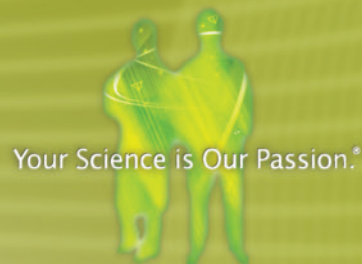


SPEX CertiPrep®



# 60TH ANNIVERSARY



2014-2015

ORGANIC  
CERTIFIED REFERENCE MATERIALS

## Our Mission:

SPEX Organics is Committed to Serving the Chromatography Community One Peak at a Time™ with Certified Reference Materials designed to meet all of your analytical needs. With our dedication to quality and our drive to innovate with passion we are consistently striving to manufacture products which will 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.



# Welcome

SPEX CertiPrep is celebrating 60 years of support to the scientific community! Since 1954 we have grown into the industry's most passionate and reliable manufacturer of Certified Reference Materials and Calibration Standards for the Analytical Spectroscopy and Chromatography communities.

We are pleased to share with you the **60th Anniversary 2014-2015 SPEX CertiPrep Certified Reference Materials** catalog. This flipbook style catalog includes our Organic Certified Reference Materials on one side and our Inorganic Certified Reference Materials on the other.

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

SPEX CertiPrep's certification by UL-DQS for ISO 9001 and accreditation by A2LA under ISO 17025 and ISO Guide 34 is the most comprehensive in the industry, and encompasses all our manufactured products.

Our Organic product line offers quick turnaround time based on your individual needs. We specialize in manufacturing Custom Standards but offer many new Organic products in this catalog including:

- **LC-MS Single and Multi-Element Standards**
- **LC-MS Daily Checks**
- **Phthalates in Polyvinyl (PVC) Standards**
- **QuEChERS Kits and Internal Standards**
- **UCMR3**
- **USP<467>**
- **NJDEP Extractable Petroleum Hydrocarbon Method**

Our heritage is our passion for science and dedication to the analytical community. We produce only the highest quality standards, and offer the best and most reliable customer support in the industry.

We look forward to working with you in the years to come.

Sincerely,



Yvonne Cangelosi  
President



**60 Years of Manufacturing Quality Products  
and Supporting the Scientific Community**



# Organic Certified Reference Materials

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# Ordering Information & Technical Support

**PHONE:** 1-800-LAB-SPEX (1-800-522-7739)

**FAX:** 732-603-9647

**E-MAIL:** [crmsales@spex.com](mailto:crmsales@spex.com)

## ONLINE ORDERS

**AND LIVE CHAT:** [www.spexcertiprep.com](http://www.spexcertiprep.com)

**ASK A CHEMIST:** [AskAChemist@spex.com](mailto:AskAChemist@spex.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 by your order.

**RETURN AND/OR EXCHANGE** – Contact the 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 charge.

**LIMITED LIABILITY** – Purchaser's sole and exclusive remedy for damages and Seller's sole and exclusive liability for damages from 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 dealers in many countries around the world. Please visit [www.spexcertiprep.com](http://www.spexcertiprep.com) for a complete list of international dealers.

**PRECAUTIONS** – SPEX CertiPrep products are not for any cosmetic, drug, or household application. 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. On our clients must rest the entire burden of safe storage, handling, and application of all products ordered from this catalog. We assume requisitioners to be competent, safety-conscious professionals.





# Custom Standards & Packaging

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 [www.spexcertiprep.com/customorganics](http://www.spexcertiprep.com/customorganics)

Standards are available for LC, LC-MS, GC or GC-MS

- We offer customs in 1 mL ampules up to 1 L bottles
- Each product is analyzed using state of the art instrumentation
- We stock a comprehensive supply of starting materials for fast manufacture as well as certified solutions ready to ship
- All standards come with a comprehensive Certificate of Analysis and MSDS

## OO/PV

### OPERATIONAL QUALIFICATION AND PERFORMANCE VERIFICATION PROGRAM

To help you comply with your OO/PV regulations, SPEX CertiPrep is now offering fast, convenient, ready-to-use SPEX CertiPrep IQ Custom Standards Kits. Our trained manufacturing chemists can make your standard with our high-purity compounds or you can supply us with your own materials. Either way, we will package your standards into convenient single-use volumes. Each kit contains a one-year supply of standards that are made and labeled entirely to your specifications.

We manufacture and/or package your standards in our ISO-9001 facility. SPEX Certiprep is also accredited by A2LA as complying with the requirements of ISO/IEC 17025 and ISO/IEC Guide 34. We can help you achieve and sustain your quality and production goals by guaranteeing homogeneity and ensuring lot-to-lot consistency.

## CAPABILITIES

- Concentration of standards: 0.01 µg/mL to 1%
- Sizes available: 1.0 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

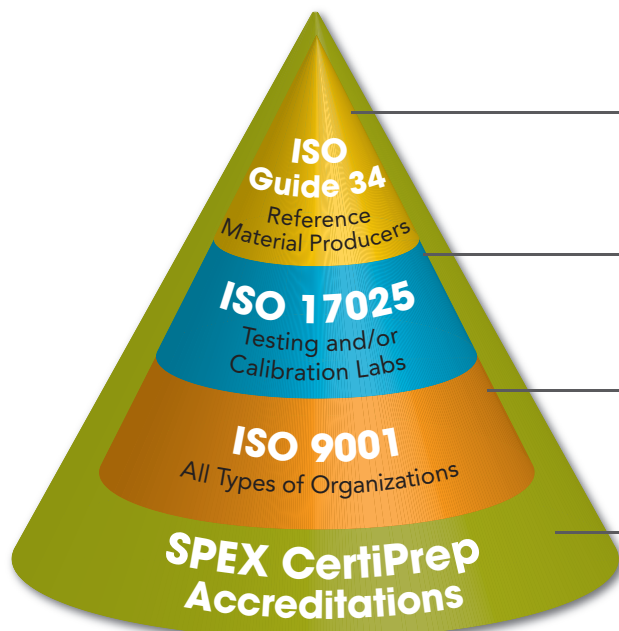
- Complete 1-year supply of standards with SAME LOT #
- Bar coding for easy tracking of standards within lab
- Filling process tracked for guaranteed homogeneity
- Lot-to-lot consistency for seamless use through the years
- Mistake-proof instructions included for easy transition between different users

## CUSTOM PACKAGING

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

# Quality

## Calibrate with Confidence®



**Level 3** – Accredited by the A2LA as an ISO/IEC Guide 34:2000 Certified **Inorganic and Organic** Reference Material Producer

**Level 2** – Accredited by the A2LA as an ISO/IEC 17025:2005 Certified Chemical Testing Laboratory

**Level 1** – Certified by UL DQS as an ISO 9001:2000 facility for our Quality Management System

**Your Science is Our Passion®** We have the **most comprehensive scope** in the industry!

### 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 chemical reference materials. How can we prove it? The International Standard Organization (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 depicted in the diagram above, there are three levels of ISO certification that are most relevant for reference material manufacturers – ISO 9001, ISO 17025 and ISO Guide 34.

Each level has its own set of internationally recognized criteria against which companies are formally measured. Moving toward the top of the cone, 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.

### Three Levels of ISO Accreditation in Short and What They Mean to Our Customers

#### ISO 9001

- Open to all Types of Organizations
- Written Procedures
- Documented Complaints

**Customer Satisfaction**

#### ISO 17025

- Specifically for Organizations Carrying Out Testing and/or Calibrations
- Competent at Quality Related Tests
- Consistent Manufacturing

**Technically Sound Products**

#### ISO Guide 34

- Specifically for Reference Material Producers
- Validate Methods to Prove Accuracy
- Report Uncertainty and Sources of Error

**Traceable & Accurate Reference Materials**

Every accredited manufacturer of Certified Reference Materials supplies a certificate of analysis with their product. ISO Guide 31 for ISO Guide 34 outlines the information required for a Certificate of Analysis. In order to comply with the ISO standard, 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 COAs 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 the information an analyst would need to use our standards. We have highlighted why our certificate is one of the best and what you should look for in a certificate of analysis.



**SPEXertificate®**  
Certificate of Reference Material

**Reference Materials Producer**  
Cert #2495.01

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

**Lot No.** C1120210014  
**Ship Date:** 1-14-2014  
**Expiration Date:** 1-13-2017

This 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 USEPA, ASTM and other methods relevant to the certified properties listed below.

| Certified Compounds:                | CAS #     | Labeled    | Purity | Certified  | Uncertainty |
|-------------------------------------|-----------|------------|--------|------------|-------------|
| Compound<br>Methyl-tert-butyl ether | 1634-04-4 | 1000 µg/mL | 99.7%  | 1000 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. Final solution calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NIST 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@spexcsp.com.

**Date of Certification:** 1-14-2014  
**Certifying Officer:** [Signature]  
**Quality Officer:** [Signature]

SPEX CertiPrep is accredited by A2LA for Organic and Inorganic Certified Reference Materials as complying with the requirements of ISO/IEC 17025 and ISO/IEC Guide 34 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.

Instrument verification on all standards

Traceable to NIST

Signed by SPEX CertiPrep®'s Vice President of Manufacturing and Quality Officer.



## SPEX CertiPrep Ltd.

SPEX CertiPrep Ltd. is the European subsidiary of SPEX CertiPrep. It is responsible for the sales, marketing and distribution of SPEX CertiPrep's Inorganic and Organic Certified Reference Materials and SPEX SamplePrep products throughout the UK, Ireland and Europe. We are also proud to be the exclusive suppliers of ERA PT Schemes in the UK. We strive to be your single source supplier of certified reference materials.

Our dedicated sales team is prepared to assist you with all of your CRM needs and this is supported by a large, specialized network of local distributors representing most European countries. We maintain a considerable stock in our UK based headquarters, which ensures a timely delivery throughout this territory. SPEX CertiPrep Ltd. makes all of the arrangements to import the products into the EU, and they are packaged and labeled according to international regulations. Our trusted network of carriers is experienced in the handling of both non-hazardous and hazardous materials and we are capable of shipping to all European countries.

SPEX CertiPrep Ltd. also supplies the full range of SPEX SamplePrep products. This includes laboratory mills, presses, XRF accessories and the Katanax® Automated Fusion Machines. Our experienced sales staff and network of local distributors are available to provide product demonstrations and test grind and/or fuse samples. We are able to offer a complete sample preparation solution suited to your application.

To request product catalogs please contact SPEX CertiPrep Ltd. or visit our website at [www.spexcertiprep.co.uk](http://www.spexcertiprep.co.uk)

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WEB: [www.spexcertiprep.co.uk](http://www.spexcertiprep.co.uk)

## SPEX SamplePrep

Just as calibration standards can limit the success of any analysis, data can be useless if the sample being analyzed is not representative of the whole or is poorly prepared. SPEX SamplePrep's expertise and products can help analysts achieve accurate and consistent results by assuring reliable, reproducible samples. The SPEX SamplePrep Handbook of Sample Preparation and Handling is well known as a primary source of helpful advice for the preparation of samples. Among the topics covered are grinding and pelletizing, fusion fluxing, and controlling contamination.

Sample Preparation products include mills, presses, dies, XRF liquid cells, XRF window films, automated fusion fluxers, 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, immuno-assay to agriculture. Copies of the Handbook may be obtained by contacting SPEX SamplePrep at (732) 623-0465. The complete text along with demonstration videos is also available on the company website at [www.spexsampleprep.com](http://www.spexsampleprep.com)

SPEX SamplePrep

65 Liberty St.

Metuchen, NJ 08840

TEL: 1-855-GET-SPEX (1-855-438-7739)

FAX: (732) 906-2492

E-MAIL: [sampleprep@spex.com](mailto:sampleprep@spex.com)

WEB: [www.spexsampleprep.com](http://www.spexsampleprep.com)

# Single-Component Organic Standards

## Single-Component Organic Standards

The following single-component standards at 1,000 µg/mL 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 and acetonitrile, THF and water. Please inquire about the matrix for a particular item when ordering if the matrix is important to your application as substitutions may be possible.

Concentrations other than these, as well as custom matrices, are readily available, but a minimum order of four 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 compound not found on this list, please contact us for assistance.

| Component @ 1,000 µg/mL      | CAS#        | Matrix                  | Catalog#   |
|------------------------------|-------------|-------------------------|------------|
| Abate                        | 3383-96-8   | Methanol                | S-102      |
| Abietic acid                 | 514-10-3    | Methyl-tert-Butyl Ether | S-4355     |
| L-Abrine                     | 526-31-8    | Methanol                | S-4644     |
| Acarol (Bromopropylate)      | 18181-80-1  | Methanol                | S-103      |
| Acenaphthene                 | 83-32-9     | Methylene Chloride      | S-105      |
| Acenaphthene                 | 83-32-9     | Acetonitrile            | S-105-ACN  |
| Acenaphthene-d10             | 15067-26-2  | Methanol                | S-110      |
| Acenaphthylene               | 208-96-8    | Methylene Chloride      | S-115      |
| Acenaphthylene-d8            | 93951-97-4  | Methylene Chloride      | S-116      |
| Acephate                     | 30560-19-1  | Methanol                | S-120      |
| Acephate                     | 30560-19-1  | Acetone                 | S-120-AC   |
| Acequinocyl-hydroxy          | 57960-31-3  | Isooctane:Toluene       | S-6415-IST |
| Acetal                       | 105-57-7    | Methanol                | S-4755     |
| Acetaldehyde                 | 75-07-0     | Methanol                | S-125      |
| Acetaldehyde                 | 75-07-0     | Deionized Water         | S-125-5K   |
| Acetaldehyde                 | 75-07-0     | Deionized Water         | S-125-W1.8 |
| Acetaldehyde-2,4-DNPH        | 1019-57-4   | Methanol                | S-5756     |
| Acetaldehyde dimethyl acetal | 534-15-6    | Methanol                | S-1570A    |
| 2-Acetaminofluorene          | 53-96-3     | Methanol                | S-130      |
| Acetaminophen                | 103-90-2    | Methanol                | S-4539     |
| Acetamiprid                  | 135410-20-7 | Methanol                | S-4677     |
| Acetanilide                  | 103-84-4    | Methanol                | S-132      |
| Acetic Acid                  | 64-19-7     | Methanol                | S-133      |
| Acetic Acid                  | 64-19-7     | Deionized Water         | S-133-W10K |
| Acetic Acid, sodium salt     | 127-09-3    | Deionized Water         | S-134      |
| Acetic Anhydride             | 108-24-7    | Methyl-tert-Butyl Ether | S-4028     |
| Acetochlor                   | 34256-82-1  | Methanol                | S-135      |
| Acetochlor                   | 34256-82-1  | Acetonitrile            | S-135-ACN  |
| Acetochlor ESA               | 187022-11-3 | Acetonitrile            | S-4630     |
| Acetochlor OA                | 194992-44-4 | Acetonitrile            | S-4631     |
| Acetoin                      | 513-86-0    | Ethanol                 | S-136      |

| Component @ 1,000 µg/mL     | CAS#       | Matrix             | Catalog# |
|-----------------------------|------------|--------------------|----------|
| Acetol                      | 116-09-6   | Methanol           | S-138    |
| Acetone                     | 67-64-1    | Methanol           | S-140    |
| Acetone                     | 67-64-1    | Deionized Water    | S-140-W  |
| Acetone-2,4-DNPH            | 1567-89-1  | Methanol           | S-5757   |
| Acetone-d6                  | 666-52-4   | Methanol           | S-141    |
| Acetonitrile                | 75-05-8    | Methanol           | S-145    |
| Acetonitrile-d3             | 2206-26-0  | Methanol           | S-146    |
| p-Acetophenetidide          | 62-44-2    | Methylene Chloride | S-150    |
| Acetophenone                | 98-86-2    | Methanol           | S-155    |
| Acetovanillone              | 498-02-2   | Methanol           | S-156    |
| 1-Acetoxy-2-methoxyethane   | 110-49-6   | Methanol           | S-157    |
| 1-Acetyl-2-thiourea         | 591-08-2   | Methanol           | S-160    |
| Acetyl Chloride             | 75-36-5    | Nonane             | S-4697   |
| Acetylene                   | 74-86-2    | Methanol           | S-158    |
| 2-Acetylfuran               | 1192-62-7  | Methanol           | S-161    |
| 1-Acetylpyrene              | 3264-21-9  | Methanol           | S-159    |
| Acetylsalicylic Acid        | 50-78-2    | Methanol           | S-5888   |
| Acifluorfen                 | 50594-66-6 | Methanol           | S-167    |
| Acifluorfen methyl ester    | 50594-67-7 | Methanol           | S-167A   |
| Alconifen                   | 74070-46-5 | Methanol           | S-5154   |
| cis-Aconitic acid           | 585-84-2   | HPLC Water         | S-5080   |
| trans-Aconitic acid         | 4023-65-8  | HPLC Water         | S-5081   |
| Acridine                    | 260-94-6   | Methanol           | S-170    |
| Acrolein                    | 107-02-8   | Methanol           | S-175    |
| Acrolein                    | 107-02-8   | Deionized Water    | S-175-W  |
| Acrolein-2,4-DNPH           | 888-54-0   | Methanol           | S-5758   |
| Acrylamide                  | 79-06-1    | Methanol           | S-177    |
| Acrylamide                  | 79-06-1    | Deionized Water    | S-177-W  |
| Acrylic acid                | 79-10-7    | Methylene Chloride | S-176    |
| Acrylic Acid Isobutyl Ester | 106-63-8   | Methanol           | S-5311   |
| Acrylonitrile               | 107-13-1   | Methanol           | S-180    |



| Component @ 1,000 µg/mL      | CAS#        | Matrix                                         | Catalog#   |
|------------------------------|-------------|------------------------------------------------|------------|
| Acrylonitrile                | 107-13-1    | Deionized Water                                | S-180-W    |
| Adipic acid                  | 124-04-9    | Deionized Water                                | S-4167     |
| Adiponitrile                 | 111-69-3    | Methanol                                       | S-5932     |
| Alachlor                     | 15972-60-8  | Methanol                                       | S-185      |
| Alachlor ESA                 | 140939-15-7 | Acetonitrile                                   | S-4633     |
| Alachlor OA                  | 171262-17-2 | Acetonitrile                                   | S-4632     |
| Aldicarb                     | 116-06-3    | Acetonitrile                                   | S-190      |
| Aldicarb                     | 116-06-3    | Methanol                                       | S-190-METH |
| Aldicarb sulfone             | 1646-88-4   | Acetone                                        | S-194      |
| Aldicarb sulfoxide           | 1646-87-3   | Acetonitrile                                   | S-195      |
| Aldoxycarb                   | 1646-88-4   | Acetonitrile                                   | S-200      |
| Aldrin                       | 309-00-2    | Methanol                                       | S-205      |
| Allethrin                    | 584-79-2    | Methanol                                       | S-4240     |
| Allidochlor                  | 93-71-0     | Methanol                                       | S-4241     |
| Alloocimene                  | 673-84-7    | Methanol                                       | S-5699     |
| Allyl alcohol                | 107-18-6    | Methanol                                       | S-207      |
| Allyl chloride               | 107-05-1    | Methanol                                       | S-210      |
| Allyl Isothiocyanate         | 57-06-7     | Methanol                                       | S-4881     |
| Aluminum phosphide           | 20859-73-8  | Acetone                                        | S-212      |
| Ambrettolide                 | 123-69-3    | Methanol                                       | S-651      |
| Ametryne                     | 834-12-8    | Methanol                                       | S-215      |
| 2-Amino-4,6-dinitrotoluene   | 35572-78-2  | Methanol                                       | S-221      |
| 2-Amino-N-isopropylbenzamide | 30391-89-0  | Methanol                                       | S-4184     |
| 3-Amino-9-ethylcarbazole     | 132-32-1    | Methanol                                       | S-0226     |
| 4-Amino-2,6-dinitrotoluene   | 19406-51-0  | Methanol                                       | S-226      |
| 2-Aminoanthraquinone         | 117-79-3    | MeCl <sub>2</sub> :Benzene:<br>Tetrahydrofuran | S-220      |
| o-Aminoazotoluene            | 97-56-3     | Methanol                                       | S-4476     |
| 2-Aminobenzothiazole         | 136-95-8    | Methanol                                       | S-4769     |
| 3-Aminobiphenyl              | 2243-47-2   | Ethyl Acetate                                  | S-6160     |
| 4-Aminobiphenyl              | 92-67-1     | Methanol                                       | S-225      |
| 4-Aminobiphenyl-d9           | 344298-96-0 | Ethyl Acetate                                  | S-6144     |
| Aminocarb                    | 2032-59-9   | Methanol                                       | S-4280     |
| 2-(2-Aminoethoxy)ethanol     | 929-06-6    | Methanol                                       | S-224      |
| Aminoethyl piperazine        | 140-31-8    | Methanol                                       | S-4364     |
| Aminoethylethanolamine       | 111-41-1    | Methanol                                       | S-4365     |
| Aminomethyl phosphonic acid  | 1066-51-9   | Deionized Water                                | S-4006     |
| 1-Aminonaphthalene           | 134-32-7    | Methanol                                       | S-230      |
| 1-Aminonaphthalene-d7        | 78832-53-8  | Methanol                                       | S-6146     |
| 2-Aminonaphthalene           | 91-59-8     | Methanol                                       | S-235      |
| 2-Aminonaphthalene-d7        | 93951-94-1  | Ethyl Acetate                                  | S-6145     |
| 4-Aminophenylether           | 101-80-4    | Methanol                                       | S-240      |
| 4-Aminoquinaldine            | 6628-04-2   | Methanol                                       | S-5721     |
| Aminotriazole                | 61-82-5     | Acetone                                        | S-245      |

| Component @ 1,000 µg/mL                                       | CAS#       | Matrix             | Catalog#     |
|---------------------------------------------------------------|------------|--------------------|--------------|
| Amitraz                                                       | 33089-61-1 | Methanol           | S-246        |
| Ammonium acetate                                              | 631-61-8   | Methanol           | S-5494       |
| Ammonium formate                                              | 540-69-2   | Methanol           | S-5166       |
| Ammonium persulfate                                           | 7727-54-0  | Methanol           | S-250        |
| Amyl acetate (isomers of pentyl acetate and 2-pentyl acetate) | 628-63-7   | Methanol           | S-255        |
| tert-Amyl alcohol                                             | 75-85-4    | Methanol           | S-260        |
| Tert-Amyl ethyl ether                                         | 919-94-8   | Methanol           | S-4459       |
| tert-Amyl methyl ether                                        | 994-05-8   | Methanol           | S-265        |
| Amylbenzene                                                   | 538-68-1   | Methanol           | S-256        |
| 4-tert-Amylphenol                                             | 80-46-6    | Methanol           | S-270        |
| Anabasine                                                     | 13078-04-1 | Methanol           | S-6361       |
| 5-alpha-Androstan-17-beta-ol-3-one                            | 521-18-6   | Methanol           | S-6182       |
| 5-alpha-Androstane                                            | 438-22-2   | Methanol           | S-211        |
| 4-Androstene-3,17-dione                                       | 63-05-8    | Methanol           | S-4434       |
| cis-Androsterone                                              | 53-41-8    | Methanol           | S-5072       |
| Anilazine                                                     | 101-05-3   | Methanol           | S-275        |
| Anilazine                                                     | 101-05-3   | Acetone            | S-275-AC     |
| Aniline                                                       | 62-53-3    | Methanol           | S-280        |
| Anilofos                                                      | 64249-01-0 | Acetonitrile       | S-6100       |
| o-Anisidine                                                   | 90-04-0    | Methanol           | S-285        |
| Anisole                                                       | 100-66-3   | Methanol           | S-288        |
| Anthanthrene                                                  | 191-26-4   | Methylene Chloride | S-4739       |
| Anthracene                                                    | 120-12-7   | Methylene Chloride | S-290        |
| Anthracene-d10                                                | 1719-06-8  | Methylene Chloride | S-291        |
| Anthracene-d10                                                | 1719-06-8  | Acetonitrile       | S-291-ACN    |
| Anthraquinone                                                 | 84-65-1    | MeOH:Acetone 50:50 | S-295        |
| Apomyoglobin                                                  | 9008-45-1  | Acetonitrile       | S-5471       |
| D-Arabinitol                                                  | 488-82-4   | Methanol           | S-5523       |
| Aramite                                                       | 140-57-8   | Methanol           | S-305        |
| Arsenal                                                       | 81510-83-0 | Methanol           | S-307        |
| Aroclor 1016                                                  | 12674-11-2 | Methanol           | S-310        |
| Aroclor 1221                                                  | 11104-28-2 | Methanol           | S-315        |
| Aroclor 1232                                                  | 11141-16-5 | Methanol           | S-317        |
| Aroclor 1242                                                  | 53469-21-9 | Methanol           | S-325        |
| Aroclor 1248                                                  | 12672-29-6 | Methanol           | S-330        |
| Aroclor 1254                                                  | 11097-69-1 | Methanol           | S-335        |
| Aroclor 1254                                                  | 11097-69-1 | Isooctane          | S-335-ISOOCT |
| Aroclor 1260                                                  | 11096-82-5 | Methanol           | S-340        |
| Aroclor 1262                                                  | 37324-23-5 | Hexane             | S-345        |
| Aroclor 1268                                                  | 11100-14-4 | Hexane             | S-350        |
| Arsenal                                                       | N/A        | Methanol           | S-4566       |
| Asana (Esfenvalerate)                                         | 66230-04-4 | Acetone            | S-0351       |
| Asana (Esfenvalerate)                                         | 66230-04-4 | Methanol           | S-351        |

| Component @ 1,000 µg/mL | CAS#        | Matrix                  | Catalog#   |
|-------------------------|-------------|-------------------------|------------|
| Aspon                   | 3244-90-4   | Methanol                | S-355      |
| Asulam                  | 3337-71-1   | Methanol                | S-4201     |
| Atenolol                | 29122-68-7  | Methanol                | S-5609     |
| Atraton                 | 1610-17-9   | Methanol                | S-360      |
| Atrazine                | 1912-24-9   | Acetone                 | S-365      |
| Atrazine desethyl       | 6190-65-4   | Methanol                | S-1145     |
| Atrazine desisopropyl   | 1007-28-9   | Methanol                | S-1135     |
| Azadirachtin            | 11141-17-6  | Acetonitrile            | S-6124     |
| Azamethiphos            | 35575-96-3  | Acetonitrile            | S-5621-ACN |
| Azamethiphos            | 35575-96-3  | Methylene Chloride      | S-5621-MC  |
| Azinphos-ethyl          | 2642-71-9   | Acetone                 | S-366      |
| Azinphos-methyl         | 86-50-0     | Acetone                 | S-2085     |
| Azinphos methyl oxon    | 961-22-8    | Acetonitrile            | S-5775-ACN |
| Azithromycin            | 83905-01-5  | Methanol                | S-5882     |
| Azobenzene              | 103-33-3    | Methanol                | S-370      |
| Azoxystrobin            | 131860-33-8 | Methanol                | S-3984     |
| Azoxystrobin            | 131860-33-8 | Acetone                 | S-3984-AC  |
| Azulene                 | 274-51-4    | Methanol                | S-372      |
| Barban                  | 101-27-9    | Methanol                | S-375      |
| Baygon (Propoxur)       | 114-26-1    | Methanol                | S-3200     |
| Baygon (Propoxur)       | 114-26-1    | Acetone                 | S-3200-AC  |
| Baygon (Propoxur)       | 114-26-1    | Acetonitrile            | S-3200-ACN |
| Baytan (Triadimenol)    | 55219-65-3  | Methanol                | S-3996     |
| Baythroid               | 68359-37-5  | Methanol                | S-376      |
| Baythroid               | 68359-37-5  | Acetone                 | S-376-AC   |
| Beam                    | 41814-78-2  | Methanol                | S-377      |
| Benalaxyl               | 71626-11-4  | Methanol                | S-4262     |
| Benazolin               | 3813-05-6   | Methanol                | S-3956     |
| Bendiocarb              | 22781-23-3  | Methanol                | S-379      |
| Benfluralin             | 1861-40-1   | Methanol                | S-380      |
| Benfuracarb             | 82560-54-1  | Acetone                 | S-4678     |
| Benodanil               | 15310-01-7  | Methanol                | S-4242     |
| Benodanil               | 15310-01-7  | Methanol                | S-4283     |
| Benomyl                 | 17804-35-2  | Acetonitrile            | S-385-ACN  |
| Benoxacor               | 98730-04-2  | Acetonitrile            | S-5510     |
| Bensulide               | 741-58-2    | Methanol                | S-390      |
| Bentazon                | 25057-89-0  | Methyl-tert-Butyl Ether | S-395      |
| Bentazon methyl ester   | 25057-89-0  | Methanol                | S-396      |
| Bentazon methyl ester   | 25057-89-0  | Methanol                | S-396A     |
| Benthiocarb             | 28249-77-6  | Methanol                | S-400      |
| Benthiocarb             | 28249-77-6  | Acetone                 | S-400-AC   |
| Benz(a)anthracene       | 56-55-3     | Methylene Chloride      | S-425      |
| Benz(b)anthracene       | 92-24-0     | Toluene                 | S-426      |
| Benzaldehyde            | 100-52-7    | Methanol                | S-402      |

| Component @ 1,000 µg/mL         | CAS#        | Matrix                     | Catalog#   |
|---------------------------------|-------------|----------------------------|------------|
| Benzalkonium Chloride           | 63449-41-2  | Methanol                   | S-5115     |
| Benzene                         | 71-43-2     | Methanol                   | S-405      |
| Benzene-d6                      | 1076-43-3   | Methanol                   | S-0406     |
| Benzidine                       | 92-87-5     | Methanol                   | S-410      |
| Benzidine                       | 92-87-5     | Methylene Chloride         | S-410-MECL |
| Benzo(a)anthracene-d12          | 1718-53-2   | Methanol                   | S-4759     |
| Benzo(a)fluorene                | 238-84-6    | Methanol                   | S-3921     |
| Benzo(a)pyrene                  | 50-32-8     | Methylene Chloride         | S-430      |
| Benzo(a)pyrene-d12              | 63466-71-7  | Methylene Chloride         | S-431      |
| Benzo(b)fluoranthene            | 205-99-2    | Methylene Chloride         | S-435      |
| Benzo(b)Naphtho(2,1-d)Thiophene | 239-35-0    | Methylene Chloride         | S-4876     |
| Benzo(b)thiophene               | 95-15-8     | Methanol                   | S-437      |
| Benzo(c)cinnoline               | 230-17-1    | Methanol                   | S-438      |
| Benzo(c)phenanthrene            | 195-19-7    | Methylene Chloride         | S-439      |
| Benzo(e)pyrene                  | 192-97-2    | Methylene Chloride         | S-440      |
| Benzo(e)pyrene-d12              | 205440-82-0 | Methanol                   | S-4971     |
| Benzo(g,h,i)perylene            | 191-24-2    | Methylene Chloride         | S-445      |
| Benzo(g,h,i)perylene-d12        | 93951-66-7  | Acetone                    | S-446      |
| Benzo(j)fluoranthene            | 205-82-3    | Methylene Chloride         | S-450      |
| Benzo(k)fluoranthene            | 207-08-9    | Methylene Chloride         | S-455      |
| Benzocaine                      | 94-09-7     | Methanol                   | S-411      |
| 2,3-Benzofluorene               | 243-17-4    | Methanol                   | S-3920     |
| 2,3-Benzofuran                  | 271-89-6    | Methanol                   | S-412      |
| Benzoic acid                    | 65-85-0     | Methylene Chloride         | S-415      |
| Benzonitrile                    | 100-47-0    | Methanol                   | S-417      |
| Benzophenone                    | 119-61-9    | Methylene Chloride         | S-418      |
| 1,4-Benzoquinone                | 106-51-4    | Methanol                   | S-420      |
| 1,4-Benzoquinone dioxime        | 105-11-3    | Methylene Chloride:Acetone | S-421      |
| Benzothiazole                   | 95-16-9     | Methanol                   | S-422      |
| Benzotriazole                   | 95-14-7     | Methanol                   | S-4121     |
| Benzoyl peroxide                | 94-36-0     | Methanol                   | S-461      |
| Benzoyl chloride                | 98-88-4     | Methanol                   | S-459      |
| Benzoylformic acid              | 611-73-4    | Acetonitrile               | S-5222     |
| Benzoylprop-ethyl               | 22212-55-1  | Methanol                   | S-4271     |
| Benzosulfuron methyl            | 83055-99-6  | Acetone                    | S-467      |
| 2-Benzyl-4-Chlorophenol         | 120-32-1    | Methylene Chloride         | S-466      |
| Benzyl-2,3,4,5,6-d5 Alcohol     | 68661-10-9  | Methanol                   | S-3936     |
| Benzyl acetate                  | 140-11-4    | Methanol                   | S-6410     |
| Benzyl alcohol                  | 100-51-6    | Methanol                   | S-460      |
| Benzyl benzoate                 | 120-51-4    | Methanol                   | S-462      |
| Benzyl benzoate                 | 120-51-4    | Cyclohexane                | S-462-CYC  |
| Benzyl bromide                  | 100-39-0    | Methanol                   | S-4312     |
| Benzyl chloride                 | 100-44-7    | Methanol                   | S-465      |

