	Fluorene	86-73-7	1,2,3-Trimethylbenzene	526-73-8

Concentration	Volume	Part #
2,000 µg/mL	1 mL	NJDEP-EPH-ARCS

Aromatics Fraction Check Mix in Hexane:Toluene

Components	CAS #	Components	CAS #	Components	CAS #
Acenaphthene	83-32-9	Benzo(g,h,i)perylene	191-24-2	Indeno(1,2,3-cd)pyrene	193-39-5
Acenaphthylene	208-96-8	Benzo(k)fluoranthene	207-08-9	Phenanthrene	85-01-8
Anthracene	120-12-7	Chrysene	218-01-9	Pyrene	129-00-0
Benz(a)anthracene	56-55-3	Dibenz(a,h)anthracene	53-70-3	1,2,3-Trimethylbenzene	526-73-8
Benzo(a)pyrene	50-32-8	Fluoranthene	206-44-0		
Benzo(b)fluoranthene	205-99-2	Fluorene	86-73-7		

Concentration	Volume	Part #
400 µg/mL	5 mL	NJDEP-EPH-ARFS

Aromatics Matrix Spike Mix in Acetone:Toluene

Components	CAS #	Components	CAS #	Components	CAS #
Acenaphthene	83-32-9	Benzo(g,h,i)perylene	191-24-2	Indeno(1,2,3-cd)pyrene	193-39-5
Acenaphthylene	208-96-8	Benzo(k)fluoranthene	207-08-9	2-Methylnaphthalene	91-57-6
Anthracene	120-12-7	Chrysene	218-01-9	Naphthalene	91-20-3
Benz(a)anthracene	56-55-3	Dibenz(a,h)anthracene	53-70-3	Phenanthrene	85-01-8
Benzo(a)pyrene	50-32-8	Fluoranthene	206-44-0	Pyrene	129-00-0
Benzo(b)fluoranthene	205-99-2	Fluorene	86-73-7	1,2,3-Trimethylbenzene	526-73-8

Concentration	Volume	Part #
200 µg/mL	5 mL	NJDEP-EPH-ARMS

EPH Fractionation Surrogate Spike Mix in Hexane

Components	CAS #	Components	CAS #
2-Bromonaphthalene	580-13-2	2-Fluorobiphenyl	321-60-8

Concentration	Volume	Part #
4,000 µg/mL	1 mL	NJDEP-EPH-FSS

Biodiesel Standards Designed for ASTM D6584 & EN14105

Biodiesel is fast becoming an environmentally friendly alternative to petroleum sources. This fuel source is obtained by esterification of oils derived from plants or animals. To meet the demands of this industry, Spex CertiPrep offers Biodiesel Certified Reference Materials, as well as glyceride and FAME (Fatty Acids Methyl Esters) impurity standards; all designed to save time and money by eliminating the need to prepare in-house standards.

Our standards are manufactured from the highest purity starting materials and the highest grade of solvents available to guarantee superior quality. These standards are manufactured in a specially designed laboratory built to eliminate contamination issues that may arise during the manufacturing process. The standards then go through a rigorous QC process where a senior chemist approves each lot. This guarantees the standards are accurate and stable at the stated concentrations for all of the components. In addition, all standards are supplied with a detailed, comprehensive Certificate of Analysis.

For a custom standard quote, please visit **spex.com/CustomProduct/OrganicProduct**.

Glyceride Impurity Standards for Biodiesel

Components	CAS #	Concentration	Volume	Matrix	Part #
Diolein	25637-84-7	50 µg/mL	1 mL	Pyridine	BD-3509
Glycerol	56-81-5	5 µg/mL			
Monolein	111-03-5	100 µg/mL			
Triolein	122-32-7	50 µg/mL			
Diolein	25637-84-7	200 µg/mL	1 mL	Pyridine	BD-3511
Glycerol	56-81-5	25 µg/mL			
Monolein	111-03-5	500 µg/mL			
Triolein	122-32-7	200 µg/mL			
Diolein	25637-84-7	350 µg/mL	1 mL	Pyridine	BD-3512
Glycerol	56-81-5	35 µg/mL			
Monolein	110-03-5	750 µg/mL			
Triolein	122-32-7	350 µg/mL			
Diolein	25637-84-7	500 µg/mL	1 mL	Pyridine	BD-3513
Glycerol	56-81-5	50 µg/mL			
Monolein	110-03-5	1,000 µg/mL			
Triolein	122-32-7	500 µg/mL			
(S)-1,2,4-Butanetriol	42890-76-6	1,000 µg/mL	5 mL	Pyridine	BD-3514
Tricaprin	621-71-6	8,000 µg/mL	5 mL	Pyridine	BD-3515
n-Trimethylsilyl-n-methyl trifluoroacetamide (MSTFA)	24589-78-4	5.2 mL	5 mL	N/A	NEAT-4419