| Component @ 1,000 µg/mL                                   | CAS#        | Matrix             | Catalog#  |
|-----------------------------------------------------------|-------------|--------------------|-----------|
| Benzyl chloride                                           | 100-44-7    | Carbon Disulfide   | S-465-CS2 |
| Benzyl ether                                              | 103-50-4    | Methanol           | S-463     |
| Benzyl mercaptan                                          | 100-53-8    | Methanol           | S-5669    |
| Bezafibrate                                               | 41859-67-0  | Methanol           | S-5879    |
| alpha-BHC                                                 | 319-84-6    | Methanol           | S-470     |
| alpha-BHC-d6 (alpha-1,2,3,4,5,6-Hexachlorocyclohexane-d6) | 86194-41-4  | Methanol           | S-490     |
| beta-BHC                                                  | 319-85-7    | Methanol           | S-475     |
| delta-BHC                                                 | 319-86-8    | Methanol           | S-480     |
| gamma-BHC                                                 | 58-89-9     | Methanol           | S-485     |
| Bifenazate                                                | 149877-41-8 | Acetonitrile       | S-6082    |
| Bifenox                                                   | 42576-02-3  | Methanol           | S-495     |
| Bifenthrin                                                | 82657-04-3  | Acetone            | S-494     |
| Bifenthrin                                                | 82657-04-3  | Acetonitrile       | S-494-ACN |
| Binapacryl                                                | 485-31-4    | Methanol           | S-4837    |
| Bioallethrin                                              | 28057-48-9  | Methanol           | S-496     |
| Biodiesel (B-100)                                         | 67784-80-9  | Methanol           | S-4874    |
| Bioresmethrin (3% cis - 96% trans)                        | 28434-01-7  | Methanol           | S-4462    |
| Biphenyl                                                  | 92-52-4     | Methylene Chloride | S-500     |
| 2-Biphenylol                                              | N/A         | Methanol           | S-4559    |
| 2,2'-Biquinoline                                          | 119-91-5    | Methanol           | S-505     |
| Bisabolene                                                | 495-62-5    | Methanol           | S-502     |
| Bisphenol A                                               | 80-05-7     | Acetone            | S-509     |
| Bisphenol A                                               | 80-05-7     | Methylene Chloride | S-509-MC  |
| Bisphenol A diglycidyl ether                              | 1675-54-3   | Acetonitrile       | S-511     |
| Bisphenol F diglycidyl ether                              | 2095-03-6   | Acetonitrile       | S-507     |
| Bisphenol S                                               | 80-09-1     | Methanol           | S-5871    |
| 3-Bis(1-isocyanato-1-methylethyl benzene                  | 2778-42-9   | Methylene Chloride | S-6632    |
| Bitertanol (mix of isomers)                               | 55179-31-2  | Acetone            | S-4679    |
| Bladex                                                    | 21725-46-2  | Methanol           | S-510     |
| Borneol                                                   | 507-70-0    | Methanol           | S-4570    |
| (+)-Borneol                                               | 464-43-7    | Methanol           | S-5093    |
| Boron trichloride                                         | 10294-34-5  | Methylene Chloride | S-516     |
| Boron trifluoride                                         | 373-57-9    | Methanol           | S-517     |
| Boscalid                                                  | 188425-85-6 | Methanol           | S-4815    |
| Bradykinin acetate salt                                   | 6846-03-3   | Acetonitrile       | S-5694    |
| Bromacil                                                  | 314-40-9    | Methanol           | S-515     |
| Bromacil                                                  | 314-40-9    | Acetonitrile       | S-515-ACN |
| 1-Bromo-2-chloroethane                                    | 107-04-0    | Methanol           | S-587     |
| 1-Bromo-2-ethylbenzene                                    | 1973-22-4   | Methanol           | S-589     |
| 1-Bromo-2-nitrobenzene                                    | 577-19-5    | Methanol           | S-590     |
| 1-Bromo-3-chloropropane                                   | 109-70-6    | Methanol           | S-4743    |
| 1-Bromo-4-ethylbenzene                                    | 1585-07-5   | Methanol           | S-592     |

| Component @ 1,000 µg/mL                       | CAS#       | Matrix                  | Catalog#  |
|-----------------------------------------------|------------|-------------------------|-----------|
| 1-Bromo-4-fluorobenzene                       | 460-00-4   | Methanol                | S-593     |
| 2-Bromo-1-chloropropane                       | 3017-95-6  | Methanol                | S-580     |
| 2-Bromo-4'-chloroacetophenone                 | 536-38-9   | Methanol                | S-5098    |
| 4-Bromo-1-butene                              | 5162-44-7  | Methanol                | S-4797    |
| 4-Bromo-3,5-dimethylphenyl-N-methylcarbamate  | 672-99-1   | Methanol                | S-591     |
| a-Bromo-2,3,4,5,6-pentafluorotoluene (PFBBBr) | 1765-40-8  | Methanol                | S-585     |
| Bromoacetic acid                              | 79-08-3    | Methyl-tert-Butyl Ether | S-520     |
| 2-Bromoacetophenone                           | 70-11-1    | Methanol                | S-5095    |
| 3'-Bromoacetophenone                          | 2142-63-4  | Methanol                | S-524     |
| Bromobenzene                                  | 108-86-1   | Methanol                | S-525     |
| Bromochloroacetic acid                        | 5589-96-8  | Methyl-tert-Butyl Ether | S-530     |
| 2-Bromochlorobenzene                          | 694-80-4   | Methanol                | S-533     |
| 3-Bromochlorobenzene                          | 108-37-2   | Methanol                | S-531     |
| 4-Bromochlorobenzene                          | 106-39-8   | Methanol                | S-534     |
| Bromochloromethane                            | 74-97-5    | Methanol                | S-535     |
| Bromocyclen                                   | 1715-40-8  | Acetone                 | S-5917    |
| Bromodichloroacetic acid                      | 71133-14-7 | Methyl-tert-Butyl Ether | S-536     |
| Bromodichloromethane                          | 75-27-4    | Methanol                | S-542     |
| 4-Bromodiphenyl ether                         | 101-55-3   | Methanol                | S-545     |
| Bromoethane                                   | 74-96-4    | Methanol                | S-547     |
| 2-Bromoethanol                                | 540-51-2   | Methanol                | S-5097    |
| 4-Bromofluorobenzene                          | 460-00-4   | Methanol                | S-550     |
| Bromoform                                     | 75-25-2    | Methanol                | S-555     |
| Bromomethane                                  | 74-83-9    | Methanol                | S-560     |
| Bromomethane                                  | 74-83-9    | N,N-Dimethylformamide   | S-560-DMF |
| Bromomethyl methyl ether                      | 13057-17-5 | Methanol                | S-5096    |
| 2-Bromonaphthalene                            | 580-13-2   | Methanol                | S-559     |
| Bromopentafluorobenzene                       | 344-04-7   | Methanol                | S-561     |
| 3-Bromophenol                                 | 591-20-8   | Methanol                | S-6044    |
| 4-Bromophenol                                 | 106-41-2   | Methanol                | S-4290    |
| Bromophenol blue                              | 115-39-9   | Methanol                | S-562     |
| Bromophos-ethyl                               | 4824-78-6  | Methanol                | S-565     |
| Bromophos-methyl                              | 2104-96-3  | Methanol                | S-570     |
| Bromophos-methyl                              | 2104-96-3  | Acetone                 | S-570-AC  |
| 1-Bromopropane                                | 106-94-5   | Methanol                | S-6048    |
| 2-Bromopropionic acid                         | 598-72-1   | Methanol                | S-572     |
| 3-Bromopropionic acid                         | 590-92-1   | Methanol                | S-574     |
| 3-Bromopropylamine hydrobromide               | 5003-71-4  | Methanol                | S-4886    |
| Bromoxynil                                    | 1689-84-5  | Methanol                | S-575     |
| Bromoxynil Octanoic acid ester                | 1689-99-2  | Methanol                | S-577     |
| 2-Bromphenol                                  | 95-56-7    | Methanol                | S-5146    |
| Bucine                                        | 357-57-3   | Acetonitrile            | S-594     |



| Component @ 1,000 µg/mL                           | CAS#       | Matrix             | Catalog#  | Component @ 1,000 µg/mL              | CAS#       | Matrix             | Catalog#   |
|---------------------------------------------------|------------|--------------------|-----------|--------------------------------------|------------|--------------------|------------|
| Bupirimate                                        | 41483-43-6 | Methanol           | S-4272    | tert-Butyl ethyl ether               | 637-92-3   | Methanol           | S-645      |
| Buprofezin                                        | 69327-76-0 | Toluene            | S-4254    | Butyl formate                        | 592-28-7   | Methanol           | S-647      |
| Butachlor                                         | 23184-66-9 | Methanol           | S-595     | tert-Butyl formate                   | 762-75-4   | Methanol           | S-646      |
| 1,3-Butadiene                                     | 106-99-0   | Methanol           | S-1260    | Butyl glycidyl ether                 | 2426-08-6  | Methanol           | S-5328     |
| 1,3-Butadiene diepoxide-(+/-)                     | 1464-53-5  | Methanol           | S-602     | N-Butyl isocyanate                   | 111-36-4   | Acetone            | S-4883-AC  |
| n-Butane                                          | 106-97-8   | Methanol           | S-605     | t-Butyl isocyanate                   | 1609-86-5  | Methanol           | S-4947     |
| 1,2-Butanediol                                    | 584-03-2   | Methanol           | S-5801    | Butyl methacrylate                   | 97-88-1    | Methanol           | S-4542     |
| 1,3-Butanediol                                    | 107-88-0   | Methanol           | S-607     | tert-Butyl methyl-d3 ether           | 29366-08-3 | Methanol           | S-2455C    |
| 1,4-Butanediol                                    | 110-63-4   | Methanol           | S-5060    | tert-Butyl methyl ether              | 1634-04-4  | Methanol           | S-650      |
| 2,3-Butanediol                                    | 513-85-9   | Methanol           | S-4193    | Butylamine                           | 109-73-9   | Methanol           | S-657      |
| 2,3-Butanedione                                   | 431-03-8   | Methanol           | S-609     | tert-Butylamine                      | 75-64-9    | Methanol           | S-3366     |
| 1-Butanethiol                                     | 109-79-5   | Methanol           | S-608     | Butylate                             | 2008-41-5  | Methanol           | S-660      |
| (S)-1,2,4-Butanetriol                             | 42890-76-6 | Pyridine           | S-4389    | Butylated hydroxyanisole             | 25013-16-5 | Methanol           | S-662      |
| 1-Butanol                                         | 71-36-3    | Methanol           | S-610     | n-Butylbenzene                       | 104-51-8   | Methanol           | S-665      |
| 2-Butanol                                         | 78-92-2    | Methanol           | S-615     | sec-Butylbenzene                     | 135-98-8   | Methanol           | S-670      |
| 2-Butanone                                        | 78-93-3    | Methanol           | S-620     | tert-Butylbenzene                    | 98-06-6    | Methanol           | S-675      |
| 2-Butanone-2,4-DNPH                               | 958-60-1   | Methanol           | S-5761    | N-Butylbenzenesulfonamide            | 3622-84-2  | Methanol           | S-677      |
| 1-Butene                                          | 106-98-9   | Methanol           | S-621     | Butylbenzyl phthalate                | 85-68-7    | Methylene Chloride | S-680-MECL |
| 2-Butene-1,4-diol                                 | 110-64-5   | Methanol           | S-625     | 4-tert-Butylcatechol                 | 98-29-3    | Methanol           | S-685      |
| cis-2-Butene                                      | 590-18-1   | Methanol           | S-622     | N-Butylcyclohexane                   | 1678-93-9  | Carbon Disulfide   | S-6359-CS2 |
| trans-2-Butene                                    | 624-64-6   | Methanol           | S-4175    | sec-Butylcyclohexane                 | 7058-01-7  | Methanol           | S-687      |
| 2-Butene (mixture of cis & trans)                 | 107-01-7   | Methanol           | S-4445    | tert-Butylhydroquinone               | 1948-33-0  | Acetone            | S-648      |
| 1-tert-Butoxy-2-ethoxyethane                      | 51422-54-9 | Methanol           | S-629     | Butyl octyl phthalate (Tech Mixture) | 84-78-6    | Methylene Chloride | S-6636     |
| 2-Butoxyethanol                                   | 111-76-2   | Methanol           | S-630     | 4-tert-Butylphenol                   | 98-54-4    | Methanol           | S-693      |
| 2-Butoxyethyl acetate                             | 112-07-2   | Methanol           | S-631     | N-Butyltin trichloride               | 1118-46-3  | Methanol           | S-4636     |
| Tris-(2-Butoxyethyl)phosphate                     | 78-51-3    | Methanol           | S-4671    | 4-tert-Butyltoluene                  | 98-51-1    | Methanol           | S-695      |
| Bis(2-n-Butoxyethyl)phthalate                     | 117-83-9   | Methanol           | S-4671    | Butyraldehyde                        | 123-72-8   | Methanol           | S-700      |
| Bis(2-n-Butoxyethyl)phthalate                     | 117-83-9   | Methylene Chloride | S-4152-MC | Butyraldehyde-2,4-DNPH               | 1527-98-6  | Methanol           | S-5762     |
| Butralin                                          | 32629-47-9 | Methanol           | S-4273    | Butyric acid                         | 107-92-6   | Deionized Water    | S-702      |
| 2-tert-butyl-4-methylphenol                       | 2409-55-4  | Methanol           | S-5062    | a,Butyrolactone                      | 96-48-0    | Methanol           | S-3885     |
| 4-tert-Butyl-2,6-dimethyl-3,5-dinitroacetophenone | 81-14-1    | Methanol           | S-652     | gamma-Butyrolactone                  | 96-48-0    | Methanol           | S-701      |
| 5-tert-Butyl-2,4,6-trinitro-m-xylene              | 81-15-2    | Methanol           | S-3761    | Butyronitrile                        | 109-74-0   | Methanol           | S-4088     |
| Butyl-4-hydroxybenzoate                           | 94-26-8    | Methanol           | S-5123    | C.I. Basic Blue 26                   | 2580-56-5  | Methanol           | S-5937     |
| Butyl acetate                                     | 123-86-4   | Methanol           | S-635     | C.I. Basic Blue 4                    | 6786-83-0  | Methanol           | S-5939     |
| Tert-butyl acetate                                | 540-88-5   | Methanol           | S-5601    | C.I. Basic Violet 3                  | 548-62-9   | Methanol           | S-5938     |
| Butyl acrylate                                    | 141-32-2   | Methanol           | S-655     | Cadusafos                            | 95465-99-9 | Acetonitrile       | S-4826     |
| sec-Butyl acrylate                                | 2998-08-5  | Methanol           | S-5312    | Caffeine                             | 58-08-2    | Methanol           | S-705      |
| tert-Butyl alcohol                                | 75-65-0    | Methanol           | S-3365    | Caffeine                             | 58-08-2    | Deionized Water    | S-705-W    |
| tert-Butyl alcohol-d10                            | 53001-22-2 | Methanol           | S-654     | Caffeine-D9                          | 77238-85-8 | Methanol           | S-5493     |
| Butyl carbitol                                    | 112-34-5   | Methanol           | S-5536    | Calcium chloride                     | 10043-52-4 | Methanol           | S-707      |
| Butyl carbitol acetate                            | 124-17-4   | Methanol           | S-640     | (+)-Camphene                         | 5794-03-6  | Methanol           | S-710      |
| Butyl ether                                       | 142-96-1   | Methanol           | S-5134    | Camphor                              | 76-22-2    | Methanol           | S-3925     |
|                                                   |            |                    |           | dl-10-Camphorsulfonic acid           | 5872-08-2  | Methanol           | S-711      |

| Component @ 1,000 µg/mL  | CAS#        | Matrix             | Catalog#   |
|--------------------------|-------------|--------------------|------------|
| e-Caprolactam            | 105-60-2    | Methanol           | S-712      |
| Captafol                 | 2425-06-1   | Acetone            | S-715      |
| Captafol                 | 2425-06-1   | Acetone            | S-715-AC   |
| Captafol                 | 2425-06-1   | Acetonitrile       | S-715-ACN  |
| Captan                   | 133-06-2    | Acetone            | S-720      |
| Carbamazepine            | 298-46-4    | Methanol           | S-4747     |
| Carbaryl                 | 63-25-2     | Acetonitrile       | S-725      |
| Carbazole                | 86-74-8     | Methylene Chloride | S-730      |
| Carbendazim              | 10605-21-7  | Methanol           | S-733-ACN  |
| Carbetamide              | 16118-49-3  | Methanol           | S-4274     |
| Carbitol                 | 111-90-0    | Methanol           | S-735      |
| Carbofuran               | 1563-66-2   | Methanol           | S-740      |
| Carbofuranphenol         | 17781-16-7  | Methanol           | S-4346     |
| Carbon disulfide         | 75-15-0     | Methanol           | S-745      |
| Carbon from dextrose     | 50-99-7     | Methanol           | S-5544     |
| Carbon sucrose           | 57-50-1     | Deionized Water    | S-3308C    |
| Carbon tetrachloride     | 56-23-5     | Methanol           | S-750      |
| Carbophenothion          | 786-19-6    | Methanol           | S-755      |
| Carbophenothion          | 786-19-6    | Acetone            | S-755-AC   |
| Carbosulfan              | 55285-14-8  | Methanol           | S-742      |
| Carboxin                 | 5234-68-4   | Acetone            | S-760      |
| Carboxin                 | 5234-68-4   | Acetonitrile       | S-760-ACN  |
| trans-Carboxylate        | 38410-80-9  | Acetone            | S-4315     |
| 3-Carene                 | 13466-78-9  | Methanol           | S-4171     |
| Carfentrazone-Ethyl      | 128639-02-1 | Acetonitrile       | S-5040     |
| Carvone                  | 6485-40-1   | Methanol           | S-5731     |
| trans-Caryophyllene      | 87-44-5     | Methanol           | S-5690     |
| Catechol                 | 120-80-9    | Methanol           | S-761      |
| alpha-Cedrene            | 469-61-4    | Methanol           | S-5691     |
| Cellobiose               | 528-50-7    | Methanol           | S-4511     |
| Cellulose nitrate        | 9004-70-0   | HPLC Water         | S-4548     |
| Cesium hydrogencarbonate | 29703-01-3  | Methanol           | S-5476     |
| Cesium iodide            | 7789-17-5   | Methanol           | S-5474     |
| Chalcone                 | 94-41-7     | Methanol           | S-764      |
| Chloramben               | 133-90-4    | Methanol           | S-765      |
| Chloramben methyl ester  | 7286-84-2   | Methanol           | S-766      |
| Chloramphenicol          | 56-75-7     | Methanol           | S-4032     |
| Chlorbenside             | 103-17-3    | Methanol           | S-767      |
| Chlorbenside-sulfone     | 7082-99-7   | Isooctane:Toluene  | S-6414-IST |
| Chlorbenside-sulfone     | 7082-99-7   | Ethyl Acetate      | S-6414-EA  |
| Chlorbenside-sulfoxide   | 7047-28-1   | Acetonitrile       | S-6421     |
| Chlorbenside-sulfoxide   | 7047-28-1   | Ethyl Acetate      | S-6421-EA  |
| Chlorbromuron            | 13360-45-7  | Methanol           | S-4275     |
| Chlorbromuron            | 13360-45-7  | Acetonitrile       | S-769      |

| Component @ 1,000 µg/mL                               | CAS#        | Matrix               | Catalog#   |
|-------------------------------------------------------|-------------|----------------------|------------|
| Chlorbufam                                            | 1967-16-4   | Methanol             | S-4276     |
| alpha-Chlordane                                       | 5103-71-9   | Methanol             | S-770      |
| Chlordane                                             | 57-74-9     | Hexane               | S-780      |
| gamma-Chlordane                                       | 5103-74-2   | Methanol             | S-775      |
| trans-Chlordene                                       | 3734-48-3   | Methanol             | S-782      |
| Chlordiamino-S-Triazine                               | 3397-62-4   | Methanol             | S-5065     |
| Chlordimeform                                         | 6164-98-3   | Methanol             | S-783      |
| Chlorendic acid                                       | 115-28-6    | Methanol             | S-4302     |
| Chlorethoxyphos                                       | 54593-83-8  | Methanol             | S-5754     |
| Chlorethoxyphos                                       | 54593-83-8  | Acetonitrile         | S-5754-ACN |
| Chlorfenapyr                                          | 122453-73-0 | Acetonitrile         | S-4961     |
| Chlorfenprop-methyl                                   | 14437-17-3  | Methanol             | S-6393     |
| Chlorfenvinfos                                        | 470-90-6    | Acetone              | S-785      |
| Chlorfluazuron                                        | 71422-67-8  | Methanol             | S-4017     |
| Chlorflurecol-methyl ester                            | 2536-31-4   | Methanol             | S-4623     |
| Chlorimuron-ethyl                                     | 90982-32-4  | Acetone              | S-3927     |
| Chlormephos                                           | 24934-91-6  | Methanol             | S-787      |
| Chlormequat chloride                                  | 999-81-5    | Methanol             | S-4838     |
| 1-Chloro-1,1-difluoroethane                           | 75-68-3     | Methanol             | S-4297     |
| 1-Chloro-2,4-difluorobenzene                          | 1435-44-5   | Methanol             | S-839      |
| 1-Chloro-2,4-dinitrobenzene                           | 97-00-7     | Methanol             | S-844      |
| 1-Chloro-2-fluorobenzene                              | 348-51-6    | Methanol             | S-935      |
| 1-Chloro-2-methylpropane                              | 513-36-0    | Methanol             | S-936      |
| 1-Chloro-2-nitrobenzene                               | 88-73-3     | Methanol             | S-948      |
| 1-Chloro-2-propanol<br>(Contains 2-Chloro-1-propanol) | 127-00-4    | Propylene Dichloride | S-908      |
| 1-Chloro-3-fluorobenzene                              | 625-98-9    | Methanol             | S-944      |
| 1-Chloro-4-fluorobenzene                              | 352-33-0    | Methanol             | S-950      |
| 1-Chloro-4-nitrobenzene                               | 100-00-5    | Methanol             | S-951      |
| 2-Chloro-1,1,1-trifluoroethane                        | 75-88-7     | Methanol             | S-958      |
| 2-Chloro-1,3-butadiene                                | 126-99-8    | Methanol             | S-930      |
| 2-Chloro-2,6-diethylacetanilide                       | 6967-29-9   | Acetone              | S-4318     |
| 2-Chloro-4-methylphenol                               | 6640-27-3   | Methanol             | S-5075     |
| 2-Chloro-4-nitrotoluene                               | 121-86-8    | Methanol             | S-498      |
| 2-Chloro-5-(trifluoromethyl) aniline                  | 121-50-6    | Methanol             | S-953      |
| 2-Chloro-5-methylphenol                               | 615-74-7    | Methanol             | S-946      |
| 2-Chloro-5-nitrotoluene                               | 13290-74-9  | Methanol             | S-4982     |
| 2-Chloro-5-trifluoromethylpyridine                    | 52334-81-3  | Methanol             | S-4046     |
| 2-Chloro-6-methylphenol                               | 87-64-9     | Methanol             | S-6151     |
| 2-chloro-6-nitrotoluene                               | 83-42-1     | Methanol             | S-4983     |
| 3-Chloro-1,2-propanediol                              | 96-24-2     | Methanol             | S-896      |
| 3-Chloro-2-methylaniline                              | 87-60-5     | Methanol             | S-940      |
| 3-Chloro-2-methylpropene                              | 563-47-3    | Methanol             | S-942      |
| 3-Chloro-4-methylphenol                               | 615-62-3    | Methanol             | S-5076     |

| Component @ 1,000 µg/mL                  | CAS#       | Matrix                  | Catalog# |
|------------------------------------------|------------|-------------------------|----------|
| 4-Chloro-1,2-phenylenediamine            | 95-83-0    | Acetonitrile            | S-954    |
| 4-Chloro-1,3-phenylenediamine            | 5131-60-2  | Acetone                 | S-907    |
| 4-Chloro-2-methylaniline                 | 95-69-2    | Methanol                | S-4472   |
| 4-Chloro-2-methylphenol                  | 1570-64-5  | Methanol                | S-3979   |
| 4-Chloro-2-nitrotoluene                  | 89-59-8    | Acetone                 | S-4984   |
| 4-Chloro-3,5-dimethylphenol              | 88-04-0    | Methanol                | S-943    |
| 4-Chloro-3-methylphenol                  | 59-50-7    | Methanol                | S-945    |
| 4-Chloro-3-nitrobenzotrifluoride         | 121-17-5   | Methanol                | S-947    |
| 4-Chloro-3-nitrotoluene                  | 89-60-1    | Methanol                | S-4985   |
| 4-Chloro-o-toloxycetic acid              | 94-74-6    | Methanol                | S-955    |
| 4-Chloro-o-toloxycetic acid methyl ester | N/A        | Methanol                | S-4551   |
| 5-Chloro-2-methylaniline                 | 95-79-4    | Methanol                | S-0941   |
| Bis(2-chloro-1-methylethyl) ether        | 108-60-1   | Methylene Chloride      | S-870    |
| Chloroacetaldehyde                       | 107-20-0   | Methanol                | S-792    |
| Chloroacetic acid                        | 79-11-8    | Methyl-tert-Butyl Ether | S-795    |
| Chloroacetone                            | 78-95-5    | Methanol                | S-4882   |
| Chloroacetonitrile                       | 107-14-2   | Methanol                | S-797    |
| 2'-Chloroacetophenone                    | 2142-68-9  | Methanol                | S-798    |
| 2-Chloroacetophenone                     | 532-27-4   | Methanol                | S-794    |
| 3'-Chloroacetophenone                    | 99-02-5    | Methanol                | S-799    |
| 4'-Chloroacetophenone                    | 99-91-2    | Methanol                | S-801    |
| 2-Chloroacrylonitrile                    | 920-37-6   | Methanol                | S-3912   |
| 2-Chloroallyldiethyldithiocarbamate      | 95-06-7    | Methanol                | S-800    |
| 2-Chloroallyldiethyldithiocarbamate      | 95-06-7    | Acetone                 | S-800-AC |
| 2-Chloroaniline                          | 95-51-2    | Methanol                | S-802    |
| 3-Chloroaniline                          | 108-42-9   | Methanol                | S-803    |
| 4-Chloroaniline (p-Chloroaniline)        | 106-47-8   | Methanol                | S-805    |
| 2-Chloroanisole                          | 766-51-8   | Methanol                | S-5143   |
| 3-Chloroanisole                          | 2845-89-8  | Methanol                | S-5144   |
| 4-Chloroanisole                          | 623-12-1   | Methanol                | S-5145   |
| o-Chlorobenzaldehyde                     | 89-98-5    | Methanol                | S-804    |
| Chlorobenzene                            | 108-90-7   | Methanol                | S-810    |
| Chlorobenzene-d5                         | 3114-55-4  | Methanol                | S-815    |
| Chlorobenzilate                          | 510-15-6   | Methanol                | S-820    |
| m-Chlorobenzoic acid                     | 535-80-8   | Methanol                | S-825    |
| o-Chlorobenzoic acid                     | 118-91-2   | Methanol                | S-830    |
| p-Chlorobenzoic acid                     | 74-11-3    | Methanol                | S-835    |
| 4-Chlorobenzotrifluoride                 | 98-56-6    | Methanol                | S-836    |
| a-Chlorobenzylidenemalononitrile         | 18270-61-6 | Methylene Chloride      | S-819    |
| 2-Chlorobiphenyl                         | 2051-60-7  | Methylene Chloride      | S-837    |
| 3-Chlorobiphenyl                         | 2051-61-8  | Methylene Chloride      | S-841    |
| 4-Chlorobiphenyl                         | 2051-62-9  | Methylene Chloride      | S-821    |
| 1-Chlorobutane                           | 109-69-3   | Methanol                | S-838    |

| Component @ 1,000 µg/mL                      | CAS#       | Matrix                  | Catalog# |
|----------------------------------------------|------------|-------------------------|----------|
| 3-Chlorocatechol                             | 4018-65-9  | Methanol                | S-3903   |
| Chlorodibromoacetic acid                     | 5278-95-5  | Methyl-tert-Butyl Ether | S-3892   |
| Chlorodifluoromethane                        | 75-45-6    | Methanol                | S-840    |
| Chloroethane                                 | 75-00-3    | Methanol                | S-845    |
| 2-Chloroethanol                              | 107-07-3   | Methanol                | S-847    |
| 1,2-bis(2-Chloroethoxy)ethane                | 112-26-5   | Methanol                | S-849    |
| Bis[2-(2-chloroethoxy)ethyl] ether           | 638-56-2   | Methanol                | S-4958   |
| bis(2-Chloroethoxy)methane                   | 111-91-1   | Methanol                | S-850    |
| 2-chloroethyl ethyl sulfide                  | 693-07-2   | Methanol                | S-4948   |
| 2-chloroethyl vinyl ether                    | 110-75-8   | Methanol                | S-855    |
| bis(2-Chloroethyl)ether                      | 111-44-4   | Methanol                | S-860    |
| Tris(2-chloroethyl)phosphate                 | 115-96-8   | Methanol                | S-4359   |
| Chloroform                                   | 67-66-3    | Methanol                | S-865    |
| Chloroform-d1                                | 865-49-6   | Methanol                | S-866    |
| 1-Chlorohexane                               | 544-10-5   | Methanol                | S-869    |
| Chlorohydroquinone                           | 615-67-8   | Methanol                | S-3894   |
| Chloromethane                                | 74-87-3    | Methanol                | S-875    |
| Chloromethyl methyl ether                    | 107-30-2   | Methanol                | S-877    |
| bis(Chloromethyl) ether                      | 542-88-1   | Isooctane               | S-880    |
| 1-Chloronaphthalene                          | 90-13-1    | Methanol                | S-885    |
| 2-Chloronaphthalene                          | 91-58-7    | Methanol                | S-890    |
| Chloroneb                                    | 2675-77-6  | Methanol                | S-790    |
| 3-Chloronitrobenzene                         | 121-73-3   | Methanol                | S-949    |
| 1-Chlorooctadecane                           | 3386-33-2  | Methylene Chloride      | S-893    |
| Chloropentafluoroethane                      | 76-15-3    | Methanol                | S-4819   |
| 2-Chlorophenol                               | 95-57-8    | Methanol                | S-900    |
| 2-Chlorophenol-3,4,5,6-d4                    | 93951-73-6 | Methanol                | S-905    |
| 3-Chlorophenol                               | 108-43-0   | Methanol                | S-901    |
| 4-Chlorophenol                               | 106-48-9   | Methanol                | S-906    |
| 2-(4-Chlorophenoxy)-2-methylpropionic acid   | 882-09-7   | Methanol                | S-5654   |
| 2-(3-Chlorophenoxy)propionic acid            | 101-10-0   | Methanol                | S-4441   |
| p-Chlorophenoxyacetic acid                   | 122-88-3   | Methanol                | S-4440   |
| 4-Chlorophenyl-phenyl ether                  | 7005-72-3  | Methanol                | S-910    |
| 4-Chlorophenyl methyl sulfone                | 98-57-7    | Acetone                 | S-916    |
| 2,2-Bis(4-chlorophenyl)-1,1-dichloroethylene | 72-55-9    | Methanol                | S-508    |
| 3-(4-chlorophenyl)-1-methyl urea             | 5352-88-5  | Methanol                | S-5063   |
| Chloropicrin                                 | 76-06-2    | Methanol                | S-911    |
| Chloroprene                                  | 126-99-8   | Methanol                | S-930A   |
| 1-Chloropropane                              | 540-54-5   | Methanol                | S-4493   |
| 2-Chloropropane                              | 75-29-6    | Methanol                | S-912    |
| 1-Chloropropene                              | 590-21-6   | Methanol                | S-909    |
| 2-Chloropropene                              | 557-98-2   | Methanol                | S-895    |
| 3-Chloropropionitrile                        | 542-76-7   | Methanol                | S-3846   |

| Component @ 1,000 µg/mL           | CAS#        | Matrix             | Catalog#   |
|-----------------------------------|-------------|--------------------|------------|
| 2-Chloropyridine                  | 109-09-1    | Methanol           | S-3860     |
| 3-Chloropyridine                  | 626-60-8    | Methanol           | S-913      |
| 4-Chloropyridine HCl              | 7379-35-3   | Methanol           | S-914      |
| Chlorosulfuron                    | 64902-72-3  | Methanol           | S-4995     |
| Chlorothalonil                    | 1897-45-6   | Methanol           | S-915      |
| Chlorothalonil                    | 1897-45-6   | Acetone            | S-915-AC   |
| Chlorothalonil                    | 1897-45-6   | Acetonitrile       | S-915-ACN  |
| 2-Chlorotoluene                   | 95-49-8     | Methanol           | S-920      |
| 3-Chlorotoluene                   | 108-41-8    | Methanol           | S-923      |
| 4-Chlorotoluene                   | 106-43-4    | Methanol           | S-925      |
| Chlorotoluron                     | 15545-48-9  | Methanol           | S-3947     |
| Chlorotrifluoroethene             | 79-38-9     | Methanol           | S-4840     |
| Chlorotrifluoromethane            | 75-72-9     | Methanol           | S-4206     |
| Chloroxuron                       | 1982-47-4   | Methanol           | S-3311     |
| Chlorpropham                      | 101-21-3    | Methanol           | S-960      |
| Chlorpropham                      | 101-21-3    | Acetonitrile       | S-960-ACN  |
| Chlorpropylate                    | 5836-10-2   | Methanol           | S-963      |
| Chlorpyrifos                      | 2921-88-2   | Methanol           | S-965      |
| Chlorpyrifos                      | 2921-88-2   | Acetone            | S-965-A    |
| Chlorpyrifos-methyl               | 5598-13-0   | Methanol           | S-966      |
| Chlorpyrifos-methyl               | 5598-13-0   | Acetone            | S-966-AC   |
| Chlorpyrifos-methyl               | 5598-13-0   | Acetonitrile       | S-966-ACN  |
| Chlorpyrifos oxon                 | 5598-15-2   | Acetone            | S-968      |
| Chlorthiamide                     | 1918-13-4   | Methanol           | S-4278     |
| Chlorthion                        | 500-28-7    | Methanol           | S-4243     |
| Chlorthion                        | 500-28-7    | Ethyl Acetate      | S-4243-EA  |
| Chlorthiophos                     | 60238-56-4  | Methanol           | S-967      |
| Chlozolate                        | 84332-86-5  | Acetonitrile       | S-4286     |
| Cholesterol                       | 57-88-5     | Methanol           | S-4702     |
| Chrysene                          | 218-01-9    | Methylene Chloride | S-970      |
| Chrysene-d12                      | 1719-03-5   | Methylene Chloride | S-975      |
| trans-Cinnamaldehyde              | 14371-10-9  | Methanol           | S-979      |
| cis-1,2,3,6-Tetrahydrophthalimide | 27813-21-4  | Ethyl Acetate      | S-6431-EA  |
| Citraconic anhydride              | 616-02-4    | Acetone            | S-5767     |
| Citric acid                       | 77-92-9     | Methanol           | S-976      |
| Citronellol                       | 106-22-9    | Methanol           | S-4868     |
| Clarithromycin                    | 81103-11-9  | Methanol           | S-5877     |
| Clethodim                         | 99129-21-2  | HPLC Acetonitrile  | S-6083     |
| Clodinafop-propargyl ester        | 105512-06-9 | Acetonitrile       | S-6039     |
| Clofentezine                      | 74115-24-5  | Methanol           | S-5772     |
| Clofentezine                      | 74115-24-5  | Acetonitrile       | S-5772-ACN |
| Clomazone                         | 81777-89-1  | Acetone            | S-762      |
| Cloransulam-methyl                | 147150-35-4 | Acetonitrile       | S-5009     |
| Command                           | 81777-89-1  | Methanol           | S-762A     |