Fatty Acids Methyl Esters (FAME), 1 mL

Components	CAS #	Concentration	Matrix	Part #
Methyl heptanoate	106-73-0	1,000 µg/mL	Methanol	S-4648
Methyl caprylate	111-11-5	1,000 µg/mL	Methanol	S-4649
Methyl nonanoate	1731-84-6	1,000 µg/mL	Methanol	S-4650
Methyl decanoate	110-42-9	1,000 µg/mL	Methanol-P&T	S-4217
Methyl myristate	124-10-7	1,000 µg/mL	Methanol	S-4654
Methyl pentadecanoate	7162-64-1	1,000 µg/mL	Methanol	S-4655
Methyl palmitate	112-39-0	1,000 µg/mL	Methanol	S-4656
Methyl tricosanoate	2433-97-8	1,000 µg/mL	Methanol	S-4663

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ASTM Standards

ASTM (American Society for Testing and Materials) is an international organization that is a recognized leader in the development of testing, material and method standards and specifications. ASTM methods are used worldwide to standardize industrial processes, materials and methods to enhance product quality and safety. There are a wide range of methods applicable to many fields of analytical chemistry; from the composition of an inorganic metal alloy test method and specification; to analytical methods for measuring hazardous organic compounds in children's toys.

Spex CertiPrep's ASTM products are designed to work within the specifications and methods of their corresponding test methods allowing for ease of use and ensuring accuracy within the testing process.

ASTM Method D2887 Standard in Carbon Disulfide

Components	CAS #	Components	CAS #	Components	CAS #
n-Decane	124-18-5	n-Hexane	110-54-3	n-Pentane	109-66-0
n-Dodecane	112-40-3	n-Hexatriacontane	630-06-8	n-Tetracontane	4181-95-7
n-Dotriacontane	544-85-4	n-Nonane	111-84-2	n-Tetracosane	646-31-1
n-Eicosane	112-95-8	n-Octacosane	630-02-4	n-Tetradecane	629-59-4
n-Heptadecane	629-78-7	n-Octadecane	593-45-3	n-Tetratetracontane	7098-22-8
n-Heptane	142-82-5	n-Octane	111-65-9	n-Undecane	1120-21-4
n-Hexadecane	544-76-3	n-Pentadecane	629-62-9		

Concentration	Volume	Part #
0.5% w/w	1 mL	ASTM-D2887

ASTM Method D3710 Standard in Neat

Components	CAS #	Concentration	Components	CAS #	Concentration
n-Butylbenzene	104-51-8	3.5% w/w	n-Octane	111-65-9	5.8% w/w
n-Decane	124-18-5	3.5% w/w	n-Pentadecane	629-62-9	2.3% w/w
2,4-Dimethylpentane	108-08-7	5.8% w/w	n-Pentane	109-66-0	8.1% w/w
n-Dodecane	112-40-3	3.5% w/w	n-Propylbenzene	103-65-1	4.7% w/w
n-Heptane	142-82-5	10.5% w/w	n-Tetradecane	629-59-4	2.3% w/w
n-Hexane	110-54-3	5.8% w/w	Toluene	108-88-3	11.6% w/w
2-Methylbutane	78-78-4	10.5% w/w	n-Tridecane	629-50-5	2.3% w/w
2-Methylpentane	107-83-5	5.8% w/w	p-Xylene	106-42-3	14% w/w

Volume	Part #
1 mL	ASTM-D3710

Did You Know?

w/w stands for weight to weight. This is used where the weight of each chemical is used and not the volume (e.g. If one dissolves 10 g of fat in 90 g of ethanol so the total mass of the whole solution is 100 g, then one has made a 10% w/w solution of fat).