| Component @ 1,000 µg/mL                                   | CAS#        | Matrix             | Catalog#   |
|-----------------------------------------------------------|-------------|--------------------|------------|
| Coprostan-3-ol                                            | 360-68-9    | Methanol           | S-4670     |
| Corn oil                                                  | 8001-30-7   | Acetone            | S-978      |
| Coronene                                                  | 191-07-1    | Methylene Chloride | S-3919     |
| Coronene                                                  | 191-07-1    | Toluene            | S-3919-TOL |
| Cotinine                                                  | 486-56-6    | Methanol           | S-4327     |
| Coumaphos                                                 | 56-72-4     | Acetone            | S-980      |
| Coumarin                                                  | 91-64-5     | Methanol           | S-5061     |
| Creosol                                                   | 1319-77-3   | Methanol           | S-987      |
| Creosote                                                  | 8021-39-4   | Methylene Chloride | S-3847     |
| Crotonaldehyde-(predom. trans)                            | 123-73-9    | Deionized Water    | S-990      |
| Crotonaldehyde-2,4-DNPH                                   | 1527-96-4   | Methanol           | S-5760     |
| Crotonaldehyde (mix. cis & trans)                         | 4170-30-3   | Methanol           | S-4879     |
| Crotonitrile                                              | 4786-20-3   | Methanol           | S-992      |
| Crotoxypfos                                               | 7700-17-6   | Methanol           | S-995      |
| Crotoxypfos                                               | 7700-17-6   | Acetone            | S-995-AC   |
| 18-Crown-6-ether                                          | 17455-13-9  | Methanol           | S-1000     |
| Crufomate                                                 | 299-86-5    | Hexane             | S-4287-HEX |
| 4-Cumylphenol                                             | 599-64-4    | Methanol           | S-4673     |
| Cyanofenphos                                              | 13067-93-1  | Acetonitrile       | S-5958     |
| Cyanogen bromide                                          | 506-68-3    | Methanol           | S-5643     |
| Cyanophos                                                 | 2636-26-2   | Methanol           | S-1006     |
| 2-Cyanopyridine                                           | 100-70-9    | Methanol           | S-4007     |
| 3-Cyanopyridine                                           | 100-54-9    | Methanol           | S-4008     |
| 4-Cyanopyridine                                           | 100-48-1    | Methanol           | S-4009     |
| Cycloate                                                  | 1134-23-2   | Methanol           | S-1010     |
| b-Cyclocitral                                             | 432-25-7    | Methanol           | S-4427     |
| Cyclohexane                                               | 110-82-7    | Methanol           | S-1015     |
| 1,2-Cyclohexane dicarboxylic acid, di-isononyl ester      | 474919-59-0 | Methanol           | S-5104     |
| 1,2-Cyclohexane dicarboxylic anhydride, predominantly cis | 85-42-7     | Methanol           | S-6045     |
| Cyclohexanol                                              | 108-93-0    | Methanol           | S-1020     |
| Cyclohexanone                                             | 108-94-1    | Methanol           | S-1025     |
| Cyclohexene                                               | 110-83-8    | Methanol           | S-1030     |
| Cyclohexene oxide                                         | 286-20-4    | Methanol           | S-1028     |
| Cyclohexyl isocyanate                                     | 3173-53-3   | Methylene Chloride | S-6633     |
| 2-Cyclohexyl-4,6-dinitrophenol                            | 131-89-5    | Methylene Chloride | S-1029     |
| Cyclohexyl Methylphosphonic Acid                          | 1932-60-1   | Methanol           | S-4496     |
| Cyclohexyl(dimethoxy)methylsilane                         | 17865-32-6  | Methanol           | S-4741     |
| Cyclohexylamine                                           | 108-91-8    | Methanol           | S-1027     |
| 1,5-Cyclooctadiene                                        | 111-78-4    | Methanol           | S-1031     |
| Cyclopenta(c,d)pyrene                                     | 27208-37-3  | Methylene Chloride | S-4875     |
| 4H-Cyclopenta[def]phenanthrene                            | 203-64-5    | Methanol           | S-1035     |
| Cyclopentane                                              | 287-92-3    | Methanol           | S-1032     |
| Cyclopentanone                                            | 120-92-3    | Methanol           | S-1042     |



| Component @ 1,000 µg/mL               | CAS#        | Matrix                  | Catalog#   |
|---------------------------------------|-------------|-------------------------|------------|
| Cyclopentene                          | 142-29-0    | Methanol                | S-1040     |
| Cyclopropyl methyl ketone             | 765-43-5    | Acetonitrile            | S-6400     |
| gamma-Cyhalothrin                     | 76703-62-3  | Acetonitrile            | S-6376     |
| Cymoxanil                             | 57966-95-7  | Methanol                | S-3926     |
| alpha-Cypermethrin                    | 67375-30-8  | Methanol                | S-5908     |
| Cypermethrin                          | 52315-07-8  | Acetone                 | S-1041     |
| Cypermethrin                          | 52315-07-8  | Acetonitrile            | S-1041-ACN |
| Cypermethrin                          | 52315-07-8  | Hexane                  | S-1041-H   |
| zeta-Cypermethrin                     | 52315-07-8  | Ethanol                 | S-6401     |
| D-trans-Cyphenothrin (mix of isomers) | 39515-40-7  | Methanol                | S-4463     |
| Cyprazine                             | 22936-86-3  | Methanol                | S-4244     |
| Cyproconazole (mix of isomers)        | 94361-06-5  | Methanol                | S-4863     |
| Cyprodinil                            | 121552-61-2 | Methanol                | S-4622     |
| Cyromazine                            | 66215-27-8  | Methanol                | S-4255     |
| 2,4-D butoxyethyl ester               | 1923-73-3   | Methanol                | S-1046     |
| 2,4-D Butyl ester                     | 94-80-4     | Methanol                | S-4864     |
| 2,4-D ethyl ester                     | 533-23-3    | Methanol                | S-4865     |
| 2,4-D Isobutyl ester                  | 1713-15-1   | Methanol                | S-4869     |
| 2,4-D Isopropyl amine salt            | 5742-17-6   | Methyl-tert-Butyl Ether | S-1047     |
| 2,4-D Isopropyl ester                 | 94-11-1     | Methanol                | S-4867     |
| 2,4-D methyl ester                    | 1928-38-7   | Methanol                | S-1050     |
| Dacthal monoacid                      | 887-54-7    | Acetonitrile            | S-4385     |
| Dalapon                               | 75-99-0     | Methanol                | S-1055     |
| Dalapon methyl ester                  | 17640-02-7  | Methanol                | S-1055A    |
| Danofloxacin                          | 112398-08-0 | Methanol                | S-4575     |
| Dazomet                               | 533-74-4    | Methanol                | S-4680     |
| 2,4-DB                                | 94-82-6     | Methyl-tert-Butyl Ether | S-1060     |
| 2,4-DB methyl ester                   | 18625-12-2  | Methanol                | S-1061     |
| o,p'-DDD                              | 53-19-0     | Methanol                | S-1070     |
| p,p'-DDD                              | 72-54-8     | Methanol                | S-1075     |
| p,p'-DDD                              | 72-54-8     | Acetone                 | S-1075-AC  |
| 4,4'-DDE-D4                           | 93952-19-3  | Methanol                | S-5615     |
| o,p'-DDE                              | 3424-82-6   | Methanol                | S-1080     |
| p,p'-DDE                              | 72-55-9     | Methanol                | S-1085     |
| p,p'-DDMU                             | 1022-22-6   | Methanol                | S-1086     |
| 4,4'-DDT-D8                           | 93952-18-2  | Methylene Chloride      | S-1096     |
| o,p'-DDT                              | 789-02-6    | Methanol                | S-1090     |
| p,p'-DDT                              | 50-29-3     | Methanol                | S-1095     |
| p,p'-DDT                              | 50-29-3     | Acetonitrile            | S-1095-ACN |
| Decabromodiphenyl ether               | 1163-19-5   | Toluene                 | S-5656     |
| Decachlorobiphenyl                    | 2051-24-3   | Hexane                  | S-1100     |
| Decachlorobiphenyl                    | 2051-24-3   | Toluene                 | S-1100-TOL |
| Decafluorobenzophenone                | 853-39-4    | Methanol                | S-4185     |

| Component @ 1,000 µg/mL                                  | CAS#       | Matrix                  | Catalog#    |
|----------------------------------------------------------|------------|-------------------------|-------------|
| Decafluorobiphenyl                                       | 434-90-2   | Methanol                | S-1103      |
| cis-Decahydronaphthalene                                 | 493-01-6   | Methanol                | S-1105      |
| trans-decahydronaphthalene                               | 493-02-7   | Methanol                | S-1106      |
| Decamethylcyclopentasiloxane                             | 541-02-6   | Methanol                | S-1110      |
| Decamethyltetrasiloxane                                  | 141-62-8   | Methanol                | S-5943      |
| n-Decane                                                 | 124-18-5   | Methylene Chloride      | S-1112      |
| n-Decane                                                 | 124-18-5   | Methanol                | S-1112-MEOH |
| n-Decane                                                 | 124-18-5   | Methylene Chloride      | S-1115      |
| Decanoic acid                                            | 334-48-5   | Methylene Chloride      | S-1122      |
| Decanophenone                                            | 6048-82-4  | Methanol                | S-5724      |
| trans-2-decen-1-ol                                       | 18409-18-2 | Methanol                | S-4148      |
| trans-2-decenal                                          | 3913-81-1  | Methanol                | S-4163      |
| Decene-1                                                 | 872-05-9   | Methylene Chloride      | S-1120      |
| Decyl alcohol                                            | 112-30-1   | Methanol                | S-1125      |
| Decyl aldehyde                                           | 112-31-2   | Methanol                | S-1126      |
| DEF                                                      | 78-48-8    | Methanol                | S-1130      |
| DEF                                                      | 78-48-8    | Acetone                 | S-1130-AC   |
| Dehydroabiatic acid                                      | 1740-19-3  | Methyl-tert-Butyl Ether | S-4356      |
| Dehydronifedipine                                        | 67035-22-7 | Methanol                | S-5066      |
| Deltamethrin                                             | 52918-63-5 | Methanol                | S-3977      |
| Deltamethrin                                             | 52918-63-5 | Acetone                 | S-3977-AC   |
| Deltamethrin                                             | 52918-63-5 | Hexane                  | S-3977-H    |
| Demeton-S sulfone                                        | 2496-91-5  | Acetone                 | S-5774-AC   |
| Demeton-S sulfone                                        | 2496-91-5  | Acetonitrile            | S-5774-ACN  |
| Demeton O                                                | 8065-48-3  | Methanol                | S-4020      |
| Demeton O                                                | 8065-48-3  | Acetonitrile            | S-4020-ACN  |
| Demeton O+S                                              | 8065-48-3  | Methanol                | S-1140      |
| Demeton S                                                | 126-75-0   | Acetone                 | S-1141      |
| Demeton S                                                | 126-75-0   | Acetonitrile            | S-1141-ACN  |
| Desmetryn                                                | 1014-69-3  | Methanol                | S-1146      |
| Devrinol                                                 | 15299-99-7 | Methanol                | S-1150      |
| Dexamethasone                                            | 50-02-2    | Methanol                | S-4608      |
| Dextrin                                                  | 9004-53-9  | HPLC Water              | S-4860      |
| Dextrin (from Corn, Type 1)                              | 9004-53-9  | Deionized Water         | S-5130      |
| Dextrose anhydrous                                       | 50-99-7    | Methanol                | S-5005      |
| 2,4-Di-tert-amylphenol                                   | 120-95-6   | Methanol                | S-1780      |
| 2,6-Di-tert-butyl-4-methylphenol                         | 128-37-0   | Methanol                | S-1785      |
| 2,6-Di-tert-butylphenol                                  | 128-39-2   | Methanol                | S-4338      |
| 3,5-Di-tert-butyl-4-hydroxyhydrocinnamate [Irganox 1076] | 2082-79-3  | Methanol                | S-3900      |
| Di-allate (mix of isomers)                               | 2303-16-4  | Acetone                 | S-1155      |
| Di-iso-octyl phthalate                                   | 27554-26-3 | Methanol                | S-5738      |
| Di-n-butyl phthalate                                     | 84-74-2    | Methanol                | S-1770      |
| Di-n-butylamine                                          | 111-92-2   | Acetonitrile            | S-5696      |

| Component @ 1,000 µg/mL                              | CAS#        | Matrix                             | Catalog#    |
|------------------------------------------------------|-------------|------------------------------------|-------------|
| Di-n-decyl phthalate                                 | 84-77-5     | Methanol                           | S-4933      |
| Di-n-heptyltin dichloride                            | 74340-12-8  | Ethanol                            | S-5518-ETOH |
| Di-n-hexyl phthalate                                 | 84-75-3     | Methanol                           | S-4155      |
| Di-n-hexyl phthalate                                 | 84-75-3     | Hexane                             | S-4155-H    |
| Di-n-hexyl phthalate                                 | 84-75-3     | Methylene Chloride                 | S-4155-MC   |
| Di-n-octyl phthalate                                 | 117-84-0    | Methanol                           | S-1775      |
| di-sodium hydrogen phosphate dihydrate               | 10028-24-7  | Methanol                           | S-4547      |
| Di(ethylene glycol) diethyl ether                    | 112-36-7    | Methanol                           | S-3907      |
| Di(ethylene glycol)ethyl ether                       | 111-90-0    | Methanol                           | S-3849      |
| Di(ethylene glycol)methyl ether                      | 111-77-3    | Methanol                           | S-5121      |
| Diacrylic acid                                       | 24615-84-7  | Methanol                           | S-5050      |
| Dialifos                                             | 10311-84-9  | Methanol                           | S-4288      |
| Dialifos                                             | 10311-84-9  | Acetone                            | S-4288-AC   |
| Diallyl phthalate                                    | 131-17-9    | Methanol                           | S-4931      |
| 2,4-Diamino-6-phenyl-1,3,5-triazine (Benzoguanamine) | 91-76-9     | Methanol                           | S-4856      |
| 4,6-Diamino-2-hydroxy-1,3,5-triazine (Ammeline)      | 645-92-1    | 0.01N NaOH                         | S-4808      |
| 1,4-Diaminobutane                                    | 110-60-1    | Methanol                           | S-1158      |
| 4,4'-Diaminodiphenylmethane                          | 101-77-9    | Methanol                           | S-1156      |
| 1,5-Diaminonaphthalene                               | 2243-62-1   | Methanol                           | S-5682      |
| 1,5-Diaminopentane                                   | 462-94-2    | Methanol                           | S-1159      |
| 2,4-Diaminotoluene                                   | 95-80-7     | Methanol                           | S-1160      |
| 2,6-Diaminotoluene                                   | 823-40-5    | Methanol                           | S-1162      |
| 3,4-Diaminotoluene                                   | 496-72-0    | Methanol                           | S-1165      |
| Diamyl phthalate                                     | 131-18-0    | Methanol                           | S-4157      |
| Diazald                                              | 80-11-5     | Methanol                           | S-1170      |
| Diazinon                                             | 333-41-5    | Acetone                            | S-1175      |
| Diazinon-D10                                         | 100155-47-3 | Methanol                           | S-4204      |
| Diazinon-O-analog                                    | 962-58-3    | Acetone                            | S-1176      |
| Dibenz(a,c)anthracene                                | 215-58-7    | Methylene Chloride                 | S-3922      |
| Dibenz(a,h)acridine                                  | 226-36-8    | Methylene Chloride                 | S-1215      |
| Dibenz(a,h)anthracene                                | 53-70-3     | Methylene Chloride                 | S-1205      |
| Dibenz(a,i)acridine                                  | 224-42-0    | Methylene Chloride                 | S-1207      |
| 1,2:5,6-Dibenzanthracene                             | 53-70-3     | Methanol                           | S-1177      |
| Dibenzo(a,e)pyrene                                   | 192-65-4    | Methylene Chloride:Benzene (50:50) | S-1200      |
| Dibenzo(a,h)anthracene-d14                           | 13250-98-1  | Methylene Chloride                 | S-4762      |
| Dibenzo(a,h)pyrene                                   | 189-64-0    | Methylene Chloride:Benzene (50:50) | S-1190      |
| 13H-Dibenzo(a,i)carbazole                            | 239-64-5    | Methanol                           | S-1192      |
| Dibenzo(a,i)pyrene                                   | 189-55-9    | Methylene Chloride:Benzene (50:50) | S-1195      |
| Dibenzo(a,l)pyrene                                   | 191-30-0    | Methylene Chloride                 | S-1196      |
| 7H-Dibenzo(c,g)carbazole                             | 194-59-2    | Methylene Chloride                 | S-1197      |

| Component @ 1,000 µg/mL                    | CAS#       | Matrix                  | Catalog#    |
|--------------------------------------------|------------|-------------------------|-------------|
| 1,2:7,8-Dibenzocarbazole                   | 239-64-5   | Methanol                | S-1198      |
| Dibenzofuran                               | 132-64-9   | Methanol                | S-1180      |
| Dibenzothiophene                           | 132-65-0   | Methanol                | S-1185      |
| Dibenzyl phthalate                         | 523-31-9   | Methylene Chloride      | S-1186      |
| Dibrom (naled)                             | 300-76-5   | Methylene Chloride      | S-2650      |
| Dibrom (naled)                             | 300-76-5   | Ethyl Acetate           | S-2650-EA   |
| 1,2-Dibromo-3-chloropropane                | 96-12-8    | Methanol                | S-1255      |
| 1,3-Dibromo-1-propene (cis & trans)        | 627-15-6   | Methanol                | S-4035      |
| 1,3-Dibromo-2-propanol                     | 96-21-9    | Methanol                | S-1252      |
| Dibromoacetic acid                         | 631-64-1   | Methyl-tert-Butyl Ether | S-1220      |
| Dibromoacetonitrile                        | 3252-43-5  | Methanol                | S-1225      |
| 1,4-Dibromobenzene                         | 106-37-6   | Methanol                | S-1227      |
| 1,4-Dibromobenzene-d4                      | 4165-56-4  | Methanol                | S-1226      |
| 2,5-Dibromobenzoic acid                    | 610-71-9   | Methanol                | S-1331      |
| 4,4'-Dibromobenzophenone                   | 3988-03-2  | Acetonitrile            | S-6378      |
| 4,4'-Dibromobiphenyl                       | 92-86-4    | Acetone                 | S-1228      |
| 4,4'-Dibromobiphenyl                       | 92-86-4    | Methanol                | S-1228-MEOH |
| Dibromochloromethane                       | 124-48-1   | Methanol                | S-1230      |
| 1,2-Dibromoethane                          | 106-93-4   | Methanol                | S-1235      |
| 1,2-Dibromoethene (mixture of cis & trans) | 540-49-8   | Methanol                | S-4744      |
| Dibromofluoromethane                       | 1868-53-7  | Methanol                | S-1240      |
| Dibromomethane                             | 74-95-3    | Methanol                | S-1245      |
| 4,4'-Dibromooctafluorobiphenyl             | 10386-84-2 | Methyl-tert-Butyl Ether | S-1250      |
| 2,4-Dibromophenol                          | 615-58-7   | Methanol                | S-5148      |
| 2,6-Dibromophenol                          | 608-33-3   | Methanol                | S-5147      |
| 1,2-Dibromopropane                         | 78-75-1    | Methanol                | S-4146      |
| 1,3-Dibromopropane                         | 109-64-8   | Methanol                | S-1249      |
| 2,3-Dibromopropionamide                    | 15102-42-8 | Methanol                | S-4804      |
| 2,3-Dibromopropionic acid                  | 600-05-5   | Methyl-tert-Butyl Ether | S-3895      |
| Tris(2,3-dibromopropyl)phosphate           | 126-72-7   | Methylene Chloride      | S-3773      |
| 2,5-Dibromotoluene                         | 615-59-8   | Methanol                | S-1251      |
| Dibutyl butyl-phosphonate                  | 78-46-6    | Methanol                | S-4198      |
| Dibutyl chlorendate                        | 1770-80-5  | Methanol                | S-1265      |
| Dibutyl sulfide                            | 544-40-1   | Methanol                | S-1266      |
| Dibutyl phosphate                          | N/A        | Methanol                | S-4558      |
| Dibutyltin dichloride                      | 683-18-1   | Methanol                | S-4637      |
| Dicamba                                    | 1918-00-9  | Methanol                | S-1270      |
| Dicamba methyl ester                       | 6597-78-0  | Methanol                | S-1270A     |
| Dicapry phthalates                         | 131-15-7   | Methanol                | S-4932      |
| Dichlobenil                                | 1194-65-6  | Methanol                | S-1271      |
| Dichlofluanid                              | 1085-98-9  | Methylene Chloride      | S-1277      |
| Dichlone                                   | 117-80-6   | Methanol                | S-1275      |
| Dichlorfenthion                            | 97-17-6    | Methanol                | S-1280      |

| Component @ 1,000 µg/mL                           | CAS#       | Matrix                               | Catalog# | Component @ 1,000 µg/mL                                            | CAS#       | Matrix   | Catalog#  |
|---------------------------------------------------|------------|--------------------------------------|----------|--------------------------------------------------------------------|------------|----------|-----------|
| Dichlormid                                        | 37764-25-3 | Methanol                             | S-3994   | 2,3'-Dichlorobiphenyl                                              | 25569-80-6 | Methanol | S-842     |
| 1,1-Dichloro-1-fluoroethane<br>(Freon 141)        | 1717-00-6  | Methanol                             | S-1480   | 2,3-Dichlorobiphenyl                                               | 16605-91-7 | Methanol | S-1349    |
| 1,1-Dichloro-2,2-bis<br>(4-chlorophenyl-d4)ethane | 93952-20-6 | Isooctane                            | S-5620   | 2,4'-Dichlorobiphenyl                                              | 34883-43-7 | Methanol | S-843     |
| 1,1-Dichloro-2,2-diethoxethane                    | 619-33-0   | Methanol                             | S-4873   | 3,5-Dichlorobiphenyl                                               | 34883-41-5 | Methanol | S-1350    |
| 1,2-Dichloro-1,1-difluoroethane                   | 1649-08-7  | Methanol                             | S-1477   | 4,4'-Dichlorobiphenyl                                              | 2050-68-2  | Methanol | S-1355    |
| 1,3-Dichloro-2-propanol                           | 96-23-1    | Methanol                             | S-1492   | 1,2-Dichlorobutane                                                 | 616-21-7   | Methanol | S-1359    |
| 1,4-Dichloro-2-butene<br>(mix of cis & trans)     | 764-41-0   | Methanol                             | S-1485   | 1,3-Dichlorobutane                                                 | 1190-22-3  | Methanol | S-1360    |
| 2,2-Dichloro-1,1,1-trifluoroethane                | 306-83-2   | Methanol                             | S-1476   | 1,4-Dichlorobutane                                                 | 110-56-5   | Methanol | S-1365    |
| 2,3-Dichloro-1-propanol                           | 616-23-9   | Methanol                             | S-1482   | 2,3-Dichlorobutane                                                 | 7581-97-7  | Methanol | S-1351    |
| 2,3-Dichloro-1-propene                            | 78-88-6    | Methanol                             | S-1458   | 3,4-Dichlorocatechol                                               | 3978-67-4  | Methanol | S-1367    |
| 3,4-Dichloro-1-butene                             | 760-23-6   | Methanol                             | S-1478   | Dichlorodifluoromethane                                            | 75-71-8    | Methanol | S-1370    |
| 4,6-Dichloro-2-(methylthio)<br>pyrimidine         | 6299-25-8  | Methanol                             | S-5590   | 1,1-Dichloroethane                                                 | 75-34-3    | Methanol | S-1375    |
| cis-1,4-Dichloro-2-butene                         | 1476-11-5  | Methanol                             | S-3887   | 1,2-Dichloroethane                                                 | 107-06-2   | Methanol | S-1380    |
| trans-1,4-Dichloro-2-butene                       | 110-57-6   | Methanol                             | S-1490   | 1,2-Dichloroethane-d4                                              | 17060-07-0 | Methanol | S-1385    |
| Dichloroacetic acid                               | 79-43-6    | Methyl-tert-Butyl Ether              | S-1285   | 1,1-Dichloroethene                                                 | 75-35-4    | Methanol | S-1390    |
| 1,1-Dichloroacetone                               | 513-88-2   | Methanol                             | S-1286   | cis-1,2-Dichloroethene                                             | 156-59-2   | Methanol | S-1394    |
| Dichloroacetonitrile                              | 3018-12-0  | Methanol                             | S-1287   | trans-1,2-Dichloroethene                                           | 156-60-5   | Methanol | S-1400    |
| 2,3-Dichloroaniline                               | 608-27-5   | Methanol                             | S-1284   | Dichlorofluoromethane                                              | 75-43-4    | Methanol | S-1405    |
| 2,5-Dichloroaniline                               | 95-82-9    | Methylene Chloride                   | S-1289   | Tris(dichloroisopropyl)phosphate                                   | 13674-87-8 | Methanol | S-4381    |
| 3,4-Dichloroaniline                               | 95-76-1    | Methanol                             | S-3851   | Dichlorophen                                                       | 97-23-4    | Acetone  | S-1407    |
| 3,5-Dichloroaniline                               | 626-43-7   | Methanol                             | S-4178   | 2,3-Dichlorophenol                                                 | 576-24-9   | Methanol | S-1406    |
| 9,10-Dichloroanthracene                           | 605-48-1   | Methanol:Methylene<br>Chloride (1:1) | S-1288   | 2,4-Dichlorophenol                                                 | 120-83-2   | Methanol | S-1410    |
| 2,6-Dichlorobenzamide                             | 2008-58-4  | Methanol                             | S-5593   | 2,5-Dichlorophenol                                                 | 583-78-8   | Methanol | S-1412    |
| 1,2-Dichlorobenzene                               | 95-50-1    | Methanol                             | S-1290   | 2,6-Dichlorophenol                                                 | 87-65-0    | Methanol | S-1415    |
| 1,2-Dichlorobenzene-d4                            | 2199-69-1  | Methanol                             | S-1305   | 3,4-Dichlorophenol                                                 | 95-77-2    | Methanol | S-1416    |
| 1,3-Dichlorobenzene                               | 541-73-1   | Methanol                             | S-1295   | 3,5-Dichlorophenol                                                 | 591-35-5   | Methanol | S-1417    |
| 1,4-Dichlorobenzene                               | 106-46-7   | Methanol                             | S-1300   | 3,4-Dichlorophenoxyacetic acid                                     | 588-22-7   | Methanol | S-4438    |
| 1,4-Dichlorobenzene-d4                            | 3855-82-1  | Methanol                             | S-1310   | 2,4-D<br>(2,4-Dichlorophenoxyacetic acid)                          | 94-75-7    | Methanol | S-1045    |
| 3,3'-Dichlorobenzidine                            | 91-94-1    | Methanol                             | S-1315   | 2,4-D<br>(2,4-Dichlorophenoxyacetic acid)                          | 94-75-7    | Acetone  | S-1045-AC |
| 3,5 Dichlorobenzoic                               | 51-36-5    | Methanol                             | S-1317   | 2,4-Dichlorophenyl acetic acid<br>methyl ester (DCAA Methyl Ester) | 55954-23-9 | Methanol | S-1421    |
| 2,3-Dichlorobenzoic acid                          | 50-45-3    | Methanol                             | S-1320   | 2,4-Dichlorophenylacetic acid                                      | 19719-28-9 | Acetone  | S-1420    |
| 2,4-Dichlorobenzoic acid                          | 50-84-0    | Methanol                             | S-1325   | 1,1-Dichloropropane                                                | 78-99-9    | Methanol | S-1429    |
| 2,5-Dichlorobenzoic acid                          | 50-79-3    | Methanol                             | S-1330   | 1,2-Dichloropropane                                                | 78-87-5    | Methanol | S-1430    |
| 2,6-Dichlorobenzoic acid                          | 50-30-6    | Methanol                             | S-1335   | 1,3-Dichloropropane                                                | 142-28-9   | Methanol | S-1435    |
| 3,4-Dichlorobenzoic acid                          | 51-44-5    | Acetone                              | S-1340   | 2,2-Dichloropropane                                                | 594-20-7   | Methanol | S-1440    |
| 3,5-Dichlorobenzoic acid                          | 51-36-5    | Methanol                             | S-1345   | 1,1-Dichloropropanone                                              | 513-88-2   | Methanol | S-1445    |
| 3,5-Dichlorobenzoic acid<br>methyl ester          | 2905-67-1  | Methanol                             | S-1346   | 1,1-Dichloropropene                                                | 563-58-6   | Methanol | S-1450    |
| 4,4'-Dichlorobenzophenone                         | 90-98-2    | Acetone                              | S-1318   | 1,3-Dichloropropene                                                | 542-75-6   | Methanol | S-1457A   |
| 3,4-Dichlorobenzotrifluoride                      | 328-84-7   | Methanol                             | S-1347   | cis-1,3-Dichloropropene                                            | 10061-01-5 | Methanol | S-1460    |
| 2,2'-Dichlorobiphenyl                             | 13029-08-8 | Methanol                             | S-1353   | trans-1,3-Dichloropropene                                          | 10061-02-6 | Methanol | S-1465    |
|                                                   |            |                                      |          | 1,3-Dichloropropene<br>(Mixture of isomers)                        | 542-75-6   | Methanol | S-1455    |

| Component @ 1,000 µg/mL        | CAS#       | Matrix                  | Catalog#  |
|--------------------------------|------------|-------------------------|-----------|
| 3,4-Dichloropropionanilide     | 709-98-8   | Methanol                | S-1468    |
| 2,3-Dichloropropionic acid     | 565-64-0   | Methanol                | S-4305    |
| 2,6-Dichloropyridine           | 2402-78-0  | Methanol                | S-1469    |
| 3,6-Dichloropyridazine         | 141-30-0   | Acetone                 | S-5594    |
| Dichlorostearic acid           | 5829-48-1  | Acetonitrile            | S-4564    |
| 1,2-Dichlorotetrafluoroethane  | 76-14-2    | Methanol                | S-1470    |
| 2,4-Dichlorotoluene            | 95-73-8    | Methanol                | S-1473    |
| 3,4-Dichlorotoluene            | 95-75-0    | Methanol                | S-1474    |
| a,a-Dichlorotoluene            | 98-87-3    | Methanol                | S-1472    |
| 1,2-Dichlorotrifluoroethane    | 354-23-4   | Methanol                | S-1479    |
| 2,3-Dichlorophenoxyacetic acid | 2976-74-1  | Acetone                 | S-4647    |
| Dichlorprop                    | 120-36-5   | Methyl-tert-Butyl Ether | S-1425    |
| Dichlorprop methyl ester       | 57153-17-0 | Methanol                | S-1426    |
| Dichlorvos                     | 62-73-7    | Methanol                | S-1475    |
| Diclofop methyl                | 51338-27-3 | Methanol                | S-1495    |
| Dicloran                       | 99-30-9    | Methanol                | S-1497    |
| Dicloran                       | 99-30-9    | Acetone                 | S-1497-AC |
| Dicrotophos                    | 141-66-2   | Methanol                | S-1500    |
| Dicyclohexyl phthalate         | 84-61-7    | Methanol                | S-4151    |
| Dicyclohexylamine              | 101-83-7   | Methanol                | S-4616    |
| Dicyclopentadiene              | 77-73-6    | Methanol                | S-1505    |
| Dieldrin                       | 60-57-1    | Methanol                | S-1510    |
| Dienochlor                     | 2227-17-0  | Methanol                | S-5242    |
| Diesel Fuel                    | 68476-34-6 | Methanol                | S-1511    |
| Diesel Fuel 50% Weathered      | N/A        | Acetone                 | S-4841    |
| Diethanolamine                 | 111-42-2   | Methanol                | S-1528    |
| Diethofencarb                  | 87130-20-9 | Methanol                | S-4830    |
| 1,2-Diethoxyethane             | 629-14-1   | Methanol                | S-1513    |
| N,N-Diethyl-m-toluamide        | 134-62-3   | Methanol                | S-1127    |
| Diethyl Malonate               | 105-53-3   | Methanol                | S-3938    |
| Diethyl phthalate              | 84-66-2    | Methanol                | S-1515    |
| Diethyl sulfate                | 64-67-5    | Methanol                | S-1520    |
| Diethylamine                   | 109-89-7   | Methanol                | S-1522    |
| 2,6-Diethylaniline             | 579-66-8   | Methanol                | S-1605    |
| N,N-Diethylaniline             | 91-66-7    | Methanol                | S-4038    |
| 1,2-Diethylbenzene             | 135-01-3   | Methanol                | S-1524    |
| 1,3-Diethylbenzene             | 141-93-5   | Methanol                | S-1512    |
| 1,3-Diethylbenzene             | 141-93-5   | Methanol                | S-1523    |
| 1,4-Diethylbenzene             | 105-05-5   | Methanol                | S-1525    |
| Diethylene glycol              | 111-46-6   | Methanol                | S-3848    |
| Diethyleneglycol dibenzoate    | 120-55-8   | Methanol                | S-4207    |
| Diethylenetriamine             | 111-40-0   | Methanol                | S-4366    |
| N,N-Diethylethanolamine        | 100-37-8   | Methanol                | S-1529    |
| Diethylstilbestrol             | 56-53-1    | Methanol                | S-1530    |

| Component @ 1,000 µg/mL           | CAS#        | Matrix             | Catalog#   |
|-----------------------------------|-------------|--------------------|------------|
| Difenoconazole                    | 119446-68-3 | Methanol           | S-3995     |
| Difenzoquat methyl sulfate        | 43222-48-6  | Methanol           | S-1535     |
| Diffubenzuron                     | 35367-38-5  | Methanol           | S-1537     |
| Diffufenican                      | 83164-33-4  | Methanol           | S-1538     |
| 1,2-Difluorobenzene               | 367-11-3    | Methanol           | S-1539     |
| 1,4-Difluorobenzene               | 540-36-3    | Methanol           | S-1540     |
| 2,2'-Difluorobiphenyl             | 388-82-9    | Methanol           | S-1542     |
| 4,4'-Difluorobiphenyl             | 398-23-2    | Methanol           | S-1541     |
| 1,2-Difluorotetrachloroethane     | 76-12-0     | Methanol           | S-1544     |
| 2,4-Difluorotoluene               | 452-76-6    | Methanol           | S-1543     |
| Digoxin                           | 20830-75-5  | Acetonitrile       | S-5695     |
| 3,4-Dihydro-2H-pyran              | 110-87-2    | Methanol           | S-1552     |
| 9,10-Dihydroanthracene            | 613-31-0    | Methylene Chloride | S-5765     |
| 2,3-Dihydrofuran                  | 1191-99-7   | Methanol           | S-1545     |
| 2,5-Dihydrofuran                  | 1708-29-8   | Methanol           | S-1550     |
| 3,5-Diiodo-4-hydroxybenzonitrile  | 1689-83-4   | Methanol           | S-1554     |
| Diiodomethane                     | 75-11-6     | Methanol           | S-1555     |
| Diisobutyl ketone                 | 108-83-8    | Methanol           | S-4945     |
| Diisobutyl phthalate              | 84-89-5     | Methanol           | S-4150     |
| 1,5-Diisocyanatonaphthalene       | 3173-72-6   | Methylene Chloride | S-6635     |
| 1,6-Diisocyanatohexane            | 822-06-0    | Methylene Chloride | S-1561     |
| Diisodecyl phthalate              | 26761-40-0  | Methanol           | S-4464     |
| Diisoheptyl phthalate             | 71888-89-6  | Methylene Chloride | S-1553     |
| Diisoheptyl phthalate             | 71888-89-6  | Hexane             | S-1553-H   |
| Diisononyl phthalate (Branched)   | 68515-48-0  | Acetone            | S-1559     |
| Diisononyl phthalate (Unbranched) | 28553-12-0  | Acetone            | S-5701     |
| Diisopentylphthalate (DIPP)       | 605-50-5    | Hexane             | S-6148-H   |
| 1,3-Diisopropenylbenzene          | 3748-13-8   | Methanol           | S-1557     |
| Diisopropyl ether                 | 108-20-3    | Methanol           | S-4852     |
| 1,3-Diisopropylbenzene            | 99-62-7     | Methanol           | S-6370     |
| 1,4-Diisopropylbenzene            | 100-18-5    | Methanol           | S-1558     |
| 2,6-Diisopropyl-naphthalene       | 24157-81-1  | Methanol           | S-1556     |
| Diltiazem                         | 33286-22-5  | Methanol           | S-4536     |
| Dimefox                           | 115-26-4    | Methanol           | S-4681     |
| Dimefox                           | 115-26-4    | Acetonitrile       | S-4681-ACN |
| Dimefuron                         | 34205-21-5  | Methanol           | S-4617     |
| 3,4-Dimercaptotoluene             | 496-74-2    | Methanol           | S-4701     |
| Dimethachlor                      | 50563-36-5  | Methanol           | S-4282     |
| Dimethachlor ESA                  | N/A         | Acetonitrile       | S-4629     |
| Dimethenamid                      | 87674-68-8  | Acetone            | S-3944     |
| Dimethipin                        | 55290-64-7  | HPLC Water         | S-4831     |
| Dimethoate                        | 60-51-5     | Methanol           | S-1560     |
| Dimethomorph                      | 110488-70-5 | Acetone            | S-3970     |



| Component @ 1,000 µg/mL             | CAS#       | Matrix                              | Catalog# | Component @ 1,000 µg/mL              | CAS#       | Matrix             | Catalog#  |
|-------------------------------------|------------|-------------------------------------|----------|--------------------------------------|------------|--------------------|-----------|
| 3,3'-Dimethoxybenzidine             | 119-90-4   | Methanol                            | S-1565   | 2,2-Dimethylbutane                   | 75-83-2    | Methanol           | S-1614    |
| 1,1-Dimethoxyethane                 | 534-15-6   | Methanol                            | S-1570   | 2,3-Dimethylbutane                   | 79-29-8    | Methanol           | S-1615    |
| 1,2-Dimethoxyethane                 | 110-71-4   | Methanol                            | S-1572   | 1,1-Dimethylcyclohexane              | 590-66-9   | Methanol           | S-1609    |
| Dimethoxyethyl phthalate            | 117-82-8   | Methanol                            | S-1575   | cis-1,4-Dimethylcyclohexane          | 624-29-3   | Methanol           | S-1613    |
| Dimethoxymethane                    | 109-87-5   | Methanol                            | S-1580   | trans-1,3-Dimethylcyclohexane        | 2207-03-6  | Methanol           | S-1612    |
| 3,5-Dimethoxytoluene                | 4179-19-5  | Methanol                            | S-5677   | 1,1-Dimethylcyclopentane             | 1638-26-2  | Methanol           | S-1616    |
| cis-1,3-Dimethylcyclohexane         | 638-04-0   | Methanol                            | S-1611   | 1,3-Dimethylcyclopentane             | 2453-00-1  | Methanol           | S-1617    |
| 1,2-Dimethyl-3-ethylbenzene         | 933-98-2   | Methanol                            | S-1622   | cis-1,2-Dimethylcyclopentane         | 1192-18-3  | Methanol           | S-3886    |
| 1,2-Dimethyl-4-ethylbenzene         | 934-80-5   | Methanol                            | S-1621   | trans-1,3-Dimethylcyclopentane       | 1759-58-6  | Methanol           | S-3891    |
| 1,3-Dimethyl-4-ethylbenzene         | 874-41-9   | Methanol                            | S-1619   | 4,6-Dimethyldibenzothiophene         | 1207-12-1  | Acetonitrile       | S-6055    |
| 1,3-Dimethyl-5-ethylbenzene         | 934-74-7   | Methanol                            | S-1618   | N,N-Dimethylethanolamine             | 108-01-0   | Methanol           | S-2807    |
| 1,4-Dimethyl-2-ethylbenzene         | 1758-88-9  | Methanol                            | S-1623   | Dimethylformamide                    | 68-12-2    | Methanol           | S-1620    |
| 2,3-Dimethyl-2,3-dinitrobutane      | 3964-18-9  | Methanol                            | S-4235   | N,N-Dimethylformamide                | 68-12-2    | Methanol           | S-3897    |
| 3,3-Dimethyl-1-butanol              | 624-95-3   | Methanol                            | S-5951   | 2,5-Dimethylfuran                    | 625-86-5   | Methanol           | S-3916    |
| 4,4-Dimethyl-2-pentanone            | 590-50-1   | Methanol                            | S-1657   | 2,3-Dimethylheptane                  | 3074-71-3  | Methanol           | S-4457    |
| 4,4-Dimethyl-2-pentene              | 762-63-0   | Methanol                            | S-3974   | 2,4-Dimethylhexane                   | 589-43-5   | Methanol           | S-1624    |
| Dimethyl-p-nitrophenylphosphate     | 950-35-6   | Methanol                            | S-1669   | 2,5-Dimethylhexane                   | 592-13-2   | Methanol           | S-1625    |
| Dimethyl-p-nitrophenylphosphate     | 950-35-6   | Methanol                            | S-2444   | 1,1-Dimethylhydrazine                | 57-14-7    | Methanol           | S-1627    |
| Dimethyl endothal                   | 88941-22-4 | Methanol                            | S-4304   | 1,1-Dimethylhydrazine                | 57-14-7    | Methanol           | S-1629    |
| Dimethyl Fumarate                   | 624-49-7   | Methanol                            | S-4870   | 1,2-Dimethylnaphthalene              | 573-98-8   | Methanol           | S-1630    |
| 2,4-Dimethyl hexane                 | 589-43-5   | Methanol                            | S-1585   | 1,3-Dimethylnaphthalene              | 575-41-7   | Methanol           | S-1631    |
| Dimethyl isophthalate               | 1459-93-4  | Methanol                            | S-1594   | 1,3-Dimethylnaphthalene              | 575-41-7   | Methylene Chloride | S-1631-MC |
| Dimethyl methylphosphonate          | 756-79-6   | Methanol                            | S-4553   | 1,5-Dimethylnaphthalene              | 571-61-9   | Methanol           | S-1634    |
| Dimethyl phthalate                  | 131-11-3   | Methanol                            | S-1590   | 1,6-Dimethylnaphthalene              | 575-43-9   | Methanol           | S-1635    |
| Dimethyl sulfate                    | 77-81-1    | Methanol                            | S-1592   | 1,8-Dimethylnaphthalene              | 569-41-5   | Methanol           | S-1636    |
| Dimethyl sulfate                    | 77-81-1    | Methanol                            | S-4884   | 2,3-Dimethylnaphthalene              | 581-40-8   | Methanol           | S-1639    |
| Dimethyl sulfoxide-d6               | 2206-27-1  | Methanol                            | S-2566   | 2,6-Dimethylnaphthalene              | 581-42-0   | Methanol           | S-1640    |
| Dimethyl terephthalate              | 120-61-6   | Methanol                            | S-1595   | 2,7-Dimethylnaphthalene              | 582-16-1   | Methanol           | S-1641    |
| Dimethyl trisulfide                 | 3658-80-8  | Methanol                            | S-4371   | Dimethylnaphthalene (mix of isomers) | 28804-88-8 | Methanol           | S-1637    |
| N,N-Dimethylacetamide               | 127-19-5   | Methanol                            | S-1597   | 2,2-Dimethylpentane                  | 590-35-2   | Methanol           | S-1645    |
| Dimethylamine                       | 124-40-3   | Methanol                            | S-1599   | 2,3-Dimethylpentane                  | 565-59-3   | Methanol           | S-1650    |
| 2-(Dimethylamino)ethyl Methacrylate | 2867-47-2  | Methanol                            | S-5120   | 2,4-Dimethylpentane                  | 108-08-7   | Methanol           | S-1655    |
| 3-(Dimethylamino)propylamine        | 109-55-7   | Methanol                            | S-1583   | 3,3-Dimethylpentane                  | 562-49-2   | Methanol           | S-1656    |
| p-Dimethylaminoazobenzene           | 60-11-7    | Methanol                            | S-1600   | 3,6-Dimethylphenanthrene             | 1576-67-6  | Methanol           | S-4002    |
| Bis(N,N-dimethylaminoethyl)ether    | 3033-62-3  | Methanol                            | S-4420   | 2,3-Dimethylphenol                   | 526-75-0   | Methanol           | S-1659    |
| 4-Dimethylaminopyridine             | 1122-58-3  | Methanol                            | S-4013   | 2,4-Dimethylphenol                   | 105-67-9   | Methanol           | S-1660    |
| 2,4-Dimethylaniline                 | 95-68-1    | Methanol                            | S-2806   | 2,5-Dimethylphenol                   | 95-87-4    | Acetone            | S-1661    |
| 2,6-Dimethylaniline                 | 87-62-7    | Methanol                            | S-4510   | 2,6-Dimethylphenol                   | 576-26-1   | Methanol           | S-1662    |
| N,N-Dimethylaniline                 | 121-69-7   | Methanol                            | S-2805   | 3,4-Dimethylphenol                   | 95-65-8    | Methanol           | S-1664    |
| 9,10-Dimethylanthracene             | 781-43-1   | Methylene Chloride                  | S-3924   | 3,5-Dimethylphenol                   | 108-68-9   | Methanol           | S-1665    |
| 7,12-Dimethylbenz(a)anthracene      | 57-97-6    | Methylene Chloride: Benzene (50:50) | S-1610   | 1,1-Bis(3,4-dimethylphenyl)ethane    | 1742-14-9  | Methanol           | S-852     |
| 2,5-Dimethylbenzaldehyde            | 5779-94-2  | Methanol                            | S-1607   | Dimethylpolysiloxane                 | 9016-00-6  | Methylene Chloride | S-1667    |

| Component @ 1,000 µg/mL                                 | CAS#        | Matrix             | Catalog#   |
|---------------------------------------------------------|-------------|--------------------|------------|
| Dimethylpolysiloxane                                    | 9016-00-6   | Methanol           | S-3853     |
| 2,5-Dimethyltetrahydrofuran<br>(mixture of cis & trans) | 1003-38-9   | Methanol           | S-1668     |
| N,N-Dimethylthioformamide                               | 758-16-7    | Methanol           | S-3971     |
| 2,5-Dimethylthiophene                                   | 638-02-8    | Methanol           | S-1666     |
| 1,7-Dimethylxanthine                                    | 611-59-6    | Methanol           | S-5067     |
| Dinitramine                                             | 29091-05-2  | Acetone            | S-4052     |
| 4,6-Dinitro-2-methylphenol                              | 534-52-1    | Methylene Chloride | S-1700     |
| 2,6-Dinitroaniline                                      | 606-22-4    | Methanol           | S-1671     |
| 1,2-Dinitrobenzene                                      | 528-29-0    | Methanol           | S-1670     |
| 1,3-Dinitrobenzene                                      | 99-65-0     | Methanol           | S-1672     |
| 1,4-Dinitrobenzene                                      | 100-25-4    | Methanol           | S-1675     |
| 2,4-Dinitrophenol                                       | 51-28-5     | Methanol           | S-1680     |
| 2,5-Dinitrophenol                                       | 329-71-5    | Methanol           | S-3980     |
| 2,6-Dinitrophenol                                       | 573-56-8    | Methanol           | S-1681     |
| 1,3-Dinitroquinone                                      | 99-65-0     | Methanol           | S-1685     |
| 2,3-Dinitrotoluene                                      | 602-01-7    | Methanol           | S-1689     |
| 2,4-Dinitrotoluene                                      | 121-14-2    | Methanol           | S-1690     |
| 2,6-Dinitrotoluene                                      | 606-20-2    | Methanol           | S-1695     |
| 3,4-Dinitrotoluene                                      | 610-39-9    | Acetonitrile       | S-1696     |
| Dinobuton                                               | 973-21-7    | Ethyl Acetate      | S-6422-EA  |
| Dinocap                                                 | 39300-45-3  | Methanol           | S-1705     |
| Dinonyl phthalate                                       | 84-76-4     | Methanol           | S-4153     |
| Dinoseb                                                 | 88-85-7     | Methanol           | S-1710     |
| Dinoseb methyl ester                                    | 6099-79-2   | Methanol           | S-1710A    |
| Dinotefuran                                             | 165252-70-0 | Methanol           | S-5780     |
| Dinotefuran                                             | 165252-70-0 | Acetonitrile       | S-5780-ACN |
| Diocetyl isophthalate                                   | 4654-18-6   | Methanol           | S-4937     |
| Diocetyl sebacate                                       | 122-62-3    | Methanol           | S-1712     |
| Diocetyl dichloride                                     | 3542-36-7   | Methanol           | S-4641     |
| Diolein                                                 | 25637-84-7  | Methanol           | S-4387     |
| Dioxacarb                                               | 6988-21-2   | Methanol           | S-4054     |
| 1,4-Dioxane                                             | 123-91-1    | Methanol           | S-1715     |
| 1,4-Dioxane-d8                                          | 17647-74-4  | Methanol           | S-1716     |
| Dioxathion                                              | 78-34-2     | Methanol           | S-1720     |
| Dioxathion                                              | 78-34-2     | Ethyl Acetate      | S-1720-EA  |
| Dioxepane                                               | 505-65-7    | Methanol           | S-1721     |
| 1,3-Dioxolane                                           | 646-06-0    | Methanol           | S-1725     |
| Dioxydemeton-S-methyl                                   | 17040-19-6  | Methanol           | S-3969     |
| Diphenamid                                              | 957-51-7    | Acetone            | S-1730     |
| Diphenhydramine                                         | 147-24-0    | Methanol           | S-4538     |
| Diphenyl isophthalate                                   | 744-45-6    | Methanol           | S-4449     |
| Diphenyl mercury                                        | 587-85-9    | Methanol           | S-1735     |
| Diphenyl phthalate                                      | 84-62-8     | Methanol           | S-4448     |

| Component @ 1,000 µg/mL         | CAS#       | Matrix                | Catalog#    |
|---------------------------------|------------|-----------------------|-------------|
| Diphenylamine                   | 122-39-4   | Methanol              | S-1740      |
| Diphenylamine                   | 122-39-4   | Acetonitrile          | S-1740-ACN  |
| 9,10-Diphenylanthracene         | 1499-10-1  | Methanol              | S-4033      |
| 5,5-Diphenylhydantoin           | 57-41-0    | Methanol              | S-1745      |
| 1,2-Diphenylhydrazine           | 122-66-7   | Methanol              | S-1750      |
| 1,1-Diphenylhydrazine HCl       | 530-47-2   | Methanol              | S-1747      |
| Diphenyltin dichloride          | 1135-99-5  | Methanol              | S-4979      |
| Dipropetryn                     | 4147-51-7  | Methanol              | S-1753      |
| Dipropyl phthalate              | 131-16-8   | Methanol              | S-4491      |
| Dipropylene glycol              | 25265-71-8 | Methanol              | S-1751      |
| Dipropylene glycol methyl ether | 34590-94-8 | Methanol              | S-4174      |
| Diquat dibromide monohydrate    | 6385-62-2  | Methanol              | S-1752      |
| Disperse Blue 1                 | 2475-45-8  | HPLC Water            | S-4845      |
| Disperse Blue 124               | 61951-51-7 | HPLC Water            | S-4848      |
| Disperse Blue 35                | 12222-75-2 | HPLC Water            | S-4846      |
| Disperse Orange 3               | 730-40-5   | HPLC Water            | S-4849      |
| Disperse Orange 37              | 12223-33-5 | HPLC Water            | S-4850      |
| Disperse Red 1                  | 2872-52-8  | HPLC Water            | S-4861      |
| Disperse Yellow 3               | 2832-40-8  | HPLC Water            | S-4862      |
| Disulfoton                      | 298-04-4   | Methanol              | S-1755      |
| Disulfoton sulfone              | 2497-06-5  | Acetone               | S-1756-AC   |
| Disulfoton sulfoxide            | 2497-07-6  | Acetone               | S-1757      |
| Disulfoton sulfoxide            | 2497-07-6  | Acetone               | S-1757-AC   |
| Disulfoton sulfoxide            | 2497-07-6  | Acetonitrile          | S-1757-ACN  |
| Ditalimfos                      | 5131-24-8  | Methanol              | S-4827      |
| 1,4-Dithiane                    | 505-29-3   | Methanol              | S-5102      |
| Dithiopyr                       | 97886-45-8 | Methanol              | S-4939      |
| Ditridecyl phthalate            | 119-06-2   | Methanol              | S-4929      |
| Diundecyl phthalate             | 3648-20-2  | Methanol              | S-4930      |
| Diuron                          | 330-54-1   | Methanol              | S-1760      |
| Divinylbenzene                  | 1321-74-0  | Methanol              | S-1765      |
| DMSA                            | 4710-17-2  | Ethyl Acetate         | S-6423-EA   |
| n-Docosane                      | 629-97-0   | Methylene Chloride    | S-1790      |
| Dodecamethylcyclhexasiloxane    | 540-97-6   | Methanol              | S-5679      |
| Dodecamethylpentasiloxane       | 141-63-9   | Methanol              | S-5944      |
| n-Dodecane                      | 112-40-3   | Methylene Chloride    | S-1795      |
| n-Dodecane                      | 112-40-3   | Methanol              | S-1795-MEOH |
| 1-Dodecanol                     | 112-53-8   | Methanol              | S-1800      |
| Dodecene-1                      | 112-41-4   | Methylene Chloride    | S-1805      |
| Dodecyl sulfate, sodium salt    | 151-21-3   | Methanol              | S-4030      |
| Dodine                          | 2439-10-3  | Methanol              | S-1807      |
| Dodine                          | 2439-10-3  | Acetonitrile:Methanol | S-1807-ACN  |
| n-Dotetracontane                | 7098-20-6  | Carbon Disulfide      | S-1809      |

| Component @ 1,000 µg/mL           | CAS#        | Matrix             | Catalog#    | Component @ 1,000 µg/mL                       | CAS#       | Matrix          | Catalog#   |
|-----------------------------------|-------------|--------------------|-------------|-----------------------------------------------|------------|-----------------|------------|
| n-Dotetracontane                  | 7098-20-6   | Hexane             | S-1809-H    | Eserine Salicylate                            | 57-64-7    | Methanol        | S-3103     |
| n-Dotetracontane                  | 7098-20-6   | Heptane            | S-1809-HEPT | 17-alpha-estradiol                            | 57-91-0    | Methanol        | S-5068     |
| n-Dotriacontane                   | 544-85-4    | Methylene Chloride | S-1810      | 17-beta-estradiol                             | 50-28-2    | Methanol        | S-5070     |
| DP3                               | 1109-28-0   | HPLC Water         | S-5490      | Estriol                                       | 50-27-1    | Methanol        | S-5541     |
| DP4                               | 9004-53-9   | HPLC Water         | S-5488      | Estrone                                       | 53-16-7    | Methanol        | S-5073     |
| Dyfonate (Fonofos)                | 944-22-9    | Methanol           | S-1815      | Etaconazole                                   | 60207-93-4 | Methanol        | S-4285     |
| Dylox                             | 52-68-6     | Acetone            | S-1816      | Ethalfuralin                                  | 55283-68-6 | Methanol        | S-1875     |
| E85 (15Gas/85ETOH)                | N/A         | Methanol           | S-4330      | Ethametsulfuron-methyl                        | 97780-06-8 | Methanol        | S-4996     |
| E90 (90Gas/10ETOH)                | N/A         | Methanol           | S-4331      | Ethane                                        | 74-84-0    | Methanol        | S-1880     |
| Edifenphos                        | 17109-49-8  | Methanol           | S-4284      | Ethanethiol                                   | 75-08-1    | Methanol        | S-1881     |
| n-Eicosane                        | 112-95-8    | Methylene Chloride | S-1820      | Ethanol                                       | 64-17-5    | Methanol        | S-1885     |
| 1-Eicosene                        | 3452-07-1   | Methanol           | S-1821      | Ethanol                                       | 64-17-5    | Deionized Water | S-1885-W   |
| Emamectin                         | 119791-41-2 | Acetone            | S-5507      | Ethanolamine                                  | 141-43-5   | Ethanol         | S-1890     |
| Emamectin                         | 119791-41-2 | Acetonitrile       | S-5507-ACN  | Ethene (Ethylene)                             | 74-85-1    | Methanol        | S-1895     |
| Endosulfan                        | 115-29-7    | Methanol           | S-1824      | Ethephon                                      | 16672-87-0 | Methanol        | S-4682     |
| Endosulfan ether                  | 3369-52-6   | Methanol           | S-4179      | Ethephon                                      | 16672-87-0 | Acetonitrile    | S-4682-ACN |
| Endosulfan I                      | 959-98-8    | Methanol           | S-1825      | Ether                                         | 60-29-7    | Methanol        | S-1900     |
| Endosulfan I                      | 959-98-8    | Acetone            | S-1825-AC   | Ethiofencarb                                  | 29973-13-5 | Methanol        | S-4683     |
| Endosulfan I                      | 959-98-8    | Acetonitrile       | S-1825-ACN  | Ethion                                        | 563-12-2   | Methanol        | S-1905     |
| Endosulfan II                     | 33213-65-9  | Methanol           | S-1830      | Ethion                                        | 563-12-2   | Acetone         | S-1905-AC  |
| Endosulfan II                     | 33213-65-9  | Acetonitrile       | S-1830-ACN  | Ethion monoxon                                | 17356-42-2 | Acetonitrile    | S-5776-ACN |
| Endosulfan sulfate                | 1031-07-8   | Methanol           | S-1835      | Ethirimol                                     | 23947-60-6 | Methanol        | S-4976     |
| Endosulfan sulfate                | 1031-07-8   | Acetonitrile       | S-1835-ACN  | Ethofumesate                                  | 26225-79-6 | Methanol        | S-3959     |
| Endosulfan sulfate                | 1031-07-8   | Toluene            | S-1835-TOL  | 2-Ethoxyethanol                               | 110-80-5   | Methanol        | S-1910     |
| Endothal                          | 145-73-3    | Methanol           | S-1840      | 2-[2-(2-Ethoxyethoxy)ethoxy] ethanol          | 112-50-5   | Methanol        | S-5661     |
| Endothal-PFPH                     | N/A         | Methanol           | S-1841      | 2-Ethoxyethyl acetate                         | 111-15-9   | Methanol        | S-1912     |
| Endothall dimethyl ester          | 3215-51-8   | Methanol           | S-1842      | Bis(2-ethoxyethyl)phthalate                   | 605-54-9   | Methanol        | S-4550     |
| Endrin                            | 72-20-8     | Methanol           | S-1845      | Ethoxyquin                                    | 91-53-2    | Methanol        | S-1913     |
| Endrin aldehyde                   | 7421-93-4   | Methanol           | S-1850      | 1-Ethyl-1-methylcyclohexane                   | 4926-90-3  | Methanol        | S-1974     |
| Endrin ketone                     | 53494-70-5  | Methanol           | S-1855      | 2-Ethyl-1-hexanol                             | 104-76-7   | Methanol        | S-4147     |
| Enrofloxacin                      | 93106-60-6  | Methanol           | S-4580      | 2-Ethyl-2-hexenal                             | 645-62-5   | Methanol        | S-4851     |
| Epichlorhydrin                    | 106-89-8    | Methanol           | S-1860      | 2-Ethyl-4-methyl-1,3-dioxolane (2-EMD) isomer | 4359-46-0  | Methanol        | S-5789     |
| EPN                               | 2104-64-5   | Methanol           | S-1865      | 2-Ethyl-5,5-dimethyl-1,3-dioxane (2-EDD)      | 768-58-1   | Methanol        | S-5785     |
| EPN                               | 2104-64-5   | Acetone            | S-1865-AC   | 2-Ethyl-6-Methylaniline                       | 24549-06-2 | Acetone         | S-4169     |
| Epoxiconazole                     | 133855-98-8 | Methanol           | S-4923      | 2-Ethyl-Fenchol                               | 18368-91-7 | Ethanol         | S-4952     |
| 1,2-Epoxybutane                   | 106-88-7    | Methanol           | S-1867      | 4-Ethyl-2-methoxyphenol                       | 2785-89-9  | Methanol        | S-4183     |
| Tris(2,3-Epoxypropyl)isocyanurate | 2451-62-9   | Methanol           | S-5930      | Ethyl-2-cyanoacrylate                         | 7085-85-0  | Methanol        | S-5232     |
| Tris(2,3-Epoxypropyl)isocyanurate | 2451-62-9   | Methylene Chloride | S-5930-MC   | Ethyl 4-hydroxybenzoate                       | 120-47-8   | Methanol        | S-1928     |
| EPTC                              | 759-94-4    | Methanol           | S-1870      | Ethyl acetate                                 | 141-78-6   | Methanol        | S-1920     |
| Equilin                           | 474-86-2    | Methanol           | S-5542      | Ethyl acetate-1,2,-13C2                       | 84508-45-2 | Methanol        | S-1921     |
| Erucylamide                       | 112-84-5    | Methanol           | S-3960      | Ethyl acrylate                                | 140-88-5   | Methanol        | S-4541     |
| Erythritol                        | 149-32-6    | Methanol           | S-4191      | Ethyl alcohol-d5                              | 1859-08-1  | Methanol        | S-1886     |
| Erythromycin                      | 114-07-8    | Methanol           | S-1871      |                                               |            |                 |            |
| Eserine                           | 57-47-6     | Methanol           | S-3102      |                                               |            |                 |            |

| Component @ 1,000 µg/mL              | CAS#       | Matrix      | Catalog#   |
|--------------------------------------|------------|-------------|------------|
| Ethyl butanoate                      | 105-54-4   | Methanol    | S-4329     |
| Ethyl disulfide                      | 110-81-6   | Methanol    | S-3196     |
| Ethyl formate                        | 109-94-4   | Methanol    | S-4279     |
| Ethyl hexanoate                      | 123-66-0   | Methanol    | S-5480     |
| Ethyl lactate                        | 687-47-8   | Methanol    | S-1973     |
| Ethyl methacrylate                   | 97-63-2    | Methanol    | S-1975     |
| Ethyl methanesulfonate               | 62-50-0    | Methanol    | S-1930     |
| Ethyl methyl sulfide                 | 624-89-5   | Methanol    | S-1976     |
| Ethyl methylphosphonic acid          | 1832-53-7  | Methanol    | S-4497     |
| Ethyl octanoate                      | 106-32-1   | Methanol    | S-5479     |
| Ethyl parathion                      | 56-38-2    | Methanol    | S-1935     |
| Ethyl propionate                     | 105-37-3   | Methanol    | S-4328     |
| Ethyl salicylate                     | 118-61-6   | Methanol    | S-5668     |
| Ethyl sulfide                        | 352-93-2   | Methanol    | S-1521     |
| Ethyl thiocyanate                    | 542-90-5   | Methanol    | S-4350     |
| Ethyl trifluoroacetate               | 383-63-1   | Methanol    | S-3957     |
| Ethyl valerate                       | 539-82-2   | Ethanol     | S-6408     |
| Ethylamine                           | 75-04-7    | Methanol    | S-1938     |
| N-Ethylaniline                       | 103-69-5   | Methanol    | S-1937     |
| Ethylbenzene                         | 100-41-4   | Methanol    | S-1940     |
| Ethylbenzene-d10                     | 25837-05-2 | Methanol    | S-1941     |
| Ethylbenzene-ethyl-d5                | NA         | Methanol    | S-1924     |
| Ethylbenzoate                        | 93-89-0    | Methanol    | S-1945     |
| Ethylcyclohexane                     | 1678-91-7  | Methanol    | S-1950     |
| Ethylcyclopentane                    | 1640-89-7  | Methanol    | S-1951     |
| N-Ethyldiethanolamine                | 139-87-7   | Methanol    | S-4703     |
| Ethylene glycol                      | 107-21-1   | Methanol    | S-1952     |
| Ethylene glycol dimethacrylate       | 97-90-5    | Methanol    | S-1954     |
| Ethylene oxide                       | 75-21-8    | Methanol    | S-1960     |
| Ethylene oxide                       | 75-21-8    | Isopropanol | S-1960-IPA |
| Ethylenediamine                      | 107-15-3   | Methanol    | S-1961     |
| Ethyleneimine                        | 151-56-4   | Methanol    | S-1955     |
| Ethylenethiourea                     | 96-45-7    | Methanol    | S-1962     |
| 2-Ethylhexanoic acid                 | 149-57-5   | Methanol    | S-1927     |
| 2-Ethylhexyl acrylate                | 103-11-7   | Methanol    | S-6399     |
| bis-(2-Ethylhexyl)adipate            | 103-23-1   | Methanol    | S-1965     |
| Bis(2-ethylhexyl)hexahydro phthalate | 84-71-9    | Methanol    | S-4927     |
| Bis(2-ethylhexyl)isophthalate        | 137-89-3   | Methanol    | S-4928     |
| bis(2-Ethylhexyl)phthalate           | 117-81-7   | Methanol    | S-1970     |
| Bis-(2-ethylhexyl)terephthalate      | 6422-86-2  | Methanol    | S-5459     |
| 4,6-O-Ethylidene-alpha-D-glucose     | 13224-99-2 | Methanol    | S-4102     |
| 5-Ethylidene-2-norbornene            | 16219-75-3 | Methanol    | S-1972     |
| Ethylidene diacetate                 | 542-10-9   | Methanol    | S-4742     |

| Component @ 1,000 µg/mL      | CAS#        | Matrix       | Catalog#    |
|------------------------------|-------------|--------------|-------------|
| 1-Ethyl-naphthalene          | 1127-76-0   | Methanol     | S-4001      |
| 2-Ethyl-naphthalene          | 939-27-5    | Methanol     | S-1980      |
| 3-Ethylpentane               | 617-78-7    | Methanol     | S-1982      |
| 2-Ethylphenol                | 90-00-6     | Methanol     | S-1983      |
| 3-Ethylphenol                | 620-17-7    | Methanol     | S-4300      |
| 4-Ethylphenol                | 123-07-9    | Methanol     | S-1985      |
| 4-Ethylphenol-2,3,5,6-d4, OD | 340256-40-8 | Methanol     | S-6156      |
| 2-Ethylthiophene             | 872-55-9    | Methanol     | S-1986      |
| Ethylthiourea                | 625-53-6    | Methanol     | S-5084      |
| 2-Ethyltoluene               | 611-14-3    | Methanol     | S-1984      |
| 3-Ethyltoluene               | 620-14-4    | Methanol     | S-1987      |
| 4-Ethyltoluene               | 622-96-8    | Methanol     | S-1990      |
| 17-alpha-ethynylestradiol    | 57-63-6     | Methanol     | S-5069      |
| Etofenprox                   | 80844-07-1  | Acetonitrile | S-6104      |
| Etiozole                     | 153233-91-1 | Acetonitrile | S-5670      |
| Etrifos                      | 38260-54-7  | Methanol     | S-4245      |
| Etrifos                      | 38260-54-7  | Acetonitrile | S-4245-ACN  |
| Etrifos                      | 38260-54-7  | Methanol     | S-4245-MEOH |
| Eucalyptol                   | 470-82-6    | Methanol     | S-4352      |
| Ezetimibe                    | 13222-33-1  | Methanol     | S-5898      |
| Famoxadone                   | 131807-57-3 | Acetone      | S-5462      |
| Famphur                      | 52-85-7     | Methanol     | S-1995      |
| Farnesene                    | 502-61-4    | Methanol     | S-1989      |
| Fenamidone                   | 161326-34-7 | Methanol     | S-4966      |
| Fenamidone                   | 161326-34-7 | Acetonitrile | S-4966-ACN  |
| Fenamiphos sulfone           | 31972-44-8  | Acetone      | S-1996      |
| Fenamiphos sulfoxide         | 31972-43-7  | Acetone      | S-1998      |
| Fenarimol                    | 60168-88-9  | Methanol     | S-1997      |
| Fenbuconazole                | 114369-43-6 | Methanol     | S-3985      |
| Fenbutatin-oxide             | 13356-08-6  | Acetone      | S-1999      |
| Fenchlorphos                 | 299-84-3    | Methanol     | S-2000      |
| Fenchone                     | 1195-79-5   | Methanol     | S-4569      |
| L(-)-fenchone                | 7787-20-4   | Methanol     | S-5091      |
| Fenhexamid                   | 126833-17-8 | Methanol     | S-4962      |
| Fenhexamid                   | 126833-17-8 | Acetonitrile | S-4962-ACN  |
| Fenitrothion                 | 122-14-5    | Acetone      | S-2001      |
| Fenofibrate                  | 49562-28-9  | Methanol     | S-5899      |
| Fenoxaprop                   | 95617-09-7  | Methanol     | S-4733      |
| Fenoxaprop-ethyl             | 66441-23-4  | Methanol     | S-2002      |
| Fenoxycarb                   | 72490-01-8  | Methanol     | S-5463      |
| Fenpropathrin                | 64257-84-7  | Methanol     | S-4246      |
| Fenpropathrin                | 39515-41-8  | Methanol     | S-5781      |
| Fenpropathrin                | 39515-41-8  | Acetonitrile | S-5781-ACN  |