ASTM Standards (continued)

ASTM Method D6160 Aroclor Singles, 1 mL				
Components	**CAS #**	**Concentration**	**Matrix**	**Part #**
Aroclor 1016	12674-11-2	200 µg/mL	Hexane	PCB-1016
		1,000 µg/mL	Hexane	PCB-1016H
		1,000 µg/mL	Methanol	S-310
Aroclor 1221	11104-28-2	200 µg/mL	Hexane	PCB-1221
		1,000 µg/mL	Hexane	PCB-1221H
		1,000 µg/mL	Methanol	S-315
Aroclor 1232	11141-16-5	200 µg/mL	Hexane	PCB-1232
		1,000 µg/mL	Hexane	PCB-1232H
		1,000 µg/mL	Methanol	S-317
Aroclor 1242	53469-21-9	200 µg/mL	Hexane	PCB-1242
		1,000 µg/mL	Hexane	PCB-1242H
		1,000 µg/mL	Methanol	S-325
Aroclor 1248	12672-29-6	200 µg/mL	Hexane	PCB-1248
		1,000 µg/mL	Hexane	PCB-1248H
		1,000 µg/mL	Methanol-P&T	S-330
Aroclor 1254	11097-69-1	200 µg/mL	Hexane	PCB-1254
		1,000 µg/mL	Hexane	PCB-1254H
		1,000 µg/mL	Isooctane	S-335-ISOOCT
Aroclor 1260	11096-82-5	200 µg/mL	Hexane	PCB-1260
		1,000 µg/mL	Hexane	PCB-1260H
		1,000 µg/mL	Isooctane	S-340-ISOOCT
Aroclor 1262	37324-23-5	200 µg/mL	Hexane	PCB-1262
		1,000 µg/mL	Hexane	PCB-1262H
		1,000 µg/mL	Hexane	S-345
Aroclor 1268	11100-14-4	200 µg/mL	Hexane	PCB-1268
		1,000 µg/mL	Hexane	PCB-1268H

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section 9

International Standards

International Standards

Spex CertiPrep has responded to your request and now offers more catalog parts for global applications. Analytical labs around the world are required to meet their countries requirements for environmental and safety testing.

CHECK OUT THESE HELPFUL AND INFORMATIONAL INDUSTRY RESOURCES

American Association for Laboratory Accreditation (A2LA)
American Chemical Society (ACS)
ACS North Jersey Section Mass Spectrometry Discussion Group (NJ-ACS)
American Society for Testing and Materials (ASTM)
AOAC International
British Mass Spectrometry Society (BMSS)
Centers for Disease Control and Prevention (CDC)
CDC Laboratory Response Network (LRN)
European Law Monitor
Harmonized Global Tariff System
International Organization for Standardization (ISO)
International Union of Pure and Applied Chemistry (IUPAC)
National Institute of Standards and Technology (NIST)
National Science Foundation (NSF)
New Jersey Department of Environmental Protection (NJDEP)
Royal Society of Chemistry
Spectroscopy Now
Underwriters Laboratories (UL)
The United Kingdom Accreditation Services (UKAS)

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If you cannot find a dealer in your country, or if you are interested in distributing Spex CertiPrep products, contact us at **spexsales@antylia.com**.

Volume for International Standards is 1 mL

22-Component Organic Standard in Acetone:Methanol

Components	CAS #	Components	CAS #	Components	CAS #
Aldicarb	116-06-3	Chlorpyrifos oxon	5598-15-2	Permethrin (mix of cis & trans)	52645-53-1
Aldicarb sulfone	1646-88-4	Diuron	330-54-1	Profenofos	41198-08-7
Aldicarb sulfoxide	1646-87-3	Folicur	107534-96-3	Prowl (Pendimethalin)	40487-42-1
Atrazine	1912-24-9	Mancozeb	8018-01-7	Simazine	122-34-9
Benomyl	17804-35-2	Methamidophos	10265-92-6	Terbufos	13071-79-9
Carbendazim	10605-21-7	Methyl parathion	298-00-0	Trifluralin	1582-09-8
Carbofuran	1563-66-2	Metolachlor	51218-45-2		
Chlorpyrifos	2921-88-2	Molinate	2212-67-1		

Concentration	Part #
100 µg/mL	POR-2914-C

9-Component Organic Standard in Methyl Tertiary-Butyl Ether

Components	CAS #	Components	CAS #
Bromoacetic acid	79-08-3	Dibromoacetic acid	631-64-1
Bromochloroacetic acid	5589-96-8	Dichloroacetic acid	79-43-6
Bromodichloroacetic acid	71133-14-7	Tribromoacetic acid	75-96-7
Chloroacetic acid	79-11-8	Trichloroacetic acid	76-03-9
Dalapon	75-99-0		