| Component @ 1,000 µg/mL       | CAS#        | Matrix             | Catalog#   |
|-------------------------------|-------------|--------------------|------------|
| Fenpropidin                   | 67306-00-7  | Methanol           | S-2004     |
| Fenpropimorph                 | 67564-91-4  | Methanol           | S-2003     |
| Fenpyroximate                 | 111812-58-9 | Acetone            | S-5804     |
| Fenson                        | 80-38-6     | Methanol           | S-4247     |
| Fensulfothion                 | 115-90-2    | Acetone            | S-2005     |
| Fensulfothion                 | 115-90-2    | Acetone            | S-2005-AC  |
| Fenthion                      | 55-38-9     | Acetone            | S-2010     |
| Fenthion sulfoxide            | 3761-41-9   | Acetone            | S-4316     |
| Fenthion sulfoxide            | 3761-41-9   | Acetonitrile       | S-4316-ACN |
| Fentin hydroxide(Super Tin)   | 76-87-9     | Methanol           | S-2009     |
| Fenuron                       | 101-42-8    | Methanol           | S-2011     |
| Fexofenadine                  | 83799-24-0  | Methanol           | S-5900     |
| Fipronil                      | 120068-37-3 | Methanol           | S-4004     |
| Fipronil                      | 120068-37-3 | Acetone            | S-4004-AC  |
| Fipronil desulfinyl           | 205650-65-3 | Acetonitrile       | S-6377-ACN |
| Fipronil desulfinyl           | 205650-65-3 | Ethyl Acetate      | S-6377-EA  |
| Fipronil sulfone              | 120068-36-2 | Methanol           | S-4699     |
| Flamprop-isopropyl            | 52756-22-6  | Methanol           | S-4269     |
| Flamprop-methyl               | 52756-25-9  | Methanol           | S-4263     |
| Flamprop-M-isopropyl          | 57973-67-8  | Methanol           | S-4437     |
| Flamprop-M-methyl             | 63729-98-6  | Acetonitrile       | S-6038     |
| Fonicamid                     | 158062-67-0 | Acetonitrile       | S-6084     |
| Fluazifop                     | 69335-91-7  | Methanol           | S-2015     |
| Fluazifop-p-butyl             | 79241-46-6  | Acetone            | S-2020     |
| Fluazinam                     | 79622-59-6  | Acetone            | S-2021     |
| Flubendiamide                 | 272451-65-7 | Methanol           | S-5773     |
| Flubendiamide                 | 272451-65-7 | Acetonitrile       | S-5773-ACN |
| Flubenzimin                   | 37893-02-0  | Acetonitrile       | S-6385     |
| Fluchloralin                  | 33245-39-5  | Methanol           | S-2025     |
| Flucofuron                    | 370-50-3    | Methanol           | S-5131     |
| Flucythrinate                 | 70124-77-5  | Acetonitrile       | S-5996     |
| Flucythrinate (Mix of Isomer) | 70124-77-5  | Acetone            | S-4684     |
| Fludioxonil                   | 131341-86-1 | Methanol           | S-2061     |
| Flufenacet                    | 142459-58-3 | Methanol           | S-4906     |
| Flufenacet                    | 142459-58-3 | Acetonitrile       | S-4906-ACN |
| Flumequine                    | 42835-25-6  | Methanol           | S-4590     |
| Flumethrin                    | 69770-45-2  | Acetone            | S-4752     |
| Flumetralin                   | 62924-70-3  | Methanol           | S-4180     |
| Flumetsulam                   | 98967-40-9  | Methanol           | S-5064     |
| Flumioxazin                   | 103361-09-7 | Acetonitrile       | S-5193     |
| Fluometuron                   | 2164-17-2   | Methanol           | S-2026     |
| Fluoranthene                  | 206-44-0    | Methylene Chloride | S-2030     |
| Fluoranthene-d10              | 93951-69-0  | Methanol           | S-4111     |
| Fluorene                      | 86-73-7     | Methylene Chloride | S-2035     |

| Component @ 1,000 µg/mL                            | CAS#        | Matrix          | Catalog#   |
|----------------------------------------------------|-------------|-----------------|------------|
| Fluorene-d10                                       | 81103-79-9  | Methanol        | S-2036     |
| Fluorenone                                         | 486-25-9    | Methanol        | S-4332     |
| Fluorescein                                        | 2321-07-5   | Methanol        | S-2037     |
| 4-Fluoroaniline                                    | 371-40-4    | Methanol        | S-4048     |
| Fluorobenzene                                      | 462-06-6    | Methanol        | S-2040     |
| Fluorobenzene                                      | 462-06-6    | Isooctane       | S-2040-ISO |
| 4-Fluorobenzoic acid                               | 456-22-4    | Methanol        | S-2042     |
| 2-Fluorobiphenyl                                   | 321-60-8    | Methanol        | S-2045     |
| 4-Fluorobiphenyl                                   | 324-74-3    | Methanol        | S-4954     |
| Fluorodifen                                        | 15457-05-3  | Methanol        | S-4260     |
| Fluoroglycofen-ethyl                               | 77501-90-7  | Ethyl Acetate   | S-6418-EA  |
| Fluoromethyl 1,1,1,3,3,3-hexafluoroisopropyl ether | 28523-86-6  | Methanol        | S-5105     |
| 1-Fluoronaphthalene                                | 321-38-0    | Methanol        | S-2047     |
| 2-Fluorophenol                                     | 367-12-4    | Methanol        | S-2050     |
| 3-Fluorophenol                                     | 372-20-3    | Methanol        | S-2051     |
| 4-Fluorophenol                                     | 371-41-5    | Methanol        | S-2055     |
| Fluoxastrobin                                      | 361377-29-9 | Acetonitrile    | S-6020     |
| Fluoxetine                                         | 56296-78-7  | Methanol        | S-5884     |
| Fluquinconazole                                    | 136426-54-5 | Acetonitrile    | S-6103     |
| Fluquinconazole                                    | 136426-54-5 | Acetonitrile    | S-6103-ACN |
| Flurochloridone                                    | 61213-25-0  | Methanol        | S-4277     |
| Fluroxypyr                                         | 69377-81-7  | Methanol        | S-3954     |
| Fluroxypyr-1-methylheptylester                     | 81406-37-3  | Methanol        | S-3955     |
| Flurtamone                                         | 96525-23-4  | Methanol        | S-4907     |
| Flusilazole                                        | 85509-19-9  | Methanol        | S-4832     |
| Flutolanil                                         | 66332-96-5  | Methanol        | S-2059     |
| Flutriafol                                         | 76674-21-0  | Methanol        | S-2058     |
| Flutriafol                                         | 76674-21-0  | Acetonitrile    | S-2058-ACN |
| tau-Fluvalinate                                    | 102851-06-9 | Acetone         | S-4161     |
| tau-Fluvalinate                                    | 102851-06-9 | Acetonitrile    | S-4161-ACN |
| Folicur                                            | 107534-96-3 | Methanol        | S-2056     |
| Folpet                                             | 133-07-3    | Methanol        | S-2057     |
| Folpet                                             | 133-07-3    | Acetone         | S-2057-AC  |
| Fomesafen                                          | 72178-02-0  | Acetonitrile    | S-4975     |
| Foramsulfuron                                      | 173159-57-4 | Methanol        | S-5011     |
| Formaldehyde                                       | 50-00-0     | Deionized Water | S-2060     |
| Formaldehyde-2,4-DNPH                              | 1081-15-8   | Deionized Water | S-5755     |
| Formamide                                          | 75-12-7     | Methanol        | S-2062     |
| Formanilide                                        | 103-70-8    | Methanol        | S-2065     |
| Formetanate hydrochloride                          | 23422-53-9  | Methanol        | S-2066     |
| Formetanate hydrochloride                          | 23422-53-9  | Acetonitrile    | S-2066-ACN |
| Formic acid                                        | 64-18-6     | Deionized Water | S-2067     |
| Formothion                                         | 2540-82-1   | Acetonitrile    | S-4685-ACN |

| Component @ 1,000 µg/mL                 | CAS#       | Matrix              | Catalog#     |
|-----------------------------------------|------------|---------------------|--------------|
| 4-Formylmorpholine                      | 4394-85-8  | Methanol            | S-2068       |
| Fosamine ammonium                       | 25954-13-6 | Methanol            | S-2070       |
| Fructose                                | 57-48-7    | Methanol            | S-4189       |
| Fructose                                | 57-48-7    | HPLC Water          | S-4189-W     |
| Fumaric acid                            | 110-17-8   | Methanol            | S-2074       |
| 2-Furaldehyde                           | 98-01-1    | Methanol            | S-2075       |
| 2-Furaldehyde                           | 98-01-1    | Water: Acetonitrile | S-2075-ACNDI |
| Furan                                   | 110-00-9   | Methanol            | S-2080       |
| 3-Furanmethanol                         | 4412-91-3  | Methanol            | S-5680       |
| Furathiocarb                            | 65907-30-4 | Methanol            | S-5464       |
| Furfuryl alcohol                        | 98-00-0    | Methanol            | S-2079       |
| D-Galactosamine hydrochloride           | 1772-03-8  | Methanol            | S-2081       |
| Galactosan                              | 644-76-8   | Methanol            | S-5522       |
| Gallic acid                             | 5995-86-8  | Methanol            | S-5657       |
| Gasoline                                | 8006-61-9  | Methanol            | S-4019       |
| Gemfibrozil                             | 25812-30-0 | Methanol            | S-5881       |
| Geraniol                                | 106-24-1   | Methanol            | S-4866       |
| D-Glucosamine hydrochloride             | 66-84-2    | Methanol            | S-2082       |
| alpha-D-Glucose (Dextrose)              | 492-62-6   | Methanol            | S-2086       |
| alpha-D-Glucose (Dextrose)              | 492-62-6   | HPLC Water          | S-2086-W     |
| Gluphosinate ammonium                   | 77182-82-8 | Methanol            | S-2083       |
| Glutaric acid                           | 110-94-1   | Deionized Water     | S-4166       |
| Glutaric dialdehyde                     | 111-30-8   | Deionized Water     | S-3854       |
| Glyburide                               | 10238-21-8 | Methanol            | S-5902       |
| Glycerol                                | 56-81-5    | Methanol            | S-4192       |
| Glycerol 2-phosphate di-Na salt hydrate | 819-83-0   | Methanol            | S-2084       |
| Glycerol Propoxylate Triacrylate        | 52408-84-1 | Methanol            | S-4103       |
| Glycidol                                | 556-52-5   | Methanol            | S-2087       |
| Glycidyl phenyl ether                   | 122-60-1   | Methanol            | S-5138       |
| Glycolic Acid                           | 79-14-1    | Methanol            | S-2088       |
| Glyoxal                                 | 107-22-2   | Deionized Water     | S-3967       |
| Glyphosate                              | 1071-83-6  | Water: Methanol     | S-3092       |
| Guaio                                   | 489-86-1   | Methanol            | S-5698       |
| n-Heneicosane                           | 629-94-7   | Methanol            | S-2090       |
| n-Hentriacontane                        | 630-04-6   | Methylene Chloride  | S-2095       |
| Heptachlor                              | 76-44-8    | Methanol            | S-2100       |
| Heptachlor                              | 76-44-8    | Acetone             | S-2100-AC    |
| Heptachlor                              | 76-44-8    | Hexane              | S-2100-HEX   |
| Heptachlor epoxide                      | 1024-57-3  | Methanol            | S-2110       |
| Heptachlor epoxide (Isomer A)           | 28044-83-9 | Methanol            | S-2106       |
| Heptachlor epoxide (Isomer B)           | 1024-57-3  | Methanol            | S-2105       |
| Heptachlor epoxide (Isomer B)           | 1024-57-3  | Acetone             | S-2105-AC    |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl    | 52663-71-5 | Methanol            | S-2107       |

| Component @ 1,000 µg/mL                        | CAS#        | Matrix             | Catalog#    |
|------------------------------------------------|-------------|--------------------|-------------|
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl           | 35065-29-3  | Methanol           | S-9180      |
| n-Heptacosane                                  | 593-49-7    | Methylene Chloride | S-2115      |
| n-Heptadecane                                  | 629-78-7    | Methanol           | S-2120      |
| 1-Heptadecanol                                 | 1454-85-9   | Methanol           | S-5770      |
| 1-Heptadecene                                  | 6765-39-5   | Methanol           | S-4731      |
| trans-trans-2,4-Heptadienal (contains 10% cis) | 4313-03-5   | Methanol           | S-5164      |
| n-Heptane                                      | 142-82-5    | Methanol           | S-2125      |
| n-Heptane-d16                                  | 142-82-5    | Methanol           | S-2126      |
| Heptanoic acid                                 | 111-14-8    | Methanol           | S-2137      |
| 1-Heptanol                                     | 111-70-6    | Methanol           | S-2130      |
| 2-Heptanone                                    | 110-43-0    | Methanol           | S-2131      |
| 3-Heptanone                                    | 106-35-4    | Methanol           | S-4233      |
| 4-Heptanone                                    | 123-19-3    | Methanol           | S-4853      |
| n-Heptatriacontane                             | 7194-84-5   | Methanol           | S-4113      |
| 1-Heptene                                      | 592-76-7    | Methanol           | S-2135      |
| Heptenophos                                    | 23560-59-0  | Methanol           | S-4261      |
| Heptyl aldehyde                                | 111-71-7    | Methanol           | S-2121      |
| 2-N-Heptylfuran                                | 3777-71-7   | Methanol           | S-5624      |
| Mono-n-heptyltin trichloride                   | 59344-47-7  | Ethanol            | S-5517-ETOH |
| Hexabromobenzene                               | 87-82-1     | Toluene            | S-5728      |
| Hexachlorobenzene                              | 118-74-1    | Benzene            | S-2140      |
| Hexachlorobenzene- <sup>13</sup> C6            | N/A         | Methanol           | S-5614      |
| 2,2',3,4,4',5'-Hexachlorobiphenyl              | 35065-28-2  | Methanol           | S-9138      |
| 2,2',4,4',5,5'-Hexachlorobiphenyl              | 35065-27-1  | Methanol           | S-9153      |
| 2,2',4,4',5,6'-Hexachlorobiphenyl              | 60145-22-4  | Methanol           | S-2142      |
| Hexachlorobutadiene                            | 87-68-3     | Methanol           | S-2145      |
| 1,2,3,4,5,6-Hexachlorocyclohexane(alpha)       | 319-84-6    | Methanol           | S-2147      |
| Hexachlorocyclopentadiene                      | 77-47-4     | Methanol           | S-2150      |
| Hexachloroethane                               | 67-72-1     | Methanol           | S-2155      |
| Hexachlorophene                                | 70-30-4     | Methylene Chloride | S-2160      |
| Hexachlorophene methyl ester                   | 100965-64-8 | Methanol           | S-2161      |
| Hexachloropropene                              | 1888-71-7   | Methanol           | S-2165      |
| Hexaconazole                                   | 79983-71-4  | Methanol           | S-5465      |
| n-Hexacontane                                  | 7667-80-3   | p-xylene           | S-2166      |
| n-Hexacosane                                   | 630-01-3    | Methylene Chloride | S-2170      |
| n-Hexadecane                                   | 544-76-3    | Methylene Chloride | S-2175      |
| 1-Hexadecanol                                  | 36653-82-4  | Methanol           | S-3941      |
| Hexadecene-1                                   | 629-73-2    | Methylene Chloride | S-2180      |
| 1,4-Hexadiene                                  | 592-45-0    | Methanol           | S-2177      |
| 1,5-Hexadiene                                  | 592-42-7    | Methanol           | S-2178      |
| 1,1,1,3,3,3-Hexafluoro-2-methyl-2-propanol     | 1515-14-6   | Methanol           | S-3913      |
| 1,1,1,3,3,3-Hexafluoro-2-propanol              | 920-66-1    | Methanol           | S-2207      |

| Component @ 1,000 µg/mL                  | CAS#       | Matrix                | Catalog# | Component @ 1,000 µg/mL                | CAS#        | Matrix                      | Catalog#    |
|------------------------------------------|------------|-----------------------|----------|----------------------------------------|-------------|-----------------------------|-------------|
| 1,1,1,3,3,3-Hexafluoro-2-propanol        | 920-66-1   | Methanol              | S-3911   | 2-Hydroxy atrazine                     | 2163-68-0   | Dimethyl Sulfoxide          | S-2236      |
| Hexafluorobenzene                        | 392-56-3   | Methanol              | S-2182   | p-Hydroxybenzoic acid                  | 99-96-7     | Methyl-tert-Butyl Ether     | S-2239      |
| Hexahydrohexamethyl cyclopentabenzopyran | 1222-05-5  | Methanol              | S-5545   | p-Hydroxybenzoic acid methyl ester     | 99-76-3     | Methanol                    | S-3889      |
| Hexamethylbenzene                        | 87-85-4    | Methanol              | S-2181   | 2-Hydroxybenzothiazole                 | 934-34-9    | Methanol                    | S-4772      |
| Hexamethylcyclotrisiloxane               | 541-05-9   | Hexane                | S-4334   | 3-Hydroxycarbofuran                    | 16655-82-6  | Acetonitrile                | S-2240      |
| Hexamethyldisiloxane                     | 107-46-0   | Methanol              | S-4456   | 3-Hydroxycarbofuran                    | 16655-82-6  | Methanol                    | S-2240-MEOH |
| Hexamethylphosphoramide                  | 680-31-9   | Methanol              | S-2185   | 2-Hydroxyethyl methacrylate            | 868-77-9    | Methanol                    | S-5329      |
| 2,6,10,15,19,23-Hexamethyltetracosane    | 111-01-3   | Hexane                | S-4170   | 2,2-Bis-(hydroxymethyl)-propionic acid | 4767-63-7   | Methanol                    | S-4029      |
| Hexanal                                  | 66-25-1    | Methanol              | S-2187   | Tris(hydroxymethyl) aminomethane       | 77-86-1     | Methanol                    | S-4307      |
| n-Hexane                                 | 110-54-3   | Methanol              | S-2190   | 5-(hydroxymethyl) Furfural             | 67-47-0     | Methanol                    | S-2227      |
| n-Hexane-d14                             | 21666-38-6 | Methanol              | S-2191   | Bis(4-hydroxyphenyl)-methane           | 620-92-8    | Methanol                    | S-512       |
| 1,6-Hexanediol                           | 629-11-8   | Methanol              | S-2195   | B-Hydroxypropionic acid                | 503-66-2    | Methanol                    | S-4197      |
| 1,6-Hexanediol diacrylate                | 13048-33-4 | Methanol              | S-4105   | 2-Hydroxypropionitrile                 | 78-97-7     | Methanol                    | S-2344      |
| 2,3-Hexanedione                          | 3848-24-6  | Methanol              | S-4143   | 8-Hydroxyquinoline                     | 148-24-3    | Methanol                    | S-3953      |
| Hexanenitrile                            | 628-73-9   | Methanol              | S-4237   | Hydroxyzine                            | 2192-20-3   | Methanol                    | S-5903      |
| Hexanoic acid                            | 142-62-1   | Deionized Water       | S-2197   | Ibuprofen                              | 15687-27-1  | Methanol                    | S-5580      |
| 2-Hexanol                                | 626-93-7   | Methanol              | S-5492   | Igepal CA 630                          | 9036-19-5   | Methanol                    | S-5114      |
| 3-Hexanol                                | 623-37-0   | Methanol              | S-5491   | Imazalil                               | 35554-44-0  | Methanol                    | S-2346      |
| 2-Hexanone                               | 591-78-6   | Methanol              | S-2200   | Imazalil                               | 35554-44-0  | Acetonitrile                | S-2346-ACN  |
| 3-Hexanone                               | 589-38-8   | Methanol              | S-4236   | Imazamethabenz-methyl                  | 81405-85-8  | Methanol                    | S-4732      |
| Hexaoxacyclo-octadecane                  | 17455-13-9 | Methanol              | S-2205   | Imazamox                               | 114311-32-9 | Methanol                    | S-4782      |
| n-Hexatricontane                         | 630-06-8   | p-xylene              | S-2210   | Imazapyr                               | 81334-34-1  | Methanol                    | S-3966      |
| cis-2-Hexene                             | 7688-21-3  | Methanol              | S-2215   | Imazaquin                              | 81335-37-7  | Methanol                    | S-2243      |
| Hexene-1                                 | 592-41-6   | Methanol              | S-2225   | Imazethapyr                            | 81335-77-5  | Methanol                    | S-2244      |
| trans-2-Hexene                           | 4050-45-7  | Methanol              | S-2220   | Imazilil                               | 73790-28-0  | Methanol                    | S-2246      |
| Hexyl 2-ethylhexyl phthalate             | 75673-16-4 | Methanol              | S-4158   | Imidacloprid                           | 138261-41-3 | Acetone                     | S-2247      |
| Hexyl alcohol                            | 111-27-3   | Methanol              | S-2230   | Imidan                                 | 732-11-6    | Methanol                    | S-2245      |
| Hexylcyclohexane                         | 4292-75-5  | Methanol              | S-4458   | Imipramine                             | 113-52-0    | Methanol                    | S-5611      |
| 2-Hexyloxyethanol                        | 112-25-4   | Methylene Chloride    | S-2226   | Imiprothrin                            | 72963-72-5  | Acetonitrile                | S-5782-ACN  |
| Hexythiazox                              | 78587-05-0 | Acetone               | S-5270   | Indan                                  | 496-11-7    | Methanol                    | S-2249      |
| Hippuric acid                            | 495-69-2   | HPLC Acetonitrile     | S-5217   | Indene                                 | 95-13-6     | Methylene Chloride          | S-2250      |
| HMX                                      | 2691-41-0  | Acetonitrile:Methanol | S-2229   | Indeno(1,2,3-c,d)pyrene                | 193-39-5    | Methylene Chloride: Benzene | S-2255      |
| Holmium oxide                            | 12055-62-8 | HPLC Water            | S-4895   | Indole                                 | 120-72-9    | Methanol                    | S-2260      |
| alpha-Humulene                           | 6753-98-6  | Methanol              | S-5692   | Indomethacin                           | 53-86-1     | Methanol                    | S-5587      |
| Hydrazine                                | 302-01-2   | Deionized Water       | S-2231   | Indoxacarb                             | 173584-44-6 | Acetone                     | S-4963      |
| Hydrazobenzene                           | 122-66-7   | Methanol              | S-2232   | Iodoacetic acid                        | 64-69-7     | HPLC Water                  | S-4972      |
| Hydrogen bromide                         | 10035-10-6 | Methanol              | S-2238   | Iodofenphos                            | 18181-70-9  | Methanol                    | S-2265      |
| Hydrogen sulfide                         | 7783-06-4  | Methanol              | S-3987   | Iodomethane                            | 74-88-4     | Methanol                    | S-2270      |
| Hydroquinone                             | 123-31-9   | Methanol              | S-2235   | Iodosulfuron-methyl-sodium             | 144550-36-7 | Methanol                    | S-4908      |
| 4-Hydroxy-2-mercapto-6-propylpyrimidine  | 51-52-5    | Methanol              | S-2242   | Ioxnil methyl ether                    | N/A         | Methanol                    | S-1554A     |
| 4-Hydroxy-3-NitroPhenylAcetic acid       | 10463-20-4 | Methanol              | S-4805   | Iprobenfos                             | 26087-47-8  | Acetonitrile                | S-6088      |
| 4-Hydroxy-4-methyl-2-pentanone           | 123-42-2   | Methanol              | S-2241   | Iprodione                              | 36734-19-7  | Isooctane                   | S-2272      |
|                                          |            |                       |          | Iprodione                              | 36734-19-7  | Acetonitrile                | S-2272-ACN  |

| Component @ 1,000 µg/mL                     | CAS#        | Matrix             | Catalog#    |
|---------------------------------------------|-------------|--------------------|-------------|
| Iprovalicarb                                | 140923-17-7 | Acetonitrile       | S-6029      |
| Iprovalicarb                                | 140923-17-7 | Methanol           | S-6029-MEOH |
| Irgarol 1051                                | 28159-98-0  | Methanol           | S-4910      |
| Isazophos                                   | 42509-80-8  | Methanol           | S-4164      |
| iso-Butylcyclohexane                        | 1678-98-4   | Methanol           | S-686       |
| Isoamyl acetate                             | 123-92-2    | Methanol           | S-4036      |
| Isoamylbenzene                              | 2049-94-7   | Methanol           | S-2273      |
| 2-Isobutyl-3-methoxypyrazine                | 24683-00-9  | Methanol           | S-6051      |
| Isobutyl acetate                            | 110-19-0    | Methanol           | S-2274      |
| Isobutyl hydrogen methylphosphonate         | 1604-38-2   | Methanol           | S-4498      |
| Isobutyl isobutyrate                        | 97-85-8     | Methanol           | S-2275      |
| 6-Isobutyl quinoline                        | 1333-58-0   | Methanol           | S-4950      |
| Isobutylbenzene                             | 538-93-2    | Methanol           | S-2276      |
| Isobutyraldehyde                            | 78-84-2     | Methanol           | S-2280      |
| Isobutyric acid                             | 79-31-2     | Deionized Water    | S-2282      |
| Isodrin                                     | 465-73-6    | Methanol           | S-2285      |
| Isofenphos                                  | 25311-71-1  | Methanol           | S-2290      |
| Isofenphos-methyl                           | 99675-03-3  | Methanol           | S-5998      |
| Isoflurane                                  | 26675-46-7  | Methanol           | S-4320      |
| Isomaltose                                  | 499-40-1    | Methanol           | S-5858      |
| Isooctyl alcohol                            | 26952-21-6  | Methanol           | S-2292      |
| 2,4-D-isooctyl ester                        | 25168-26-7  | Methanol           | S-4986      |
| Isopentyl pentyl phthalate                  | 776297-69-9 | Methylene Chloride | S-6109      |
| Isopentyl pentyl phthalate                  | 776297-69-9 | Hexane             | S-6109-H    |
| Isophorone                                  | 78-59-1     | Methanol           | S-2295      |
| Isophorone diisocyanate                     | 4098-71-9   | Methylene Chloride | S-6631      |
| Isophosphamide (Ifosfamide)                 | 3778-73-2   | Methanol           | S-5890      |
| Isopimaric acid                             | 5835-26-7   | Methanol           | S-4357      |
| Isoprene                                    | 78-79-5     | Methanol           | S-2300      |
| Isoprocab                                   | 2631-40-5   | Methanol           | S-4253      |
| Isopropalin                                 | 33820-53-0  | Methanol           | S-2304      |
| Isopropanol (2-Propanol, Isopropyl alcohol) | 67-63-0     | Methanol           | S-2585B     |
| 2-isopropyl-3-methoxypyrazine               | 25773-40-4  | Methanol           | S-6050      |
| Isopropyl-1,1,1,3,3,3-d6-Alcohol            | 3976-29-2   | Methanol           | S-3935      |
| Isopropyl-4,4'-dichlorobenzilate            | 5836-10-2   | Methanol           | S-4552      |
| Isopropyl acetate                           | 108-21-4    | Methanol           | S-2305      |
| Isopropyl cellosolve                        | 109-59-1    | Methanol           | S-5735      |
| Isopropyl ether                             | 108-20-3    | Methanol           | S-2310      |
| Isopropyl Isocyanate                        | 1795-48-8   | Methanol           | S-4946      |
| Isopropyl methylphosphonic acid             | 1832-54-8   | Methanol           | S-4494      |
| Isopropyl sulfide                           | 625-80-9    | Methanol           | S-4370      |
| Isopropylamine branched alkylbenzene        | 68649-00-3  | Methanol           | S-5109      |

| Component @ 1,000 µg/mL   | CAS#        | Matrix                  | Catalog#  |
|---------------------------|-------------|-------------------------|-----------|
| Isopropylbenzene          | 98-82-8     | Methanol                | S-2315    |
| 2-Isopropylphenol         | 88-69-7     | Methanol                | S-4293    |
| 3-Isopropylphenol         | 618-45-1    | Methanol                | S-2317    |
| 4-Isopropylphenol         | 99-89-8     | Methanol                | S-5514    |
| 2-Isopropyltoluene        | 527-84-4    | Methanol                | S-2319    |
| 3-Isopropyltoluene        | 535-77-3    | Methanol                | S-2318    |
| p-Isopropyltoluene        | 99-87-6     | Methanol                | S-2320    |
| Isoproturon               | 34123-59-6  | Methanol                | S-3945    |
| Isoquinoline              | 119-65-3    | Methanol                | S-2325    |
| Isosafrole                | 120-58-1    | Methanol                | S-2330    |
| Isovaleraldehyde          | 590-86-3    | Methanol                | S-2331    |
| Isovaleric acid           | 503-74-2    | Deionized Water         | S-2332    |
| Isoxathion                | 18854-01-8  | Acetonitrile            | S-6094    |
| Ivermectin                | 70288-86-7  | Acetone                 | S-5457    |
| JP-4                      | 8008-20-6   | Methanol                | S-4042    |
| Kelthane 1.5%o,p'-95%p,p' | 115-32-2    | Methanol                | S-2335    |
| Kepone                    | 143-50-0    | Methanol                | S-2340    |
| Kerosene                  | 8008-20-6   | Methylene Chloride      | S-2341    |
| 3-Keto-carbofuran         | 16709-30-1  | Methanol                | S-6129    |
| Kresoxim-methyl           | 143390-89-0 | Methanol                | S-4833    |
| L(+)-Lactic acid          | 79-33-4     | Deionized Water         | S-2342    |
| Lactose                   | 64044-51-5  | HPLC Water              | S-4516    |
| lambda-cyhalothrin        | 91465-08-6  | Toluene                 | S-1044    |
| lambda-cyhalothrin        | 91465-08-6  | Acetone                 | S-1044-AC |
| Leptophos                 | 21609-90-5  | Methanol                | S-2345    |
| Leptophos oxon            | 25006-32-0  | Methanol                | S-2348    |
| Levoglucosan              | 498-07-7    | Methanol                | S-5520    |
| Lidocaine                 | 137-58-6    | Methanol                | S-2347    |
| (R)-(+)-Limonene          | 5989-27-5   | Methanol                | S-4021    |
| (S)-(-)-Limonene          | 5989-54-8   | Ethanol                 | S-6409    |
| Linalool                  | 78-70-6     | Methanol                | S-5133    |
| Linoleic acid             | 60-33-3     | Methyl-tert-Butyl Ether | S-3990    |
| Linolenic acid            | 463-40-1    | Methyl-tert-Butyl Ether | S-3991    |
| Linuron                   | 330-55-2    | Acetone                 | S-2350    |
| Lontrel (Clopyralid)      | 1702-17-6   | Methanol                | S-2354    |
| Lysine                    | 56-87-1     | Methanol                | S-4298    |
| Malaoxon                  | 1634-78-2   | Methanol                | S-2356    |
| Malathion                 | 121-75-5    | Methanol                | S-2355    |
| Malathion                 | 121-75-5    | Acetone                 | S-2355-AC |
| Maleic acid               | 110-16-7    | Deionized Water         | S-5622    |
| Maleic anhydride          | 108-31-6    | Methanol                | S-2357    |
| Maleic hydrazide          | 123-33-1    | Methanol                | S-2360    |
| L-Malic acid              | 97-67-6     | Acetonitrile            | S-5647    |
| Malic acid                | 636-61-3    | Methanol                | S-4168    |