Concentration	Part #
1,000 µg/mL	POR-2914-D

17-Component Organic Standard in Methanol-P&T

Components	CAS #	Components	CAS #	Components	CAS #
Acrylamide	79-06-1	trans-1,2-Dichloroethene	156-60-5	1,2,3-Trichlorobenzene	87-61-6
Benzene	71-43-2	bis(2-Ethylhexyl)phthalate	117-81-7	1,2,4-Trichlorobenzene	120-82-1
Carbon tetrachloride	56-23-5	Methylene chloride	75-09-2	1,3,5-Trichlorobenzene	108-70-3
1,2-Dichloroethane	107-06-2	Pentachlorophenol	87-86-5	Trichloroethene	79-01-6
1,1-Dichloroethene	75-35-4	Styrene	100-42-5	Vinyl chloride	75-01-4
cis-1,2-Dichloroethene	156-59-2	Tetrachloroethene	127-18-4		

Concentration	Part #
1,000 µg/mL	POR-2914-E1

2-Component Organic Standard in DI Water

Components	CAS #	Components	CAS #
Aminomethyl phosphonic acid	1066-51-9	Glyphosate	1071-83-6

Concentration	Part #
1,000 µg/mL	POR-2914-F

Volume for International Standards is 1 mL

19-Component Organic Standard in Benzene

Components	CAS #	Components	CAS #	Components	CAS #
Alachlor	15972-60-8	p,p'-DDT	50-29-3	Heptachlor epoxide (Isomer B)	1024-57-3
Aldrin	309-00-2	Dieldrin	60-57-1	Methoxychlor	72-43-5
gamma-BHC	58-89-9	Endosulfan I	959-98-8	Metolachlor	51218-45-2
alpha-Chlordane	5103-71-9	Endosulfan II	33213-65-9	Toxaphene	8001-35-2
gamma-Chlordane	5103-74-2	Endosulfan sulfate	1031-07-8	Trifluralin	1582-09-8
p,p'-DDD	72-54-8	Endrin	72-20-8		
p,p'-DDE	72-55-9	Heptachlor	76-44-8		

Concentration	Part #
2,000 µg/mL	CON-430-A

3-Component Organic Standard in Methylene Chloride

Components	CAS #	Components	CAS #
Carbaryl	63-25-2	Malathion	121-75-5
Demeton (O+S)	8065-48-3		

Concentration	Part #
2,000 µg/mL	CON-430-B

Trihalomethanes in Methanol-P&T

Components	CAS #	Components	CAS #
Bromodichloromethane	75-27-4	Chloroform	67-66-3
Bromoform	75-25-2	Dibromochloromethane	124-48-1

Concentration	Part #
200 µg/mL	THM-X

BTEX Standard in Methanol-P&T

Components	CAS #	Components	CAS #
Benzene	71-43-2	m-Xylene	108-38-3
Ethylbenzene	100-41-4	o-Xylene	95-47-6
Toluene	108-88-3	p-Xylene	106-42-3

Concentration	Part #
200 µg/mL	BTEX

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Volume for International Standards is 1 mL

PAH Analyte Mix in Acetonitrile

Components	CAS #	Concentration	Components	CAS #	Concentration
Acenaphthene	83-32-9	1,000 µg/mL	Dibenz(a,h)anthracene	53-70-3	10 µg/mL
Acenaphthylene	208-96-8	1,000 µg/mL	Fluoranthene	206-44-0	5 µg/mL
Anthracene	120-12-7	50 µg/mL	Fluorene	86-73-7	100 µg/mL
Benz(a)anthracene	56-55-3	1 µg/mL	Indeno(1,2,3-cd)pyrene	193-39-5	10 µg/mL
Benzo(a)pyrene	50-32-8	5 µg/mL	Naphthalene	91-20-3	1,000 µg/mL
Benzo(b)fluoranthene	205-99-2	1 µg/mL	Phenanthrene	85-01-8	50 µg/mL
Benzo(g,h,i)perylene	191-24-2	5 µg/mL	Pyrene	129-00-0	50 µg/mL
Benzo(k)fluoranthene	207-08-9	1 µg/mL			
Chrysene	218-01-9	50 µg/mL			

Part #
550-A

Aroclor Mix 1 in Hexane

Components	CAS #	Components	CAS #
Aroclor 1016	12674-11-2	Aroclor 1248	12672-29-6
Aroclor 1232	11141-16-5	Aroclor 1260	11096-82-5

Concentration	Part #
200 µg/mL	PCB-M1

Aroclor Mix 2 in Hexane

Components	CAS #	Components	CAS #
Aroclor 1221	11104-28-2	Aroclor 1254	11097-69-1
Aroclor 1242	53469-21-9		

Concentration	Part #
200 µg/mL	PCB-M2

5022-B 170
5022-BH 170
5022-I 170
504-AH 170
5041-AH 170
505-A2 229
506-AH 190
507-A 231
507-B 231
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CLPS-SOM-ISB	215	LCS-3185	221	LCS-6189	221	PCB-BZ-35	246
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