| Component @ 1,000 µg/mL                 | CAS#        | Matrix                  | Catalog# | Component @ 1,000 µg/mL              | CAS#        | Matrix            | Catalog#    |
|-----------------------------------------|-------------|-------------------------|----------|--------------------------------------|-------------|-------------------|-------------|
| Malonic acid                            | 141-82-2    | Methanol                | S-2361   | Methanethiol                         | 74-93-1     | Deionized Water   | S-2433-W    |
| Malononitrile                           | 109-77-3    | Methanol                | S-3896   | Methanol                             | 67-56-1     | Deionized Water   | S-2380      |
| Maltitol                                | 585-88-6    | HPLC Water              | S-4348   | Methapyrilene HCl                    | 135-23-9    | Methanol          | S-2450      |
| Maltose                                 | 6363-53-7   | Methanol                | S-4188   | Methidathion                         | 950-37-8    | Methanol          | S-2384      |
| Maltotriose                             | 1109-28-0   | HPLC Water              | S-4859   | Methiocarb                           | 2032-65-7   | Acetonitrile      | S-2385      |
| Mandelic acid                           | 90-64-2     | HPLC Acetonitrile       | S-5221   | Methiocarb-sulfone                   | 2179-25-1   | Methanol          | S-4790      |
| Mannitol                                | 69-65-8     | Methanol                | S-4349   | Methiocarb sulfoxide                 | 2635-10-1   | Methanol          | S-4791      |
| D-Mannosamine HCl                       | 5505-63-5   | Methanol                | S-2363   | Methional                            | 3268-49-3   | Methanol          | S-4821      |
| Mannosan                                | 14168-65-1  | Methanol                | S-5521   | 2-Methylpentane                      | 107-83-5    | Methanol          | S-2390      |
| MCPA-butoxyethyl ester                  | 19480-43-4  | Acetonitrile            | S-6374   | Methocarbamol                        | 532-03-6    | Methanol          | S-5906      |
| MCPA                                    | 94-74-6     | Methanol                | S-4565   | Methomyl                             | 16752-77-5  | Acetonitrile      | S-2395      |
| MCPA methyl ester                       | 2436-73-9   | Methanol                | S-956    | Methomyl                             | 16752-77-5  | Methanol          | S-2395-MEOH |
| MCPB                                    | 94-81-5     | Methanol                | S-2364   | Methoprene                           | 40596-69-8  | Methanol          | S-2396      |
| MCPB methyl Ester                       | 57153-18-1  | Methanol                | S-2364A  | Methoprene                           | 40596-69-8  | Acetonitrile      | S-2396-ACN  |
| MCPP methyl ester                       | 23844-56-6  | Methyl-tert-Butyl Ether | S-2365B  | Methoprotryne                        | 841-06-5    | Methanol          | S-4264      |
| Mecarbam                                | 2595-54-2   | Methanol                | S-4847   | 1-Methoxy-2-propanol                 | 107-98-2    | Methanol          | S-2412      |
| Mecoprop                                | 7085-19-0   | Methanol                | S-2365   | 2-Methoxy-4-methylphenol             | 93-51-6     | Methanol          | S-985       |
| p-Mentha-1,5-diene                      | 99-83-2     | Methanol                | S-4173   | 2-Methoxy-4-methylphenol-3,5,6-d3,OD | 20189-08-6  | Methanol          | S-4746      |
| Menthol                                 | 2216-51-5   | Methanol                | S-4669   | 2-Methoxy-4-vinylphenol              | 7786-61-0   | Methanol          | S-4694      |
| 2-Mercapto-1-methylimidazole            | 60-56-0     | Methanol                | S-2367   | 2-Methoxy-5-methylaniline            | 120-71-8    | Methanol          | S-2415      |
| 2-Mercaptobenzothiazole                 | 149-30-4    | Methanol                | S-2366   | 2-Methoxy-5-nitroaniline             | 99-59-2     | Methanol          | S-2420      |
| 2-Mercaptoethanol                       | 60-24-2     | Methanol                | S-5535   | 2-Methoxy-d3-phenol                  | 74495-69-5  | Methanol          | S-4745      |
| 8-Mercaptomenthone (mixture of isomers) | 38462-22-5  | Methanol                | S-4824   | 4-Methoxy-m-phenylenediamine         | 615-05-4    | Methanol          | S-4473      |
| Mesityl oxide                           | 141-79-7    | Methanol                | S-2368   | Methoxychlor                         | 72-43-5     | Methanol          | S-2397      |
| Mesosulfuron-methyl                     | 208465-21-8 | Methanol                | S-4909   | Methoxychlor                         | 72-43-5     | Acetonitrile      | S-2397-ACN  |
| Mestranol                               | 72-33-3     | Methanol                | S-2369   | o,p'-Methoxychlor                    | 30667-99-3  | Methanol          | S-2400      |
| Metalaxyl                               | 57837-19-1  | Acetone                 | S-2369A  | p,p'-Methoxychlor                    | 72-43-5     | Methanol          | S-2405      |
| Metalaxyl-M                             | 70630-17-0  | Acetonitrile            | S-5511   | 2-Methoxyethanol                     | 109-86-4    | Methanol          | S-2407      |
| Metaldehyde                             | 108-62-3    | Methanol                | S-5027   | 2-Methoxyethanol                     | 109-86-4    | Methanol          | S-2409      |
| Metamitron                              | 41394-05-2  | Methanol                | S-3946   | Bis(2-methoxyethyl)phthalate         | 117-82-8    | Methanol          | S-4156      |
| Metasystox I (TM)                       | 919-86-8    | Methanol                | S-4205   | Bis(2-methoxyethyl)phthalate         | 117-82-8    | Hexane            | S-4156-H    |
| Metaxalone                              | 1665-48-1   | Methanol                | S-5904   | 2-Methoxyethyl ether                 | 111-96-6    | Methanol          | S-3908      |
| Metazachlor                             | 67129-08-2  | Methanol                | S-2372   | Methoxyfenozide                      | 161050-58-4 | HPLC Acetonitrile | S-6033      |
| Metformin                               | 657-24-9    | Methanol                | S-5905   | Methoxyfenozide                      | 161050-58-4 | Methanol          | S-6033-MEOH |
| Methabenzthiazuron                      | 18691-97-9  | Acetone                 | S-3948   | 4-Methoxyphenol                      | 150-76-5    | Methanol          | S-4110      |
| Methacrifos                             | 62610-77-9  | Acetone                 | S-5619   | 2-Methoxyphenol                      | 90-05-1     | Methanol          | S-986       |
| Methacrolein                            | 78-85-3     | Methanol                | S-2370   | 3-Methoxypropionitrile               | 110-67-8    | Methanol          | S-2410      |
| Methacrylic acid                        | 79-41-4     | Acetonitrile            | S-5235   | 3-Methoxypropylamine                 | 5332-73-0   | Methanol          | S-2416      |
| Methacrylonitrile                       | 126-98-7    | Methanol                | S-2375   | (S)-(-)-2-Methyl-butanol             | 1565-80-6   | Methanol          | S-3958      |
| Methamidophos                           | 10265-92-6  | Acetone                 | S-2377   | 1-Methyl-1-cyclopentene              | 693-89-0    | Methanol          | S-689       |
| Methane                                 | 74-82-8     | Methanol                | S-2379   | 1-Methyl-1-propanethiol              | 513-53-1    | Methanol          | S-691       |
| Methanesulfonic acid                    | 75-75-2     | Methanol                | S-2378   | 1-Methyl-2-propylbenzene             | 1074-17-5   | Methanol          | S-2588      |
| Methanethiol                            | 74-93-1     | Methanol                | S-2433   | 1-Methyl-2-pyrrolidinone             | 872-50-4    | Methanol          | S-2590      |

| Component @ 1,000 µg/mL                                   | CAS#        | Matrix                  | Catalog#   |
|-----------------------------------------------------------|-------------|-------------------------|------------|
| 1-Methyl-4-propylbenzene                                  | 1074-55-1   | Methanol                | S-2589     |
| 1-Methyl-cyclohexane                                      | 591-49-1    | Methanol                | S-4740     |
| 2-Methyl-1,3-dioxolane                                    | 497-26-7    | Methanol                | S-2580     |
| 2-Methyl-1-butanol                                        | 137-32-6    | Methanol                | S-4238     |
| 2-Methyl-1-heptene                                        | 15870-10-7  | Isooctane:Toluene       | S-6413-IST |
| 2-Methyl-1-hexene                                         | 6094-02-6   | Isooctane:Toluene       | S-6412-IST |
| 2-Methyl-1-pentene                                        | 763-29-1    | Methanol                | S-4887     |
| 2-Methyl-1-phenyl-2-propanol                              | 100-86-7    | Methanol                | S-4031     |
| 2-Methyl-1-propanethiol                                   | 513-44-0    | Methanol                | S-2587     |
| 2-methyl-1-propanol                                       | 78-83-1     | Methanol                | S-2585     |
| 2-Methyl-2,4-pentanediol                                  | 107-41-5    | Methanol                | S-2595     |
| 2-Methyl-2-Butene                                         | 513-35-9    | Methanol                | S-4039     |
| 2-Methyl-2-pentenal                                       | 623-36-9    | Methanol                | S-2603     |
| 2-Methyl-2-propanethiol                                   | 75-66-1     | Methanol                | S-2586     |
| 2-Methyl-2-propanol                                       | 75-65-0     | Methanol                | S-2602     |
| 2-Methyl-3-buten-2-ol                                     | 115-18-4    | Methanol                | S-5697     |
| 2-Methyl-3-butyln-2-ol                                    | 115-19-5    | Methanol                | S-2605     |
| 2-Methyl-4,6-bis((octylthio)methyl) phenol [Irganox 1520] | 110553-27-0 | Methanol                | S-3902     |
| 2-Methyl-4-Isothiazoline-3-one                            | 2682-20-4   | Methanol                | S-4466     |
| 2-Methyl-5-nitroaniline                                   | 99-55-8     | Methanol                | S-2610     |
| 3-Methyl-1-butanol                                        | 123-51-3    | Methanol                | S-2579     |
| 3-Methyl-1-Butene                                         | 563-45-1    | Methanol                | S-4165     |
| 3-Methyl-2-butanol                                        | 598-75-4    | Methanol                | S-5092     |
| 3-Methyl-2-butanone                                       | 563-80-4    | Methanol                | S-2604     |
| 3-Methyl-2-pentene                                        | 922-61-2    | Methanol                | S-3910     |
| 3-Methyl-3-buten-ol                                       | 763-32-6    | Methanol                | S-2418     |
| 4-Methyl-1,3-dioxane                                      | 1120-97-4   | Methanol                | S-2583     |
| 4-Methyl-1,3-dioxolane                                    | 1072-47-5   | Methanol                | S-2581     |
| 4-Methyl-2-hexanone                                       | 105-42-0    | Methanol                | S-5631     |
| 4-Methyl-2-pentanol                                       | 108-11-2    | Methanol                | S-2596     |
| 4-Methyl-2-pentanone                                      | 108-10-1    | Methanol                | S-2600     |
| 5-Methyl-1H-benzotriazole                                 | 136-85-6    | Methanol                | S-4380     |
| 5-Methyl-2-hexanone                                       | 110-12-3    | Methanol                | S-2606     |
| 6-Methyl-2-heptanone                                      | 928-68-7    | Methanol                | S-5632     |
| Bis(4-methyl-2-pentyl)phthalate                           | 146-50-9    | Methanol                | S-4154     |
| Methyl-2,3-dibromopropionate                              | 2905-69-3   | Methanol                | S-2597     |
| Methyl-2-bromopropionate                                  | 57885-43-5  | Methyl-tert-Butyl Ether | S-2598     |
| Methyl-3-methoxypropionate                                | 3852-09-3   | Methanol                | S-3857     |
| Methyl-tert-butyl ether                                   | 1634-04-4   | Methanol                | S-2455     |
| Trans-2-Methyl-2-butenal                                  | 497-03-0    | Methanol                | S-5633     |
| trans-3-Methyl-2-pentene                                  | 616-12-6    | Methanol                | S-2446     |
| Methyl-2,3-dibromopropionate                              | 1729-67-5   | Methanol                | S-3895A    |
| Methyl acetate                                            | 79-20-9     | Methanol                | S-3893     |

| Component @ 1,000 µg/mL      | CAS#       | Matrix                  | Catalog#   |
|------------------------------|------------|-------------------------|------------|
| Methyl acrylate              | 96-33-3    | Methanol                | S-2424     |
| Methyl alcohol-d3            | 1849-29-2  | Deionized Water         | S-2381     |
| Methyl arachidate            | 1120-28-1  | Methanol                | S-4215     |
| Methyl behenate              | 929-77-1   | Methanol                | S-4662     |
| Methyl behenate              | 929-77-1   | Hexane                  | S-4662-H   |
| Methyl bromoacetate          | 96-32-2    | Methanol                | S-521      |
| Methyl bromochloroacetate    | 20428-74-4 | Methanol                | S-530A     |
| Methyl bromodichloroacetate  | 20428-76-6 | Methanol                | S-4043     |
| 2-Methyl butanediol          | N/A        | Methanol                | S-2411     |
| Methyl caproate              | 106-70-7   | Methanol                | S-4220     |
| Methyl caprylate             | 111-11-5   | Methanol                | S-4649     |
| Methyl chloroacetate         | 96-34-4    | Methanol                | S-795A     |
| Methyl chloroacetate         | 96-34-4    | Methyl-tert-Butyl Ether | S-796      |
| Methyl chlorocarbonate       | 79-22-1    | Nonane                  | S-4698     |
| Methyl chlorodibromoacetate  | 20428-75-5 | Methyl-tert-Butyl Ether | S-4044     |
| Methyl cis-13-docosenoate    | 1120-34-9  | Methanol                | S-5529     |
| Methyl cis-15-tetracosenoate | 2733-88-2  | Methanol                | S-5530     |
| Methyl cis-9-hexadecenoate   | 1120-25-8  | Methanol                | S-5526     |
| Methyl dacthal               | 1861-32-1  | Methanol                | S-1065     |
| Methyl dacthal               | 1861-32-1  | Acetone                 | S-1065-AC  |
| Methyl dacthal               | 1861-32-1  | Acetonitrile            | S-1065-ACN |
| Methyl decanoate             | 110-42-9   | Methanol                | S-4217     |
| Methyl decanoate             | 110-42-9   | Hexane                  | S-4217-H   |
| Methyl dibromoacetate        | 6482-26-4  | Methanol                | S-1221     |
| Methyl dichloroacetate       | 116-54-1   | Methanol                | S-1285A    |
| Methyl disulfide             | 624-92-0   | Methanol                | S-2599     |
| Methyl ether                 | 115-10-6   | Methanol                | S-2428     |
| Methyl ethyl ketone peroxide | 1338-23-4  | Methanol                | S-4343     |
| Methyl eugenol               | 93-15-2    | Methanol                | S-5686     |
| Methyl gamma-linolenate      | 16326-32-2 | Methanol                | S-5528     |
| Methyl heptadecanoate        | 1731-92-6  | Methanol                | S-4657     |
| Methyl heptadecanoate        | 1731-92-6  | Hexane                  | S-4657-H   |
| Methyl heptanoate            | 106-73-0   | Methanol                | S-4648     |
| Methyl hydrazine             | 60-34-4    | Methanol                | S-4199     |
| Methyl isocyanate            | 624-83-9   | Hexane                  | S-2431     |
| Methyl laurate               | 111-82-0   | Methanol                | S-4652     |
| Methyl lignocerate           | 2442-49-1  | Methanol                | S-4664     |
| Methyl lignocerate           | 2442-49-1  | Hexane                  | S-4664-H   |
| Methyl linoleate             | 112-63-0   | Methanol                | S-4219     |
| Methyl linolenate            | 301-00-8   | Methanol                | S-4222     |
| Methyl malonic acid          | 516-05-2   | Methanol                | S-2432     |
| Methyl methacrylate          | 80-62-6    | Methanol                | S-2435     |
| Methyl methanesulfonate      | 66-27-3    | Methanol                | S-2440     |

| Component @ 1,000 µg/mL   | CAS#       | Matrix             | Catalog#   |
|---------------------------|------------|--------------------|------------|
| Methyl myristate          | 124-10-7   | Hexane             | S-4654-H   |
| Methyl nonadecanoate      | 1731-94-8  | Methanol           | S-4659     |
| Methyl nonanoate          | 1731-84-6  | Methanol           | S-4650     |
| Methyl oleate             | 112-62-9   | Methanol           | S-4223     |
| Methyl orange             | 547-58-0   | Methanol           | S-4461     |
| Methyl palmitate          | 112-39-0   | Methanol           | S-4656     |
| Methyl parathion          | 298-00-0   | Methanol           | S-2445     |
| Methyl parathion          | 298-00-0   | Acetone            | S-2445-AC  |
| Methyl parathion          | 298-00-0   | Acetonitrile       | S-2445-ACN |
| Methyl pentadecanoate     | 7162-64-1  | Methanol           | S-4655     |
| 1-Methyl-1-pentene        | 691-37-2   | Isooctane:Toluene  | S-4888-IST |
| Methyl ricinoleate        | 141-24-2   | Methanol           | S-5527     |
| Methyl salicylate         | 119-36-8   | Methanol           | S-2458     |
| Methyl stearate           | 112-61-8   | Methanol           | S-2453     |
| Methyl stearate           | 112-61-8   | Methanol           | S-4658     |
| Methyl stearate           | 112-61-8   | Hexane             | S-4658-H   |
| Methyl sulfide            | 75-18-3    | Methanol           | S-2454     |
| Methyl sulfoxide          | 67-68-5    | Methanol           | S-2565     |
| Methyl tetracosanoate     | 2442-49-1  | Methanol           | S-4225     |
| 3-Methyl tetrahydrofuran  | 13423-15-9 | Methanol           | S-2571     |
| Methyl thioacetate        | 1534-08-3  | Methanol           | S-4822     |
| Methyl thiocyanate        | 556-64-9   | Methanol           | S-4351     |
| Methyl tribromoacetate    | 3222-05-7  | Methanol           | S-4045     |
| Methyl trichloroacetate   | 598-99-2   | Methanol           | S-3576     |
| Methyl tricosanoate       | 2433-97-8  | Methanol           | S-4663     |
| Methyl tricosanoate       | 2433-97-8  | Hexane             | S-4663-H   |
| Methyl tridecanoate       | 1731-88-0  | Methanol           | S-4653     |
| Methyl undecanoate        | 1731-86-8  | Methanol           | S-4651     |
| Methyl undecanoate        | 1731-86-8  | Hexane             | S-4651-H   |
| Methyl vinyl ketone       | 78-94-4    | Methanol           | S-2611     |
| Methyl yellow             | 60-11-7    | Methanol           | S-3856     |
| N-Methylacetamide         | 79-16-3    | Methanol           | S-6047     |
| 9-Methylacridine          | 611-64-3   | Methanol           | S-2456     |
| Methylamine               | 74-89-5    | Methanol           | S-2457     |
| Methylamine hydrochloride | 593-51-1   | Methanol           | S-2457A    |
| N-Methylaniline           | 100-61-8   | Methanol           | S-2459     |
| 3-Methylanisole           | 100-84-5   | Methanol           | S-5676     |
| 4-Methylanisole           | 104-93-8   | Methanol           | S-5675     |
| 2-Methylantracene         | 613-12-7   | Methanol           | S-2460     |
| 4-Methylbenzenethiol      | 106-45-6   | Methanol           | S-2414     |
| 3-Methylbenzenethiol      | 108-40-7   | Methanol           | S-2413     |
| 7-Methylbenzo[a]pyrene    | 63041-77-0 | Methylene Chloride | S-6053     |
| 2-Methylbenzofuran        | 4265-25-2  | Methanol           | S-2461     |
| Methylbenzyl alcohol      | 98-85-1    | Methanol           | S-4176     |

| Component @ 1,000 µg/mL                 | CAS#       | Matrix             | Catalog# |
|-----------------------------------------|------------|--------------------|----------|
| 2-Methylbutane                          | 78-78-4    | Methanol           | S-2462   |
| 2-Methylbutane                          | 78-78-4    | Methanol           | S-2464   |
| 3-Methylcholanthrene                    | 56-49-5    | Methylene Chloride | S-2465   |
| 5-Methylchrysene                        | 3697-24-3  | Methylene Chloride | S-4811   |
| 6-Methylchrysene                        | 1705-85-7  | Methylene Chloride | S-2426   |
| Methylcyclohexane                       | 108-87-2   | Methanol           | S-2470   |
| 2-Methylcyclohexanol acetate (c&t)      | 54714-33-9 | Methanol           | S-2471   |
| Methylcyclopentadiene                   | 26472-00-4 | Methanol           | S-3915   |
| Methylcyclopentane                      | 96-37-7    | Methanol           | S-2422   |
| Methylcyclopentane                      | 96-37-7    | Methanol           | S-2475   |
| 3-Methylcyclopentene                    | 1120-62-3  | Methanol           | S-3972   |
| 2-Methyldecane                          | 6975-98-0  | Methanol           | S-4813   |
| 3-Methyldecane                          | 13151-34-3 | Methanol           | S-4814   |
| 4-Methyldibenzothiophene                | 7372-88-5  | Methylene Chloride | S-6052   |
| N-Methyldiethanolamine                  | 105-59-9   | Methanol           | S-2484   |
| Methyldiethoxysilane                    | 2031-62-1  | Methanol           | S-5612   |
| 4,4'-Methylene-bis(2-methylaniline)     | 838-88-0   | Methanol           | S-4474   |
| 4,4'-Methylene bis(o-chloroaniline)     | 101-14-4   | Methanol           | S-4556   |
| Methylene chloride                      | 75-09-2    | Methanol           | S-2480   |
| Methylene chloride-d2                   | 1665-00-5  | Methanol           | S-2481   |
| Methylene di-p-phenyl diisocyanate      | 101-68-8   | Acetone            | S-2487   |
| 4,4'-Methylenebis(2-chloroaniline)      | 101-14-4   | Methanol           | S-2485   |
| 4,4'-Methylenebis (N,N-dimethylaniline) | 101-61-1   | Methanol           | S-5941   |
| 4,4'-Methylenedianiline                 | 101-77-9   | Methanol           | S-2486   |
| 1-Methylfluorene                        | 1730-37-6  | Methanol           | S-2490   |
| n-Methylformamide                       | 123-39-7   | Methanol           | S-5004   |
| Methylformate                           | 107-31-3   | Methanol           | S-2495   |
| 2-Methylfuran                           | 534-22-5   | Methanol           | S-2500   |
| 3-Methylfuran                           | 930-27-8   | Methanol           | S-2501   |
| 5-Methylfurfural                        | 620-02-0   | Methanol           | S-2607   |
| Methylglyoxal                           | 78-98-8    | Methanol           | S-3968   |
| 2-Methylheptane                         | 592-27-8   | Methanol           | S-2505   |
| 3-Methylheptane                         | 589-81-1   | Methanol           | S-2430   |
| Methylhexahydrophthalic anhydride       | 25550-51-0 | Methanol           | S-6125   |
| 2-Methylhexane                          | 591-76-4   | Methanol           | S-2510   |
| 3-Methylhexane                          | 589-34-4   | Methanol           | S-2515   |
| 2-Methylhippuric acid                   | 42013-20-7 | Acetonitrile       | S-5218   |
| 3-Methylhippuric acid                   | 27115-49-7 | Acetonitrile       | S-5219   |
| 4-Methylhippuric acid                   | 27115-50-0 | Acetonitrile       | S-5220   |
| 3-Methylindole                          | 83-34-1    | Methanol           | S-2516   |
| n-Methylmorpholine                      | 109-02-4   | Methanol           | S-2519   |
| 1-Methylnaphthalene                     | 90-12-0    | Methanol           | S-2520   |
| 2-Methylnaphthalene                     | 91-57-6    | Methanol           | S-2525   |

| Component @ 1,000 µg/mL                        | CAS#        | Matrix             | Catalog#  |
|------------------------------------------------|-------------|--------------------|-----------|
| 2-Methylnaphthalene-d10                        | 7297-45-2   | Methanol           | S-4443    |
| 4-(Methylnitrosamino)-1-(3-Pyridyl)-1-Butanone | 64091-91-4  | Methanol           | S-2526    |
| 4-Methylnonane                                 | 17301-94-9  | Methanol           | S-4818    |
| 2-Methylpentane                                | 107-83-5    | Methanol           | S-2527    |
| 3-Methylpentane                                | 96-14-0     | Methanol           | S-2530    |
| 1-Methylphenanthrene                           | 832-69-9    | Methanol           | S-2535    |
| 2-Methylphenanthrene                           | 2531-84-2   | Methanol           | S-3999    |
| 2-Methylphenol                                 | 95-48-7     | Methanol           | S-2545    |
| 3-Methylphenol                                 | 108-39-4    | Methanol           | S-2540    |
| 4-Methylphenol                                 | 106-44-5    | Methanol           | S-2550    |
| 2-Methylpropane                                | 75-28-5     | Methanol           | S-2555    |
| 2-Methylpropene                                | 115-11-7    | Methanol           | S-2556    |
| 1-Methylpyrene                                 | 2381-71-7   | Methylene Chloride | S-3858    |
| 2-Methylstyrene                                | 611-15-4    | Methanol           | S-2561    |
| 3-Methylstyrene                                | 100-80-1    | Methanol           | S-2562    |
| 4-Methylstyrene                                | 622-97-9    | Methanol           | S-2563    |
| alpha-Methylstyrene                            | 98-83-9     | Methanol           | S-2560    |
| trans-beta-Methylstyrene                       | 873-66-5    | Methanol           | S-2564    |
| n-Methylsuccinimide                            | 1121-07-9   | Methanol           | S-2567    |
| 2-Methyltetrahydrofuran                        | 96-47-9     | Methanol           | S-2570    |
| 2-Methyltetrahydropyran                        | 10141-72-7  | Methanol           | S-5124    |
| 2-Methylthianaphthene                          | 1195-14-8   | Methanol           | S-5750    |
| 4-Methylthiazole                               | 693-95-8    | Methanol           | S-2575    |
| 2-Methylthiobenzothiazole                      | 615-22-5    | Methanol           | S-4770    |
| 2-Methylthiophene                              | 554-14-3    | Methanol           | S-3982    |
| 3-Methylthiophene                              | 616-44-4    | Methanol           | S-2576    |
| 4-Methylvaleric acid                           | 646-07-1    | Methanol           | S-2284    |
| Metiram                                        | 9006-42-2   | Methanol           | S-4687    |
| Metobromuron                                   | 3060-89-7   | Acetonitrile       | S-2574    |
| Metolachlor                                    | 51218-45-2  | Methanol           | S-2615    |
| S-Metolachlor                                  | 87392-12-9  | Acetonitrile       | S-5203    |
| S-Metolachlor                                  | 87392-12-9  | Acetone            | S-5203-AC |
| Metolachlor ESA (sodium salt)                  | 947601-85-6 | Acetonitrile       | S-4634    |
| Metolachlor OA                                 | 152019-73-3 | Acetonitrile       | S-4635    |
| Metolcarb                                      | 1129-41-5   | Methanol           | S-2617    |
| Metoxuron                                      | 19937-59-8  | Methanol           | S-3997    |
| Metribuzin                                     | 21087-64-9  | Methanol           | S-2620    |
| Metronidazole                                  | 443-48-1    | Methanol           | S-5570    |
| Metsulfuron methyl                             | 74223-64-6  | Acetone            | S-2621    |
| Metsulfuron methyl                             | 74223-64-6  | Methanol           | S-3928    |
| Mevinphos                                      | 7786-34-7   | Methanol           | S-2625    |
| Mexacarbate                                    | 315-18-4    | Methanol           | S-4265    |
| MGK 264 (a=81% b=19%)                          | 113-48-4    | Methanol           | S-2627    |

| Component @ 1,000 µg/mL                      | CAS#       | Matrix             | Catalog#   |
|----------------------------------------------|------------|--------------------|------------|
| MGK 326                                      | 136-45-8   | Methanol           | S-2628     |
| Michler's ketone                             | 90-94-8    | Methanol           | S-5940     |
| Military fuel standard                       | N/A        | Methanol           | S-3859     |
| Mineral oil                                  | 8042-47-5  | Methylene Chloride | S-2630     |
| Mineral oil type A                           | 68476-34-6 | Acetone            | S-5125     |
| Mineral oil type B                           | N/A        | Acetone            | S-5126     |
| Mineral spirits                              | 64475-85-0 | Methanol           | S-3918     |
| Mirex                                        | 2385-85-5  | Hexane:Toluene     | S-2635     |
| Mirex                                        | 2385-85-5  | Acetonitrile       | S-2635-ACN |
| Molinate                                     | 2212-67-1  | Methanol           | S-2640     |
| Monceren                                     | 66063-05-6 | Acetonitrile       | S-4555     |
| Mono propylene glycol                        | 57-55-6    | Methanol           | S-2646     |
| Monocrotophos                                | 6923-22-4  | Acetone            | S-2645     |
| Monocrotophos                                | 6923-22-4  | Acetone            | S-2645-AC  |
| Monolein                                     | 111-03-5   | Methanol           | S-4386     |
| Monolinuron                                  | 1746-81-2  | Acetonitrile       | S-2642     |
| Monomethyl tetrachloroterephthalate          | 887-54-7   | Methylene Chloride | S-1068     |
| Monopalmitin                                 | 542-44-9   | Methanol           | S-4645     |
| Monostearin                                  | 123-94-4   | Pyridine           | S-4646     |
| Monothiono TEPP                              | 645-78-3   | Acetonitrile       | S-6373     |
| Monuron                                      | 150-68-5   | Methanol           | S-2647     |
| Morpholine                                   | 110-91-8   | Methanol           | S-2648     |
| Motor oil composite                          | N/A        | Acetone            | S-4468     |
| Motor oil composite (5W30,10W30,10W40,20W50) | N/A        | Acetone            | S-5149     |
| Motor oil, SAE 10W                           | N/A        | Methanol           | S-3931     |
| Motor oil, SAE 20W                           | N/A        | Methylene Chloride | S-2653     |
| Motor oil, SAE 30W                           | N/A        | Methanol           | S-2649     |
| Motor oil, SAE 40W                           | N/A        | Methanol           | S-2651     |
| Motor oil, SAE 50W                           | N/A        | Methanol           | S-2652     |
| 10W30 Motor oil                              | N/A        | Acetone            | S-4509     |
| trans,trans-Muconic acid                     | 3588-17-8  | HPLC Water         | S-5223     |
| Myosmine                                     | 532-12-7   | Methanol           | S-6363     |
| beta-Myrcene                                 | 123-35-3   | Hexane             | S-2654     |
| Myristic acid                                | 544-63-8   | Methanol           | S-4230     |
| Naphtha                                      | 8030-30-6  | Methylene Chloride | S-3861     |
| Naphtha                                      | 64741-41-9 | Methanol           | S-3861A    |
| Naphthalene                                  | 91-20-3    | Methanol           | S-2655     |
| Naphthalene-d8                               | 1146-65-2  | Methanol           | S-2660     |
| Naphthalene-d8                               | 1146-65-2  | Acetonitrile       | S-2660-ACN |
| 1-Naphthol                                   | 90-15-3    | Acetonitrile       | S-2665     |
| 2-Naphthol                                   | 135-19-3   | Methanol           | S-2666     |
| 1,4-Naphthoquinone                           | 130-15-4   | Methanol           | S-2670     |



| Component @ 1,000 µg/mL    | CAS#        | Matrix             | Catalog#  | Component @ 1,000 µg/mL                                  | CAS#       | Matrix             | Catalog#   |
|----------------------------|-------------|--------------------|-----------|----------------------------------------------------------|------------|--------------------|------------|
| 1-Naphthyl isocyanate      | 86-84-0     | Methylene Chloride | S-6634    | N-Nitrosodi-n-propylamine                                | 621-64-7   | Methylene Chloride | S-2835     |
| Naproxen                   | 22204-53-1  | Methanol           | S-5880    | N-Nitrosodiethanolamine                                  | 1116-54-7  | Methanol           | S-2811     |
| Neburon                    | 555-37-3    | Methanol           | S-2671    | N-Nitrosodiethylamine                                    | 55-18-5    | Methanol           | S-2810     |
| Neoabietic acid            | 471-77-2    | Methanol           | S-4358    | N-Nitrosodiisopropylamine                                | 601-77-4   | Methanol           | S-3939     |
| Neopentyl chloride         | 753-89-9    | Methanol           | S-2675    | N-Nitrosodimethylamine                                   | 62-75-9    | Methanol           | S-2815     |
| Nicarbazin                 | 330-95-0    | Acetonitrile       | S-4599    | 4-Nitrosodiphenylamine                                   | 156-10-5   | Methanol           | S-2745     |
| Nicosulfuron               | 111991-09-4 | Methanol           | S-4993    | N-Nitrosodiphenylamine                                   | 86-30-6    | Methylene Chloride | S-2820     |
| Nicotinamide               | 98-92-0     | Methanol           | S-4016    | N-Nitrosomethylethylamine                                | 10595-95-6 | Methanol           | S-2830     |
| Nicotine                   | 54-11-5     | Methanol           | S-2680    | N-Nitrosomorpholine                                      | 59-89-2    | Methanol           | S-2749     |
| Nitralin                   | 4726-14-1   | Methanol           | S-4289    | N'-Nitrosonornicotine                                    | 53759-22-1 | Methanol           | S-2751     |
| Nitrapyrin                 | 1929-82-4   | Methanol           | S-4018    | N'-Nitrosonornicotine (NNN)                              | 80508-23-2 | Methanol           | S-5726     |
| Nitrapyrin                 | 1929-82-4   | Methanol           | S-4266    | N-Nitrosopiperidine                                      | 100-75-4   | Methanol           | S-2750     |
| Nitriilotriacetic acid     | 139-13-9    | Methanol           | S-4096    | N-Nitrosopiperidine                                      | 100-75-4   | Methanol           | S-2750A    |
| 2-Nitro-m-xylene           | 81-20-9     | Methanol           | S-2760    | N-Nitrosoproline                                         | 7519-36-0  | Methanol           | S-2752     |
| 4-Nitro-m-cresol           | 2581-34-2   | Methanol           | S-2713    | 1-Nitrosopyrrolidine                                     | 930-55-2   | Methanol           | S-2755     |
| 5-Nitro-o-toluidine        | 99-55-8     | Methanol           | S-3862    | Nitrothal isopropyl                                      | 10552-74-6 | Methanol           | S-4291     |
| 5-Nitroacenaphthene        | 602-87-9    | Methanol           | S-2685    | 2-Nitrotoluene                                           | 88-72-2    | Methanol           | S-2756     |
| 2-Nitroaniline             | 88-74-4     | Methanol           | S-2690    | 3-Nitrotoluene                                           | 99-08-1    | Methanol           | S-2757     |
| 3-Nitroaniline             | 99-09-2     | Methanol           | S-2695    | 4-Nitrotoluene                                           | 99-99-0    | Methanol           | S-2758     |
| 4-Nitroaniline             | 100-01-6    | Methanol           | S-2700    | cis-Nonachlor                                            | 5103-73-1  | Methanol           | S-2765     |
| 2-Nitroanisole             | 91-23-6     | Methanol           | S-2702    | trans-Nonachlor                                          | 39765-80-5 | Methanol           | S-2770     |
| Nitrobenzene               | 98-95-3     | Methanol           | S-2705    | n-Nonacosane                                             | 630-03-5   | Methanol           | S-2775     |
| Nitrobenzene-d5            | 4165-60-0   | Methanol           | S-2710    | n-Nonadecane                                             | 629-92-5   | Methylene Chloride | S-2780     |
| 4-Nitrobiphenyl            | 92-93-3     | Methanol           | S-2715    | 1-Nonadecene                                             | 18435-45-5 | Methanol           | S-4210     |
| 3-Nitrodiphenyl            | 2113-58-8   | Methanol           | S-2714    | (E,Z)-2,6-Nonadienal<br>(contains 90% cis and 10% trans) | 557-48-2   | Methanol           | S-5163     |
| 2-Nitrodiphenylamine       | 119-75-5    | Methanol           | S-2717    | Nonafluoro-1-butanefulfonic acid<br>potassium salt       | 29420-49-3 | Methanol           | S-5316     |
| 4-Nitrodiphenylamine       | 836-30-6    | Methanol           | S-2716    | Nonafluorobutane-1-sulfonic acid                         | 375-73-5   | Methanol           | S-5713     |
| Nitrofen                   | 1836-75-5   | Methanol           | S-2720    | n-Nonane                                                 | 111-84-2   | Methanol           | S-2785     |
| Nitrofen                   | 1836-75-5   | Acetone            | S-2720-AC | 1-Nonanol                                                | 143-08-8   | Methanol           | S-2790     |
| Nitrogen (from Pyridine)   | 110-86-1    | Methanol           | S-2721C   | 2-Nonanone                                               | 821-55-6   | Methanol           | S-5094     |
| Nitromethane               | 75-52-5     | Methanol           | S-2722    | n-Nonatriacontane                                        | 7194-86-7  | Methanol           | S-4313     |
| 2-Nitrophenol              | 88-75-5     | Methanol           | S-2725    | trans-2-Nonenal                                          | 18829-56-6 | Methanol           | S-4149     |
| 3-Nitrophenol              | 554-84-7    | Methanol           | S-2728    | 1-Nonene                                                 | 124-11-8   | Isooctane:Toluene  | S-4211-IST |
| 4-Nitrophenol              | 100-02-7    | Methanol           | S-2730    | Nonyl aldehyde                                           | 124-19-6   | Methanol           | S-2794     |
| 4-Nitrophenol-methyl ester | N/A         | Methanol           | S-2729    | 4-n-Nonylphenol                                          | 104-40-5   | Methanol           | S-5074     |
| 4-Nitrophenol methyl ester | 100-17-4    | Methanol           | S-2731    | Nonylphenol                                              | 25154-52-3 | Methylene Chloride | S-2795     |
| 1-Nitropropane             | 108-03-2    | Methanol           | S-2736    | 4-Nonylphenol (branched)                                 | 84852-15-3 | Methanol           | S-2795A    |
| 2-Nitropropane             | 79-46-9     | Methanol           | S-2732    | Tris(nonylphenyl)phosphite                               | 26523-78-4 | Methylene Chloride | S-3498     |
| 1-Nitropyrene              | 5522-43-0   | Methanol           | S-2737    | Norethindrone                                            | 68-22-4    | Methanol           | S-5071     |
| 4-Nitroquinoline-N-oxide   | 56-57-5     | Methylene Chloride | S-2735    | Norflurazon                                              | 27314-13-2 | Acetone            | S-2800     |
| N-Nitrosoanabasine         | 37620-20-5  | Methanol           | S-2733    | Norflurazon desmethyl                                    | 23576-24-1 | Acetonitrile       | S-5778-ACN |
| N-Nitrosoanatabine         | 71267-22-6  | Methanol           | S-2734    | Nuarimol                                                 | 63284-71-9 | Methanol           | S-4248     |
| Nitrosobenzene             | 586-46-9    | Methanol           | S-2740    |                                                          |            |                    |            |
| N-Nitrosodi-n-butylamine   | 924-16-3    | Methanol           | S-2825    |                                                          |            |                    |            |

| Component @ 1,000 µg/mL                          | CAS#       | Matrix                    | Catalog#   |
|--------------------------------------------------|------------|---------------------------|------------|
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl           | 40186-71-8 | Methanol                  | S-2837     |
| Octachloronaphthalene                            | 2234-13-1  | Methylene Chloride:Hexane | S-4200     |
| Octachlorostyrene                                | 29082-74-4 | Methylene Chloride        | S-2840     |
| Octachlorostyrene                                | 29082-74-4 | Toluene                   | S-2840-TOL |
| n-Octacosane                                     | 630-02-4   | Methylene Chloride        | S-2845     |
| cis-9,trans-11-Octadecadienoic acid methyl ester | N/A        | Methanol                  | S-5525     |
| n-Octadecane                                     | 593-45-3   | Methanol                  | S-2850     |
| 1-Octadecanol                                    | 112-92-5   | Methanol                  | S-3942     |
| Octadecene-1                                     | 112-88-9   | Methanol                  | S-2855     |
| 2,2',3,3',5,5',6,6'-Octafluorobiphenyl           | 3883-86-1  | Methanol                  | S-2860     |
| Octafluoronaphthalene                            | 313-72-4   | Acetone                   | S-3863     |
| Octafluorotoluene                                | 434-64-0   | Methanol                  | S-2861     |
| Octamethylcyclotetrasiloxane                     | 556-67-2   | Methanol                  | S-2865     |
| Octamethylpyrophosphoramidate                    | 152-16-9   | Acetone                   | S-3265     |
| Octamethyltrisiloxane                            | 107-51-7   | Methanol                  | S-5942     |
| n-Octane                                         | 111-65-9   | Methanol                  | S-2870     |
| Octanethiol                                      | 111-88-6   | Methanol                  | S-4880     |
| Octanoic acid                                    | 124-07-2   | Methyl-tert-Butyl Ether   | S-4114     |
| 1-Octanol                                        | 111-87-5   | Methanol                  | S-2875     |
| 2-Octanol                                        | 4128-31-8  | Methanol                  | S-2880     |
| 3-Octanol                                        | 20296-29-1 | Methanol                  | S-5090     |
| 2-Octanone                                       | 113-13-7   | Methanol                  | S-4234     |
| 3-Octanone                                       | 106-68-3   | Methanol                  | S-2885     |
| n-Octatriacontane                                | 7194-85-6  | Methanol                  | S-2886     |
| trans-2-Octen-1-ol                               | 18409-17-1 | Methanol                  | S-2891     |
| Octene-1                                         | 111-66-0   | Methanol                  | S-2890     |
| Octyl aldehyde                                   | 124-13-0   | Methanol                  | S-2892     |
| 4-Octylphenol                                    | 1806-26-4  | Methanol                  | S-4177     |
| 4-tert-Octylphenol                               | 140-66-9   | Methanol                  | S-4379     |
| mono-Octyltin trichloride                        | 3091-25-6  | Methanol                  | S-4640     |
| Ofurace                                          | 58810-48-3 | Methanol                  | S-5286     |
| Oleamide                                         | 301-02-0   | Methanol                  | S-4621     |
| Oleic acid                                       | 112-80-1   | Methanol                  | S-3992     |
| Omethoate                                        | 1113-02-6  | Methanol                  | S-3864     |
| Omethoate                                        | 1113-02-6  | Ethyl Acetate             | S-3864-EA  |
| Omite                                            | 2312-35-8  | Acetone                   | S-2895     |
| Omite                                            | 2312-35-8  | Acetonitrile              | S-2895-ACN |
| Oryzalin                                         | 19044-88-3 | Methanol                  | S-2900     |
| Ovex                                             | 80-33-1    | Methanol                  | S-2901     |
| Oxadiargyl                                       | 39807-15-3 | Methanol                  | S-5934     |
| Oxadiazon                                        | 19666-30-9 | Acetone                   | S-2912     |

| Component @ 1,000 µg/mL                         | CAS#       | Matrix                                         | Catalog#   |
|-------------------------------------------------|------------|------------------------------------------------|------------|
| Oxadixyl                                        | 77732-09-3 | Methanol                                       | S-2903     |
| Oxalacetic acid                                 | 328-42-7   | Methanol                                       | S-2902     |
| Oxalic acid                                     | 144-62-7   | Methanol                                       | S-2904     |
| Oxamyl                                          | 23135-22-0 | Acetonitrile                                   | S-2905     |
| 1,1-Oxybisoctane                                | 629-82-3   | Methanol                                       | S-5135     |
| Oxycarboxin                                     | 5259-88-1  | Acetone                                        | S-4249     |
| Oxychlorane                                     | 27304-13-8 | Methanol                                       | S-2910     |
| Oxychlorane                                     | 27304-13-8 | Toluene                                        | S-2910-TOL |
| Oxydemeton-methyl                               | 301-12-2   | Acetonitrile                                   | S-4828-ACN |
| Oxyfluorfen                                     | 42874-03-3 | Acetone                                        | S-2911     |
| Oxyfluorfen                                     | 42874-03-3 | Acetonitrile                                   | S-2911-ACN |
| Paclobutrazol                                   | 76738-62-0 | Acetone                                        | S-4345     |
| Palmitic acid                                   | 57-10-3    | Methyl-tert-Butyl Ether                        | S-3993     |
| Palmitoleic acid                                | 373-49-9   | Methanol                                       | S-4231     |
| D-Panose                                        | 33401-87-5 | Methanol                                       | S-5859     |
| Paraformaldehyde                                | 30525-89-4 | Methanol                                       | S-5512     |
| Paraldehyde                                     | 123-63-7   | Methanol                                       | S-2913     |
| Paraoxon                                        | 311-45-5   | Acetone                                        | S-2914     |
| Paraoxon                                        | 311-45-5   | Acetone                                        | S-2921     |
| Paraquat dichloride tetrahydrate                | 1910-42-5  | Methanol                                       | S-2915     |
| Parathion                                       | 56-38-2    | Methanol                                       | S-2920     |
| Pebulate                                        | 1114-71-2  | Methanol                                       | S-2925     |
| Pefluorotridecanoic acid                        | 72629-94-8 | Methanol                                       | S-5795     |
| Penconazole                                     | 66246-88-6 | Methanol                                       | S-4267     |
| Pencyuron                                       | 66063-05-6 | Acetonitrile                                   | S-5171     |
| Pentabromophenyl ether                          | 1163-19-5  | Methanol                                       | S-2926     |
| 2',3',4',5,5'-pentachloro-2-biphenylol          | 67651-36-9 | Methanol                                       | S-2938     |
| Pentachloroaniline                              | 527-20-8   | Acetone                                        | S-4783     |
| 2,3,4,5,6-Pentachloroanisole                    | 1825-21-4  | Methanol                                       | S-2930     |
| Pentachlorobenzene                              | 608-93-5   | Methanol                                       | S-2935     |
| Pentachlorobenzene                              | 608-93-5   | Acetone                                        | S-2935-AC  |
| 2,2',3',4,6-Pentachlorobiphenyl                 | 60233-25-2 | Methanol                                       | S-2937     |
| 2,2',4,5,5'-Pentachlorobiphenyl                 | 37680-73-2 | Hexane                                         | S-9101     |
| Pentachloroethane                               | 76-01-7    | Methanol                                       | S-2940     |
| Pentachloronitrobenzene                         | 82-68-8    | Methanol                                       | S-2945     |
| Pentachlorophenol                               | 87-86-5    | Methanol                                       | S-2950     |
| Pentachlorophenol- <sup>13</sup> C <sub>6</sub> | 85380-74-1 | Methanol                                       | S-4202     |
| Pentachlorophenol methyl ester                  | 1825-21-4  | Methanol                                       | S-2950A    |
| Pentachlorophenyl acetate                       | 1441-02-7  | Methanol                                       | S-5638     |
| Pentachlorophenyl Sulfide                       | 1825-19-0  | Methanol                                       | S-5505     |
| 2,3,4,5,6,-Pentachlorotoluene                   | 877-11-2   | Methylene Chloride                             | S-2952     |
| n-Pentacontane                                  | 6596-40-3  | CS <sub>2</sub> & Pentane & Methylene Chloride | S-2953     |

| Component @ 1,000 µg/mL                | CAS#       | Matrix             | Catalog#    | Component @ 1,000 µg/mL         | CAS#       | Matrix                    | Catalog#  |
|----------------------------------------|------------|--------------------|-------------|---------------------------------|------------|---------------------------|-----------|
| n-Pentacosane                          | 629-99-2   | Methylene Chloride | S-2955      | Perfluoropentanoic acid         | 2706-90-3  | HPLC Water                | S-5051    |
| n-Pentadecane                          | 629-62-9   | Methanol           | S-2960      | Perfluorotetradecanoic acid     | 376-06-7   | Methanol                  | S-5058    |
| 1-Pentadecanol                         | 629-76-5   | Methanol           | S-5769      | Perfluorotributylamine          | 311-89-7   | Methanol                  | S-2997    |
| 1,3-Pentadiene (Piperylene)            | 504-60-9   | Methanol           | S-3914      | Perfluoroundecanoic acid        | 2058-94-8  | HPLC Water                | S-5056    |
| Pentaerythritol tetraacrylate          | 4986-89-4  | Methanol           | S-4109      | cis-Permethrin                  | 61949-76-6 | Methanol                  | S-3001    |
| Pentafluorobenzene                     | 363-72-4   | Methanol           | S-2970      | cis-Permethrin                  | 61949-76-6 | Acetone                   | S-3001-AC |
| Pentafluorophenol                      | 771-61-9   | Methanol           | S-4047      | trans-Permethrin                | 51877-74-8 | Methanol                  | S-3003    |
| Bis(pentafluorophenyl) phenylphosphine | 5074-71-5  | Methanol           | S-1105      | trans-Permethrin                | 51877-74-8 | Acetone                   | S-3003-AC |
| Pentafluorophenylhydrazine             | 828-73-9   | Methanol           | S-2972      | Permethrin (c=27%;t=72%)        | 52645-53-1 | Acetone                   | S-3000    |
| Pentamethylbenzene                     | 700-12-9   | Methanol           | S-2973      | trans-Permethrin (isomeric mix) | 61949-77-7 | Acetone                   | S-5732    |
| Pentamethyldiethylenetriamine          | 3030-47-5  | Methanol           | S-4363      | Perylene                        | 198-55-0   | Methylene Chloride        | S-3005    |
| 1,5-Pentamethylenetetrazole            | 54-95-5    | Acetone            | S-5685      | Perylene-d12                    | 1520-96-3  | Methylene Chloride        | S-3010    |
| n-Pentane                              | 109-66-0   | Methanol           | S-2975      | Petro-diesel                    | 68334-30-5 | Methanol                  | S-5704    |
| 1,2-Pentanediol                        | 5343-92-0  | Methanol           | S-4953      | Phenamiphos                     | 22224-92-6 | Methanol                  | S-3014    |
| 1,4-Pentanediol                        | 626-95-9   | Methanol           | S-2965      | Phenanthrene                    | 85-01-8    | Methylene Chloride        | S-3015    |
| 1,5-Pentanediol                        | 111-29-5   | Methanol           | S-2974      | Phenanthrene-d10                | 1517-22-2  | Methylene Chloride        | S-3020    |
| 2,3-Pentanedione                       | 600-14-6   | Methanol           | S-2966      | Phenanthridine                  | 229-87-8   | Methanol                  | S-3025    |
| 2,4-Pentanedione                       | 123-54-6   | Methanol           | S-4295      | Phenanthridine                  | 229-87-8   | Methanol                  | S-3027    |
| 1-Pentanethiol                         | 110-66-7   | Methanol           | S-3981      | Phenol                          | 108-95-2   | Methanol                  | S-3030    |
| 1-Pentanol                             | 71-41-0    | Methanol           | S-2980      | Phenol                          | 108-95-2   | Deionized Water           | S-3030-W  |
| 2-Pentanol                             | 6032-29-7  | Methanol           | S-2985      | Phenol-d5                       | 4165-62-2  | Methanol                  | S-4195    |
| 3-Pentanol                             | 584-02-1   | Methanol           | S-2987      | Phenol-d6                       | 13127-88-3 | Methanol                  | S-3035    |
| 2-Pentanone                            | 107-87-9   | Methanol           | S-2986      | p-Phenolsulfonic acid           | 1333-39-7  | Methanol                  | S-3036    |
| 3-Pentanone                            | 96-22-0    | Methanol           | S-3932      | Phenothiazine                   | 92-84-2    | MMethanol                 | S-3040    |
| n-Pentatriacontane                     | 630-07-9   | Hexane             | S-2990      | d-(cis-trans)-Phenothrin        | 26002-80-2 | Acetone                   | S-3041    |
| 1-Pentene                              | 109-67-1   | Methanol           | S-2995      | Phenoxyacetic acid              | 122-59-8   | Methanol                  | S-4934    |
| cis-2-Pentene                          | 627-20-3   | Methanol           | S-4259      | 3-Phenoxybenzoic acid           | 3739-38-6  | Hexane:Methylene Chloride | S-5946-H  |
| trans-2-Pentene                        | 646-04-8   | Methanol           | S-4257      | 4-Phenoxybutyric acid           | 6303-58-8  | Methanol                  | S-4926    |
| 2-Pentylfuran                          | 3777-69-3  | Methanol           | S-5623      | 2-Phenoxyethanol                | 122-99-6   | Methanol                  | S-3045    |
| Pentyl acetate                         | 628-63-7   | Methanol           | S-2976      | 2-Phenoxypropionic acid         | 940-31-8   | Methanol                  | S-4925    |
| tert-Pentylbenzene                     | 2049-95-8  | Methanol           | S-676       | 3-Phenoxypropionic acid         | 7170-38-9  | Methanol                  | S-5720    |
| Pentylcyclohexane                      | 38792-89-1 | Methanol           | S-4816      | Phentermine HCL                 | 1197-21-3  | Methanol                  | S-3898    |
| Perchloric acid                        | 7601-90-3  | Methanol           | S-4903      | Phenthoate                      | 2597-03-7  | Methanol                  | S-4250    |
| Perfluoro-1-decane sulfonate           | 13419-61-9 | Methanol           | S-5841      | 1-Phenyl-2-thiourea             | 103-85-5   | Methanol                  | S-3077    |
| Perfluorodecanoic acid                 | 335-76-2   | HPLC Water         | S-5055      | 2-Phenyl-2-propanol             | 617-94-7   | Methanol                  | S-3076    |
| Perfluorododecanoic acid               | 307-55-1   | HPLC Water         | S-5057      | Phenyl acetate                  | 122-79-2   | Methanol                  | S-3046    |
| Perfluoroheptanoic acid                | 375-85-9   | Methanol           | S-5053      | Phenyl ether                    | 101-84-8   | Methanol                  | S-3055    |
| Perfluorohexadecanoic acid             | 67905-19-5 | Methanol           | S-5796      | Phenyl Isocyanate               | 103-71-9   | Methylene Chloride        | S-4504    |
| Perfluorohexanoic acid                 | 307-24-4   | HPLC Water         | S-5052      | Phenyl Isothiocyanate           | 103-72-0   | Methanol                  | S-4505    |
| Perfluorononanoic acid                 | 375-95-1   | Methanol           | S-5054      | Phenyl tin trichloride          | 1124-19-2  | Methanol                  | S-4978    |
| Perfluorooctadecanoic acid             | 16517-11-6 | Methanol           | S-5797      | Phenylacetaldehyde              | 122-78-1   | Methanol                  | S-3062    |
| Perfluorooctanesulfonic acid           | 1763-23-1  | Methanol           | S-5059      | Phenylacetylene                 | 536-74-3   | Methanol                  | S-3866    |
| Perfluorooctanoic acid                 | 335-67-1   | Methanol           | S-4460-MEOH | Phenylarsonic acid              | 98-05-5    | Methanol                  | S-3989    |

| Component @ 1,000 µg/mL                                      | CAS#       | Matrix             | Catalog#   |
|--------------------------------------------------------------|------------|--------------------|------------|
| 4-Phenylazoaniline                                           | 60-09-3    | Methanol           | S-3065     |
| 4-Phenylazophenol                                            | 1689-82-3  | Methanol           | S-4549     |
| Phenylboric acid                                             | 98-80-6    | Methanol           | S-3050     |
| 4-Phenylcyclohexene                                          | 4994-16-5  | Methanol           | S-5137     |
| 1-Phenyldodecane                                             | 123-01-3   | Methanol           | S-3933     |
| 1,2-Phenylene diamine                                        | 95-54-5    | Methanol           | S-3071     |
| 1,3-Phenylenediamine                                         | 108-45-2   | Methanol           | S-3072     |
| p-Phenylenediamine                                           | 106-50-3   | Methanol           | S-3070     |
| 1-Phenylheptane                                              | 1078-71-3  | Methanol           | S-3051     |
| 1-Phenylhexane                                               | 1077-16-3  | Methanol           | S-3052     |
| 1-Phenylnonane                                               | 1081-77-2  | Methanol           | S-3054     |
| 1-Phenyloctane                                               | 2189-60-8  | Methanol           | S-3053     |
| 2-Phenylphenol                                               | 90-43-7    | Methanol           | S-3075     |
| 2-Phenylphenol                                               | 90-43-7    | Acetonitrile       | S-3075-ACN |
| 4-Phenylphenol                                               | 92-69-3    | Methanol           | S-3060     |
| 1-Phenyltridecane                                            | 123-02-4   | Methanol           | S-3934     |
| Phorate                                                      | 298-02-2   | Methanol           | S-3080     |
| Phorate                                                      | 298-02-2   | Acetone            | S-3080-AC  |
| Phorate oxon                                                 | 2600-69-3  | Toluene            | S-4181     |
| Phorate oxon (NM)                                            | 2600-69-3  | Acetonitrile       | S-5784-ACN |
| Phorate sulfone                                              | 2588-04-7  | Methanol           | S-4256     |
| Phorate sulfoxide                                            | 2588-04-7  | Methanol           | S-5777     |
| Phorate sulfoxide                                            | 2588-04-7  | Acetone            | S-5777-AC  |
| Phorate sulfoxide                                            | 2588-04-7  | Acetonitrile       | S-5777-ACN |
| Phosalone                                                    | 2310-17-0  | Methanol           | S-3085     |
| Phosalone                                                    | 2310-17-0  | Acetone            | S-3085-AC  |
| Phosphamidon(37.6% E; 62.2% Z)                               | 13171-21-6 | Methanol           | S-3090     |
| Phosphamidon(37.6% E; 62.2% Z)                               | 13171-21-6 | Acetone            | S-3090-AC  |
| Phoxim                                                       | 14816-18-3 | Acetonitrile       | S-4689     |
| Phthalic acid                                                | 88-99-3    | Methanol           | S-3095     |
| Phthalic acid bis (2-methoxyethyl)ester                      | 117-82-8   | Methanol           | S-3867     |
| Phthalic acid di-n-amyl ester                                | 131-18-0   | Methanol           | S-3868     |
| Phthalic acid diisobutyl ester                               | 84-69-5    | Methanol           | S-3869     |
| Phthalic acid dinonyl ester                                  | 84-76-4    | Methanol           | S-3870     |
| Phthalic acid, n-pentyl-isopentyl ester (mixture of isomers) | 84777-06-0 | Hexane             | S-6147     |
| Phthalic acid, n-pentyl-isopentyl ester (mixture of isomers) | 84777-06-0 | Hexane             | S-6147-H   |
| Phthalic anhydride                                           | 85-44-9    | Methanol           | S-3100     |
| Phthalide                                                    | 87-41-2    | Methanol           | S-3101     |
| Phthalimide                                                  | 85-41-6    | Acetone            | S-5766     |
| Phytane                                                      | 638-36-8   | Methylene Chloride | S-3105     |
| Picene                                                       | 213-46-7   | Methanol           | S-3923     |
| Picloram                                                     | 1918-02-1  | Methanol           | S-3110     |

| Component @ 1,000 µg/mL          | CAS#        | Matrix        | Catalog#    |
|----------------------------------|-------------|---------------|-------------|
| Picloram methyl ester            | 14143-55-6  | Methanol      | S-3110A     |
| 2-Picoline                       | 109-06-8    | Methanol      | S-3115      |
| 3-Picoline                       | 108-99-6    | Methanol      | S-4015      |
| 4-Picoline                       | 108-89-4    | Methanol      | S-4014      |
| 3-Picolyl chloride hydrochloride | 6959-48-4   | Methanol      | S-3116      |
| Picoxystrobin                    | 117428-22-5 | Methanol      | S-5467      |
| Picramic acid                    | 831-52-7    | Methanol      | S-3113      |
| Picric acid                      | 88-89-1     | Methanol      | S-5306      |
| Pinacolyl methylphosphonic acid  | 616-52-4    | Methanol      | S-4495      |
| a-Pinene                         | 80-56-8     | Methanol      | S-4172      |
| beta-Pinene                      | 127-91-3    | Methanol      | S-3142      |
| Piperazine                       | 110-85-0    | Methanol      | S-3114      |
| Piperonyl butoxide               | 51-03-6     | Methanol      | S-3117      |
| Pirimicarb                       | 23103-98-2  | Methanol      | S-3118      |
| Pirimphos-ethyl                  | 23505-41-1  | Methanol      | S-3120      |
| Pirimphos-methyl                 | 29232-93-7  | Methanol      | S-3119      |
| Plifenate                        | 21757-82-4  | Acetonitrile  | S-6420      |
| Plifenate                        | 21757-82-4  | Ethyl Acetate | S-6420-EA   |
| Poly(bisphenol A carbonate)      | 25037-45-0  | Methanol      | S-5734      |
| Poly(propylene glycol) - 1000    | 25322-69-4  | Methanol      | S-3131      |
| Poly(propylene glycol) - 2000    | 25322-69-4  | Methanol      | S-3131      |
| Poly(propylene glycol) - 2700    | 25322-69-4  | Methanol      | S-5485      |
| Poly(propylene glycol) - 3300    | 9003-11-6   | Methanol      | S-5484      |
| Poly(propylene glycol) - 425     | 25322-69-4  | Methanol      | S-5486      |
| Polyethylene glycol - 1000       | 25322-68-3  | Methanol      | S-3129      |
| Polyethylene glycol - 200        | 25322-68-3  | Methanol      | S-3126      |
| Polyethylene glycol - 400        | 25322-68-3  | Methanol      | S-3127      |
| Polyethylene glycol - 600        | 25322-68-3  | Methanol      | S-3128      |
| Potassium hydroxide              | 1310-58-3   | Methanol      | S-3123      |
| Potassium sorbate                | 24634-61-5  | Methanol      | S-5786      |
| Potassium sorbate                | 24634-61-5  | HPLC Water    | S-5786-HPLC |
| Prallethrin (mix of isomers)     | 23031-36-9  | Methanol      | S-5783      |
| Prallethrin (mix of isomers)     | 23031-36-9  | Acetonitrile  | S-5783-ACN  |
| Prochloraz                       | 67747-09-5  | Methanol      | S-4268      |
| Procymidon                       | 32809-16-8  | Methanol      | S-3871      |
| Profenofos                       | 41198-08-7  | Methanol      | S-3134      |
| Profenofos                       | 41198-08-7  | Acetone       | S-3134-AC   |
| Profluralin                      | 26399-36-0  | Methanol      | S-3132      |
| Profluralin                      | 26399-36-0  | Acetone       | S-3132-AC   |
| Profluralin                      | 26399-36-0  | Acetonitrile  | S-3132-ACN  |
| Progesterone                     | 57-83-0     | Methanol      | S-5543      |
| Promecarb                        | 2631-37-0   | Methanol      | S-3133      |
| Prometon                         | 1610-18-0   | Acetone       | S-3130      |



| Component @ 1,000 µg/mL               | CAS#       | Matrix          | Catalog#  | Component @ 1,000 µg/mL           | CAS#        | Matrix             | Catalog#   |
|---------------------------------------|------------|-----------------|-----------|-----------------------------------|-------------|--------------------|------------|
| Prometryne                            | 7287-19-6  | Methanol        | S-3135    | Propylene oxide                   | 75-56-9     | Heptane            | S-3214-H   |
| Propachlor                            | 1918-16-7  | Acetone         | S-3140    | 2-n-Propylfuran                   | 4229-91-8   | Methanol           | S-5625     |
| Propamocarb                           | 24579-73-5 | Methanol        | S-5468    | n-Propylparaben                   | 94-13-3     | Methanol           | S-3202A    |
| Propamocarb HCl                       | 25606-41-1 | Methanol        | S-4690    | 2-n-Propylphenol                  | 644-35-9    | Methanol           | S-4301     |
| Propane                               | 74-98-6    | Methanol        | S-3145    | Propyzamide                       | 23950-58-5  | Methanol           | S-3220     |
| 1,2-Propanediol                       | 57-55-6    | Methanol        | S-3147    | Propyzamide                       | 23950-58-5  | Acetone            | S-3220-AC  |
| 1,3-Propanediol                       | 504-63-2   | Methanol        | S-5187    | Prosulfocarb                      | 52888-80-9  | Methanol           | S-3223     |
| 1-Propanethiol                        | 107-03-9   | Methanol        | S-3152    | Prosulfuron                       | 94125-34-5  | Methanol           | S-4999     |
| 2-Propanethiol                        | 75-33-2    | Methanol        | S-3151    | Prowl (Pendimethalin)             | 40487-42-1  | Methanol           | S-3230     |
| Propanil                              | 709-98-8   | Methanol        | S-3155    | Prowl (Pendimethalin)             | 40487-42-1  | Acetone            | S-3230-AC  |
| Propanil                              | 709-98-8   | Acetone         | S-3155-AC | (+)- Pulegone                     | 89-82-7     | Methanol           | S-5136     |
| Propanoic acid methyl ester           | 554-12-1   | Methanol        | S-5678    | Pymetrozin                        | 123312-89-0 | Acetonitrile       | S-4967     |
| 1-Propanol                            | 71-23-8    | Methanol        | S-3160    | Pyraclostrobin                    | 175013-18-0 | Methanol           | S-4968     |
| 2-Propanol                            | 67-63-0    | Methanol        | S-3165    | Pyraflufen-ethyl                  | 129630-19-9 | Acetone            | S-6024-AC  |
| Propargyl alcohol                     | 107-19-7   | Methanol        | S-3169    | Pyrazon                           | 1698-60-8   | Methanol           | S-786      |
| Propazine                             | 139-40-2   | Methanol        | S-3170    | Pyrazophos                        | 13457-18-6  | Methanol           | S-3234     |
| Propene                               | 115-07-1   | Methanol        | S-3175    | Pyrene                            | 129-00-0    | Methylene Chloride | S-3235     |
| Propham                               | 122-42-9   | Methanol        | S-3180    | Pyrene-d10                        | 1718-52-1   | Methanol           | S-3236     |
| Prophos                               | 13194-48-4 | Acetone         | S-3185    | Pyrethrins (mix of isomers)       | 8003-34-7   | Methanol           | S-5506     |
| Propiconazole (tilt)                  | 60207-90-1 | Acetone         | S-3186    | Pyrethrins (mix of isomers)       | 8003-34-7   | Acetone            | S-5506-AC  |
| Propineb                              | 12071-83-9 | Methanol        | S-4691    | Pyrethrins (mix of isomers)       | 8003-34-7   | Acetonitrile       | S-5506-ACN |
| beta-Propiolactone                    | 57-57-8    | Methanol        | S-3187    | Pyrethrins (mix of isomers)       | 8003-34-7   | Isooctane          | S-5506-ISO |
| Propionaldehyde                       | 123-38-6   | Methanol        | S-3190    | Pyrethrum analytical stds.        | 121-21-1    | Methanol           | S-3872     |
| Propionaldehyde-2,4-DNPH              | 725-00-8   | Methanol        | S-5759    | Pyrethrum extract or pyrethrin II | 8003-34-7   | Methanol           | S-3872A    |
| Propionic acid                        | 79-09-4    | Deionized Water | S-3192    | Pyridaben                         | 96489-71-3  | Methanol           | S-5779     |
| Propionic acid n-butyl ester          | 590-01-2   | Methanol        | S-5310    | Pyridaben                         | 96489-71-3  | Acetone            | S-5779-AC  |
| Propionitrile                         | 107-12-0   | Methanol        | S-3195    | Pyridaben                         | 96489-71-3  | Acetonitrile       | S-5779-ACN |
| Propyl acetate                        | 109-60-4   | Methanol        | S-3204    | Pyridine                          | 110-86-1    | Methanol           | S-3240     |
| Propyl alcohol-1,1-d2                 | 40422-04-6 | Methanol        | S-3161    | Pyridine-d5                       | 7291-22-7   | Methanol           | S-3937     |
| Propyl disulfide                      | 629-19-6   | Methanol        | S-3201    | Pyrifenox                         | 88283-41-4  | Methanol           | S-5291     |
| Propyl ether                          | 111-43-3   | Methanol        | S-3909    | Pyrimethanil                      | 53112-28-0  | Methanol           | S-5225     |
| Propyl gallate                        | 121-79-9   | Methanol        | S-5142    | Pyriproxifen                      | 95737-68-1  | Acetonitrile       | S-4969     |
| Propyl paraben                        | 94-13-3    | Methanol        | S-3202    | Pyruvic acid                      | 127-17-3    | Deionized Water    | S-3242     |
| Propyl sulfide                        | 111-47-7   | Methanol        | S-3203    | Pyruvic aldehyde                  | 78-98-8     | Methanol           | S-3243     |
| Propylamine                           | 107-10-8   | Methanol        | S-3205    | Quinalphos                        | 13593-03-8  | Acetone            | S-3246     |
| n-Propylbenzene                       | 103-65-1   | Methanol        | S-3210    | Quindlorac                        | 84087-01-4  | Methanol           | S-3950     |
| n-Propylbutylnitrosamine              | 25413-64-3 | Methanol        | S-3940    | Quinine sulfate monohydrate       | 6119-70-6   | Methanol           | S-3904     |
| Propylene dichloride                  | 78-87-5    | Methanol        | S-3211    | Quinmerac                         | 90717-03-6  | Methanol           | S-4938     |
| Propylene glycol                      | 57-55-6    | Methanol        | S-3212    | Quinoline                         | 91-22-5     | Methanol           | S-3245     |
| Propylene glycol methyl ether acetate | 108-65-6   | Methanol        | S-3213    | Quinoline                         | 91-22-5     | Methylene Chloride | S-3245-MC  |
| Propylene glycol monolaurate          | 27194-74-7 | Methanol        | S-4447    | Quinoline d7                      | 34071-94-8  | Methanol           | S-4310     |
| Propylene glycol propyl ether         | 1569-01-3  | Methanol        | S-4450    | Quinomethionate                   | 2439-01-2   | Methanol           | S-3247     |
| Propylene oxide                       | 75-56-9    | Methanol        | S-3214    | Quizalofop                        | 76578-12-6  | Methanol           | S-3988     |

| Component @ 1,000 µg/mL              | CAS#        | Matrix                  | Catalog#   | Component @ 1,000 µg/mL           | CAS#        | Matrix                  | Catalog#  |
|--------------------------------------|-------------|-------------------------|------------|-----------------------------------|-------------|-------------------------|-----------|
| Quizalofop-ethyl                     | 76578-14-8  | Acetonitrile            | S-5293     | Sorbic acid                       | 110-44-1    | Methyl-tert-Butyl Ether | S-5749    |
| Quizalofop-p-ethyl                   | 100646-51-3 | Acetonitrile            | S-5037     | Sorbitol                          | 50-70-4     | Methanol                | S-4347    |
| RDX                                  | 121-82-4    | Acetonitrile:Methanol   | S-3251     | Spinosad                          | 131929-60-7 | Methanol                | S-5672    |
| Regular unleaded gas-87octane        | 86290-81-5  | Methanol                | S-3873     | Spirotetramat                     | 203313-25-1 | Acetonitrile            | S-5873    |
| Renin                                | 20845-02-7  | Acetonitrile            | S-5472     | Spiroxamine                       | 118134-30-8 | Methanol                | S-5469    |
| Reserpine                            | 50-55-5     | Methanol:Acetone        | S-3249     | Stearic acid                      | 57-11-4     | Methyl-tert-Butyl Ether | S-3299    |
| Resmethrin                           | 10453-86-8  | Acetone                 | S-3252     | Stoddard solvent                  | 8052-41-3   | Acetone                 | S-5165    |
| Resorcinol                           | 108-46-3    | Methanol                | S-3250     | Strobane (TM)                     | 8001-50-1   | Methanol                | S-4360    |
| Retene                               | 483-65-8    | Methanol                | S-4436     | Strychnine                        | 57-24-9     | Methanol                | S-3295    |
| Rhodanine                            | 141-84-4    | Methanol                | S-5565     | Styrene                           | 100-42-5    | Methanol                | S-3300    |
| Ribitol(andonitol)                   | 488-81-3    | Methanol                | S-4190     | Styrene-7,8-Oxide                 | 96-09-3     | Methanol                | S-5103    |
| Rimsulfuron                          | 122931-48-0 | Methanol                | S-4834     | Succinic acid                     | 110-15-6    | Deionized Water         | S-3301    |
| Rotenone                             | 83-79-4     | Methanol                | S-3248     | Sucrose                           | 57-50-1     | Methanol                | S-3308    |
| Rubidium iodide                      | 7790-29-6   | HPLC Water              | S-4843     | Sucrose                           | 57-50-1     | HPLC Water              | S-3308-W  |
| Safrole                              | 94-59-7     | Methanol                | S-3255     | Sulcofuron-sodium Monohydrate     | 3567-25-7   | Methanol                | S-5132    |
| Safrotin                             | 31218-83-4  | Methanol                | S-3260     | Sulcotrione                       | 99105-77-8  | Methanol                | S-4977    |
| Salicylic acid                       | 69-72-7     | Methanol                | S-5572     | Sulfachloropyridazine             | 80-32-0     | Methanol                | S-4600    |
| Sanmarton                            | 51630-58-1  | Acetone                 | S-3261     | Sulfadiazine                      | 68-35-9     | Methanol                | S-4598    |
| Sanmarton                            | 51630-58-1  | Acetonitrile            | S-3261-ACN | Sulfadimethoxine                  | 122-11-2    | Methanol                | S-4589    |
| Sebacic acid                         | 111-20-6    | Methanol                | S-5595     | Sulfadimidine                     | 57-68-1     | Methanol                | S-4587    |
| Sebuthylazine                        | 7286-69-3   | Methanol                | S-4003     | Sulfaguandine                     | 57-67-0     | Methanol                | S-4586    |
| Secbumeton                           | 26259-45-0  | Methanol                | S-4270     | Sulfamerazine                     | 127-79-7    | Methanol                | S-4596    |
| Sethoxydim                           | 74051-80-2  | Acetone                 | S-3266     | Sulfamethoxazole                  | 723-46-6    | Methanol                | S-4535    |
| Sethoxydim                           | 74051-80-2  | Acetonitrile            | S-3266-ACN | Sulfometuron-methyl               | 74222-97-2  | Methanol                | S-3302    |
| Siduron                              | 1982-49-6   | Methanol                | S-3279     | Sulfosulfuron                     | 141776-32-1 | Methanol                | S-4997    |
| sigma-Caprolactam                    | 105-60-2    | Methanol                | S-3890     | Sulfur                            | 7704-34-9   | Methylene Chloride      | S-3875    |
| Silvex                               | 93-72-1     | Methyl-tert-Butyl Ether | S-3660     | Sulfur (from benzyl mercaptan)    | 100-53-8    | Methanol                | S-5669A   |
| Silvex methyl ester                  | 4841-20-7   | Methanol                | S-3270     | Sulfur (from dibenzothiophene)    | 7704-34-9   | Methanol                | S-3875B   |
| Simazine                             | 122-34-9    | Acetone                 | S-3280     | Sulfur (from thiophene)           | 7704-34-9   | Methanol                | S-5478    |
| Simetryn                             | 1041-70-6   | Methanol                | S-3285     | Sulfur dioxide                    | 7446-09-5   | Methanol                | S-4040    |
| beta-Sitosterol                      | 83-46-5     | Methanol                | S-4676     | Sulfur hexafluoride               | 2551-62-4   | Methanol                | S-4000    |
| Sodium alkyl aryl sulfonate          | 68037-49-0  | Methanol                | S-5111     | Sulfur trioxide                   | 7446-11-9   | Methanol                | S-3855    |
| Sodium azide                         | 26628-22-8  | Methanol                | S-5706     | Sulprofos                         | 35400-43-2  | Methanol                | S-3305    |
| Sodium benzoate                      | 532-32-1    | Methanol                | S-3286     | Sulprofos                         | 35400-43-2  | Acetone                 | S-3305-AC |
| Sodium chlorate                      | 7775-09-9   | Methanol                | S-3281     | Sulprofos-sulfoxide               | N/A         | Methanol                | S-4557    |
| Sodium citrate dihydrate             | 6132-04-3   | Methanol                | S-3288     | Super unleaded gasoline 92 octane | N/A         | Methanol                | S-3917    |
| Sodium fluoroacetate                 | 62-74-8     | Deionized Water         | S-3291     | Systhane                          | 88671-89-0  | Acetone                 | S-3306    |
| Sodium Iodide                        | 7681-82-5   | HPLC Water              | S-4842     | 2,4,5-T methyl ester              | 1928-36-6   | Methanol                | S-3664    |
| Sodium linear alkylbenzene sulfonate | 68081-81-2  | Methanol                | S-5108     | L-Tartaric acid                   | 87-69-4     | Acetonitrile            | S-5644    |
| Sodium sulfide nonahydrate           | 1313-84-4   | Methanol                | S-3998     | Taurine                           | 107-35-7    | HPLC Water              | S-5608    |
| Sodium tetraborate decahydrate       | 1303-96-4   | Methanol                | S-5201     | Taurocholic acid                  | 345909-26-4 | Acetonitrile            | S-5473    |
| Sodium xylene sulfonate              | 1300-72-7   | Methanol                | S-5110     | TCMTB                             | 21564-17-0  | Methanol                | S-3359    |
| Sonar/Flouridone                     | 59756-60-4  | Methanol                | S-3290     | Tebufenpyrad                      | 119168-77-3 | Methanol                | S-5226    |

| Component @ 1,000 µg/mL                              | CAS#        | Matrix             | Catalog#   | Component @ 1,000 µg/mL                     | CAS#       | Matrix                         | Catalog#   |
|------------------------------------------------------|-------------|--------------------|------------|---------------------------------------------|------------|--------------------------------|------------|
| Tebupirimphos                                        | 96182-53-5  | Acetone            | S-4317     | 2,3,5,6-Tetrachloroaniline                  | 3481-20-7  | Methanol                       | S-4924     |
| Tebuthiuron                                          | 34014-18-1  | Acetone            | S-3310     | 2,3,4,6-Tetrachloroanisole                  | 938-22-7   | Methanol                       | S-3405B    |
| Teflubenzuron                                        | 83121-18-0  | Acetone            | S-5458     | 2,3,5,6-Tetrachloroanisole                  | 6936-40-9  | Methanol                       | S-4465     |
| Tefluthrin                                           | 79538-32-2  | Methanol           | S-4281     | 1,2,3,4-Tetrachlorobenzene                  | 634-66-2   | Methanol                       | S-3370     |
| Tefluthrin                                           | 79538-32-2  | Acetone            | S-4281-AC  | 1,2,3,5-Tetrachlorobenzene                  | 634-90-2   | Methanol                       | S-3375     |
| Telodrin (isobenzan)                                 | 297-78-9    | Methanol           | S-5460     | 1,2,4,5-Tetrachlorobenzene                  | 95-94-3    | Methanol                       | S-3380     |
| TEPP                                                 | 107-49-3    | Methanol           | S-3315     | 2,2',4,4'-Tetrachlorobiphenyl               | 2437-79-8  | Methanol                       | S-3382     |
| Terbacil                                             | 5902-51-2   | Methanol           | S-3320     | 2,2',5,5'-Tetrachlorobiphenyl               | 35693-99-3 | Hexane                         | S-9052     |
| Terbacil                                             | 5902-51-2   | Acetone            | S-3320-AC  | 1,1,1,2-Tetrachloroethane                   | 630-20-6   | Methanol                       | S-3385     |
| Terbucarb                                            | 1918-11-2   | Methanol           | S-4344     | 1,1,2,2-Tetrachloroethane                   | 79-34-5    | Methanol                       | S-3390     |
| Terbufos                                             | 13071-79-9  | Methanol           | S-3325     | Tetrachloroethene                           | 127-18-4   | Methanol                       | S-3395     |
| Terbufos sulfone                                     | 56070-16-7  | Methanol           | S-4369     | 2,3,4,5-Tetrachlorophenol                   | 4901-51-3  | Methanol                       | S-3400     |
| Terbumeton                                           | 33693-04-8  | Methanol           | S-4292     | 2,3,4,6-Tetrachlorophenol                   | 58-90-2    | Methanol                       | S-3405     |
| Terbutylazine                                        | 5915-41-3   | Methanol           | S-3330     | 2,3,5,6-Tetrachlorophenol                   | 935-95-5   | Methanol                       | S-3410     |
| Terbutylazine-desethyl                               | 30125-63-4  | Acetonitrile       | S-5591     | Bis(2,3,3,3-tetrachloropropyl) ether (S421) | 127-90-2   | Methanol                       | S-5916     |
| Terbutryne                                           | 886-50-0    | Methanol           | S-3335     | Tetrachloroterephthalate                    | 2136-79-0  | Acetone                        | S-1067     |
| Tergitol-NP10                                        | 127087-87-0 | Methanol           | S-5790     | Tetrachloroterephthalate-MEO                | 2163-79-0  | Methanol                       | S-1067A    |
| Tergitol-NP7                                         | 127087-87-0 | Methanol           | S-5792     | 2,3,5,6-Tetrachloroethoxyanisole            | 68671-90-9 | Methanol                       | S-4940     |
| Tergitol-NP9                                         | 127087-87-0 | Methanol           | S-5791     | a,a-2,6-Tetrachlorotoluene                  | 81-19-6    | Methanol                       | S-5209     |
| m-Terphenyl                                          | 92-06-8     | Methanol           | S-3340     | Tetrachlorvinphos                           | 961-11-5   | Acetone                        | S-3425     |
| o-Terphenyl                                          | 84-15-1     | Methanol           | S-3345     | n-Tetracontane                              | 4181-95-7  | Hexane                         | S-3430     |
| p-Terphenyl                                          | 92-94-4     | Methylene Chloride | S-3350     | n-Tetracosane                               | 646-31-1   | 1,1,2-Trichlorotrifluoroethane | S-3435     |
| p-Terphenyl-d14                                      | 1718-51-0   | Methylene Chloride | S-3355     | n-Tetracosane-d50                           | 16416-32-3 | Methanol                       | S-3436     |
| alpha-Terpinene                                      | 99-86-5     | MMethanol          | S-5687     | n-Tetradecane                               | 629-59-4   | Methylene Chloride             | S-3440     |
| gamma-Terpinene                                      | 99-85-4     | Methanol           | S-5688     | 1-Tetradecanol                              | 112-72-1   | Methanol                       | S-3943     |
| 4-Terpineol                                          | 562-74-3    | Methanol           | S-5693     | Tetradecene-1                               | 1120-36-1  | Methanol                       | S-3445     |
| alpha-Terpineol                                      | 98-55-5     | Methanol           | S-4145     | Tetradifon                                  | 116-29-0   | Methanol                       | S-3450     |
| Terpinolene                                          | 586-62-9    | Methanol           | S-5689     | Tetradifon                                  | 116-29-0   | Acetone                        | S-3450-AC  |
| Terrazole                                            | 2593-15-9   | Methanol           | S-3360     | Tetraethyl lead                             | 78-10-4    | Methanol                       | S-4871     |
| Terrazole                                            | 2593-15-9   | Acetonitrile       | S-3360-ACN | Tetraethyl orthosilicate                    | 78-10-4    | Methanol                       | S-3456     |
| Tetrabromo bisphenol A                               | 79-94-7     | Methanol           | S-4311     | Tetraethyldithio pyrophosphate/sulfotep     | 3689-24-5  | Methanol                       | S-3455     |
| 1,2,4,5-Tetrabromobenzene                            | 636-28-2    | Methanol           | S-3367     | Tetraethylene glycol                        | 112-60-7   | Methanol                       | S-3457     |
| 2,2',5,5'-Tetrabromobiphenyl                         | 59080-37-4  | Methanol           | S-4144     | 1,1,1,2-Tetrafluoroethane                   | 811-97-2   | Methanol                       | S-3386     |
| 2,2',4,4'-Tetrabromodiphenyl ether                   | 5436-43-1   | Methanol           | S-4376     | Tetrahydrofuran                             | 109-99-9   | Methanol                       | S-3460     |
| 1,1,2,2-Tetrabromoethane                             | 79-27-6     | Methanol           | S-4100     | Tetrahydrofuran-d8                          | 1693-74-9  | Methanol                       | S-3461     |
| 3',3'',5',5''-Tetrabromophenol-phthalein ethyl ester | 1176-74-5   | Methanol           | S-4296     | 1,2,3,4-Tetrahydronaphthalene               | 119-64-2   | Methanol                       | S-3464     |
| Tetrabutylammonium hydrogen sulfate                  | 32503-27-8  | Methanol           | S-3876     | 1,2,3,6-Tetrahydrophthalimide               | 85-40-5    | Methanol                       | S-5771     |
| Tetrabutyltin                                        | 1461-25-2   | Methanol           | S-4639     | 1,2,3,6-Tetrahydrophthalimide               | 85-40-5    | Acetonitrile                   | S-5771-ACN |
| 1,2,4,5-Tetrachloro-3-nitrobenzene                   | 117-18-0    | Methanol           | S-3415     | Tetrahydropyran                             | 142-68-7   | Methanol                       | S-3465     |
| 2',3',4',5'-Tetrachloro-4-biphenylol                 | 67651-34-7  | Methanol           | S-3384     | Tetrahydrothiophene                         | 110-01-0   | Methanol                       | S-3470     |
| 2,4,5,6-Tetrachloro-m-xylene                         | 877-09-8    | Acetone            | S-3420     | Tetramethrin                                | 7696-12-0  | Methanol                       | S-4251     |
| 3,3',5,5'-Tetrachloro-4,4'-biphenyldiol              | 13049-13-3  | Methanol           | S-3387     | Tetramethrin                                | 7696-12-0  | Acetone                        | S-4251-AC  |

| Component @ 1,000 µg/mL          | CAS#        | Matrix                | Catalog#   |
|----------------------------------|-------------|-----------------------|------------|
| Tetramethyl urea                 | 632-22-4    | Methanol              | S-4872     |
| Tetramethylammonium hydroxide    | 75-59-2     | Methanol              | S-3476     |
| 1,2,3,4-Tetramethylbenzene       | 488-23-3    | Methanol              | S-3472     |
| 1,2,3,5-Tetramethylbenzene       | 527-53-7    | Methanol              | S-3473     |
| 1,2,4,5-Tetramethylbenzene       | 95-93-2     | Methanol              | S-3475     |
| Tetramethylene sulfone           | 126-33-0    | Methanol              | S-3877     |
| 2,6,11,15-Tetramethylhexadecane  | 504-44-9    | Methanol              | S-3477     |
| 2,6,10,14-Tetramethylpentadecane | 1921-70-6   | Methylene Chloride    | S-3125     |
| Tetranitromethane                | 509-14-8    | Methanol              | S-4858     |
| Tetraphenyltin                   | 595-90-4    | Methanol              | S-4980     |
| Tetrapropylene glycol            | 30242-05-8  | Methanol              | S-3471     |
| Tetrasul                         | 2227-13-6   | Methanol              | S-4252     |
| n-Tetratetracontane              | 7098-22-8   | Methylene Chloride    | S-3480     |
| n-Tetratriacontane               | 14167-59-0  | Methylene Chloride    | S-3485     |
| Tetryl                           | 479-45-8    | Methanol              | S-3478     |
| Theobromine                      | 83-67-0     | Acetonitrile          | S-5952     |
| Theophylline                     | 58-55-9     | Acetonitrile          | S-5953     |
| Thiabendazole                    | 148-79-8    | Methanol              | S-3490     |
| Thiacloprid                      | 111988-49-9 | Acetonitrile          | S-5723     |
| Thiamethoxam                     | 153719-23-4 | Acetonitrile          | S-5173     |
| Thiazolidine                     | 504-78-9    | Methanol              | S-3489     |
| Thidiazuron                      | 51707-55-2  | Methanol              | S-3978     |
| Thifensulfuron-methyl            | 79277-27-3  | Methanol              | S-4994     |
| Thioacetamide                    | 62-55-5     | Methanol              | S-3491     |
| 4,4'-Thiobisbenzeneamine         | 139-65-1    | Methanol              | S-4475     |
| Thiodicarb                       | 59669-26-0  | Methanol              | S-3493     |
| Thiodicarb                       | 59669-26-0  | Acetonitrile          | S-3493-ACN |
| Thiodiglycol                     | 111-48-8    | Acetonitrile:Methanol | S-4010     |
| Thiofanox                        | 39196-18-4  | Methanol              | S-3492     |
| Thiometon                        | 640-15-3    | Methanol              | S-4693     |
| Thionazin-o-analog               | 7359-55-9   | Methanol              | S-4786     |
| Thionazin (zinophos)             | 297-97-2    | Methanol              | S-3850A    |
| Thionazin (zinophos)             | 297-97-2    | Acetone               | S-3850A-AC |
| Thiophanate-methyl               | 23564-05-8  | Methanol              | S-3494     |
| Thiophene                        | 110-02-1    | Methanol              | S-3496     |
| Thiophenol                       | 108-98-5    | Methanol              | S-3495     |
| 2-Thiouracil                     | 141-90-2    | Methanol              | S-3497     |
| Thiourea                         | 62-56-6     | Methanol              | S-4299     |
| Thiram                           | 137-26-8    | Methanol              | S-3499     |
| Tiocarbazil                      | 36756-79-3  | Tetrahydrofuran       | S-5918     |
| TNT                              | 118-96-7    | Methanol              | S-3501     |
| Tokuthion/prothiophos            | 34643-46-4  | Acetone               | S-3225     |
| Tolclofos-methyl                 | 57018-04-9  | Methanol              | S-4835     |
| o-Tolidine                       | 119-93-7    | Methylene Chloride    | S-3500     |

| Component @ 1,000 µg/mL         | CAS#         | Matrix                  | Catalog#    |
|---------------------------------|--------------|-------------------------|-------------|
| m-Tolualdehyde                  | 620-23-5     | Methanol                | S-3514      |
| o-Tolualdehyde                  | 529-20-4     | Methanol                | S-3346      |
| p-Tolualdehyde                  | 104-87-0     | Methanol                | S-3524      |
| Toluene                         | 108-88-3     | Methanol                | S-3505      |
| Toluene-2,4-diisocyanate        | 584-84-9     | Methanol                | S-3530      |
| Toluene-d8                      | 2037-26-5    | Methanol                | S-3510      |
| Toluene-d8                      | 2037-26-5    | Isooctane               | S-3510-ISO  |
| m-Toluidine                     | 108-44-1     | Methanol                | S-3515      |
| o-Toluidine                     | 95-53-4      | Methanol                | S-3520      |
| p-Toluidine                     | 106-49-0     | Methanol                | S-3525-5K   |
| o-Toluidine HCl                 | 636-21-5     | Methanol                | S-3526      |
| Tolyfluand                      | 731-27-1     | Methanol                | S-3531      |
| Tolyene-2,6-diisocyanate        | 91-08-7      | Methylene Chloride      | S-5870      |
| Tolytriazole                    | 29385-43-1   | Methanol                | S-5596      |
| Total xylenes                   | 1330-20-7    | Methanol                | S-3841      |
| Toxaphene                       | 8001-35-2    | Hexane                  | S-3535      |
| 2,4,5 TP (Silvex)               | 93-72-1      | Methanol                | S-3275      |
| Tralkoxydim                     | 87820-88-0   | Methanol                | S-5470      |
| Tralomethrin                    | 66841-25-6   | Methanol                | S-4965      |
| Tralomethrin                    | 66841-25-6   | Acetone                 | S-4965-AC   |
| Transfluthrin                   | 118712-89-3  | Acetonitrile            | S-6375      |
| Transformer oil                 | N/A          | Methanol                | S-3878      |
| 2,4,6-Tri-tert-butylphenol      | 732-26-3     | Methanol                | S-4037      |
| Tri-allate                      | 2303-17-5    | Methanol                | S-3550      |
| Tri-n-propyltin chloride        | 2279-76-7    | Methanol                | S-5516      |
| Tri-o-cresyl phosphate          | 78-30-8      | Methanol                | S-4361      |
| Tri(Propylene glycol)diacrylate | 42978-66-5   | Methanol                | S-4104      |
| n-Triacontane                   | 638-68-6     | Methylene Chloride      | S-3540      |
| Triadimefon                     | 43121-43-3   | Methanol                | S-3545      |
| Triadimefon                     | 43121-43-3   | Acetone                 | S-3545-AC   |
| Triasulfuron                    | 82097-50-5   | Methanol                | S-5003      |
| S-Triazine                      | 290-87-9     | Methanol                | S-5793      |
| Triazophos                      | 24017-47-8   | Methanol                | S-4160      |
| Triazophos                      | 24017-47-8   | Acetonitrile            | S-4160-ACN  |
| Tribenuron-methyl               | 101200-48-0  | Methanol                | S-4998      |
| Tribromoacetic acid             | 75-96-7      | Methanol                | S-3879      |
| Tribromoacetic acid             | 75-96-7      | Methyl-tert-Butyl Ether | S-3879-MTBE |
| 2,4,6-Tribromoanisole           | 607-99-8     | Methanol                | S-4309      |
| 2,4,6-Tribromoanisole-d5        | 1219795-33-1 | Methanol                | S-4335      |
| 1,3,5-Tribromobenzene           | 626-39-1     | Methanol                | S-3552      |
| 2,4,6-Tribromophenol-3,5-d2     | 1219795-42-2 | Methanol                | S-5718      |
| 2,4,6-Tribromophenol            | 118-79-6     | Methanol                | S-3555      |
| 2,4,6-Tribromophenol Acetate    | 607-95-4     | Hexane                  | S-6608-HEX  |
| 2,4,6-Trichlorophenol Acetate   | 23399-90-8   | Hexane                  | S-6607-HEX  |



| Component @ 1,000 µg/mL                                                    | CAS#        | Matrix                  | Catalog# |
|----------------------------------------------------------------------------|-------------|-------------------------|----------|
| Tributyl phosphate                                                         | 126-73-8    | Methanol                | S-3560   |
| Tributylamine                                                              | 102-82-9    | Methanol                | S-3556   |
| Tributylphosphoro-trithioite                                               | 150-50-5    | Acetone                 | S-3565   |
| S,S,S-Tributylphosphorotrithioate                                          | 78-48-8     | Methanol                | S-3564   |
| Tributyltin chloride                                                       | 1461-22-9   | Acetone                 | S-4638   |
| Tributyltin hydride                                                        | 688-73-3    | Methanol                | S-4418   |
| Tricaprin                                                                  | 621-71-6    | Methanol                | S-4390   |
| 1,1,1-Trichloro-2,2,2-trifluoroethane                                      | 354-58-5    | Methanol                | S-4820   |
| 1,1,2-Trichloro-1-fluoroethane                                             | 811-95-0    | Methanol                | S-3617   |
| 3,5,6-Trichloro-2-pyridinol                                                | 6515-38-4   | Methanol                | S-3666   |
| 3,5,6-Trichloro-2-pyridinyloxyacetic acid, n-butoxyethyl ester (Triclopyr) | 55335-06-3  | Methanol                | S-3677   |
| Trichloroacetic acid                                                       | 76-03-9     | Methyl-tert-Butyl Ether | S-3575   |
| 1,1,1-Trichloroacetone                                                     | 918-00-3    | Methanol                | S-3577   |
| Trichloroacetonitrile                                                      | 545-06-2    | Methanol                | S-3579   |
| 2,4,5-Trichloroaniline                                                     | 636-30-6    | Acetonitrile            | S-5082   |
| 2,3,4-Trichloroanisole                                                     | 54135-80-7  | Methanol                | S-3584   |
| 2,3,5-Trichloroanisole                                                     | 54135-81-8  | Methanol                | S-3581   |
| 2,3,6-Trichloroanisole                                                     | 50375-10-5  | Methanol                | S-3582   |
| 2,4,5-Trichloroanisole                                                     | 6130-75-2   | Methanol                | S-3578   |
| 2,4,6-Trichloroanisole                                                     | 87-40-1     | Methanol                | S-3586   |
| 2,4,6-Trichloroanisole-d5                                                  | 352439-08-8 | Methanol                | S-4336   |
| 3,4,5-Trichloroanisole                                                     | 54135-82-9  | Methanol                | S-3583   |
| 1,2,3-Trichlorobenzene                                                     | 87-61-6     | Methanol                | S-3580   |
| 1,2,4-Trichlorobenzene                                                     | 120-82-1    | Methanol                | S-3585   |
| 1,3,5-Trichlorobenzene                                                     | 108-70-3    | Methanol                | S-3590   |
| 1,3,5-Trichlorobenzene-d3                                                  | 1198-60-3   | Methanol                | S-3591   |
| 2,3,5-Trichlorobenzoic acid                                                | 50-73-7     | Methanol                | S-3595   |
| 2,3,6-Trichlorobenzoic acid                                                | 50-31-7     | Methanol                | S-3965   |
| 2,4,5-Trichlorobiphenyl                                                    | 15862-07-4  | Methanol                | S-3602   |
| 2,4',6-Trichlorobiphenyl                                                   | 38444-77-4  | Methanol                | S-3600   |
| 1,1,1-Trichloroethane                                                      | 71-55-6     | Methanol                | S-3605   |
| 1,1,1-Trichloroethane-2,2,2-d3                                             | 2747-58-2   | Methanol                | S-3606   |
| 1,1,2-Trichloroethane                                                      | 79-00-5     | Methanol                | S-3610   |
| Trichloroethene                                                            | 79-01-6     | Methanol                | S-3615   |
| Trichlorofluoromethane                                                     | 75-69-4     | Methanol                | S-3620   |
| Trichloronate                                                              | 327-98-0    | Acetone                 | S-3570   |
| 2,3,4-Trichlorophenol                                                      | 15950-66-0  | Methanol                | S-3625   |
| 2,3,5-Trichlorophenol                                                      | 933-78-8    | Methanol                | S-3630   |
| 2,3,6-Trichlorophenol                                                      | 933-75-5    | Methanol                | S-3635   |
| 2,4,5-Trichlorophenol                                                      | 95-95-4     | Methanol                | S-3640   |
| 2,4,6-Trichlorophenol                                                      | 88-06-2     | Methanol                | S-3645   |
| 2,4,6-Trichlorophenol-3,5-d2                                               | 93951-80-5  | Methanol                | S-5717   |
| 3,4,5-Trichlorophenol                                                      | 609-19-8    | Methanol                | S-3647   |

| Component @ 1,000 µg/mL                            | CAS#        | Matrix                  | Catalog#    |
|----------------------------------------------------|-------------|-------------------------|-------------|
| 2,4,5-Trichlorophenoxy acetic acid                 | 93-76-5     | Methyl-tert-Butyl Ether | S-3655      |
| 2,4,5-Trichlorophenoxy acetic acid methyl ester    | 1928-37-6   | Methanol                | S-3650      |
| 1,2,3-Trichloropropane                             | 96-18-4     | Methanol                | S-3665      |
| 1,2,3-Trichloropropane                             | 96-18-4     | Methyl-tert-Butyl Ether | S-3665-MTBE |
| 2,3,6-Trichlorotoluene                             | 2077-46-5   | Methanol                | S-3930      |
| 2,4,5-Trichlorotoluene                             | 6639-30-1   | Methanol                | S-3670      |
| α,2,6-Trichlorotoluene                             | 2014-83-7   | Methanol                | S-3672      |
| α,α,α-Trichlorotoluene                             | 98-07-7     | Methanol                | S-3674      |
| 1,1,2-Trichlorotrifluoroethane                     | 76-13-1     | Methanol                | S-3675      |
| Triclopyr                                          | 55335-06-3  | Methanol                | S-3680      |
| Triclosan                                          | 3380-34-5   | Methanol                | S-4382      |
| n-Tricosane                                        | 638-67-5    | Methylene Chloride      | S-3685      |
| Tricresyl phosphate                                | 1330-78-5   | Methanol                | S-3880      |
| Tricyclohexyltin chloride                          | 3091-32-5   | Methanol                | S-4643      |
| Tricyclohexyltin hydroxide                         | 13121-70-5  | Methanol                | S-3687      |
| Tridecafluorohexane-1-sulfonic acid potassium salt | 3871-99-6   | Methanol                | S-5317      |
| n-Tridecane                                        | 629-50-5    | Methanol                | S-3690      |
| 1-Tridecanol                                       | 112-70-9    | Methanol                | S-5768      |
| Trietazine                                         | 1912-26-1   | Methanol                | S-3949      |
| Trietazine                                         | 1921-26-1   | Acetonitrile            | S-3949-ACE  |
| Triethanolamine                                    | 102-71-6    | Methanol                | S-3695      |
| 1,1,1-Triethoxyethane                              | 78-39-7     | Methanol                | S-3697      |
| Triethoxysilane                                    | 998-30-1    | Methanol                | S-5613      |
| Triethyl citrate                                   | 77-93-0     | Methanol                | S-4675      |
| Triethyl phosphate                                 | 78-40-0     | Methanol                | S-3700      |
| Triethylamine                                      | 121-44-8    | Methanol                | S-3702      |
| Triethylene diamine                                | 280-57-9    | Methanol                | S-4367      |
| Triethylene glycol                                 | 112-27-6    | Methanol                | S-3703      |
| Triethylene glycol dimethacrylate                  | 109-16-0    | Methanol                | S-3704      |
| Triethylene glycol dimethyl ether                  | 112-49-2    | Methanol                | S-5315      |
| Triethylene glycol monomethyl ether                | 112-35-6    | Methanol                | S-5660      |
| Triethylentetramine                                | 112-24-3    | Methanol                | S-4368      |
| o,o,o-Triethylphosphorothioate                     | 126-68-1    | Methanol                | S-3705      |
| Trifloxystrobin                                    | 141517-21-7 | Acetonitrile            | S-4836      |
| Trifloxystrobin                                    | 141517-21-7 | Acetone                 | S-4836-AC   |
| Triflumizole                                       | 68694-11-1  | Methanol                | S-4964      |
| Triflumuron                                        | 64628-44-0  | Acetonitrile            | S-5962-ACN  |
| Trifluoroacetic acid                               | 76-05-1     | HPLC Water              | S-4787      |
| 1,2,3-Trifluorobenzene                             | 1489-53-8   | Methanol                | S-4294      |
| Trifluoromethane                                   | 75-46-7     | Methanol                | S-4120      |
| 3-(trifluoromethyl)benzenamine                     | 98-16-8     | Acetone                 | S-4319      |
| a,a,a-Trifluorotoluene                             | 98-08-8     | Methanol                | S-3710      |

| Component @ 1,000 µg/mL                              | CAS#        | Matrix             | Catalog#  |
|------------------------------------------------------|-------------|--------------------|-----------|
| Trifluralin                                          | 1582-09-8   | Methanol           | S-3715    |
| Trifluralin                                          | 1582-09-8   | Acetone            | S-3715-AC |
| Triflusulfuron-methyl                                | 126535-15-7 | Deionized Water    | S-3929    |
| Triisopropyl naphthalenesulfonic acid sodium salt    | 1323-19-9   | Methanol           | S-3881    |
| 2,3,5-Trimethacarb                                   | 12407-86-2  | Methanol           | S-5933    |
| Trimethoprim                                         | 738-70-5    | Methanol           | S-4594    |
| 2,4,6-Trimethoxy-1,3,5-triazine                      | 877-89-4    | Acetone            | S-5592    |
| 1,2,4-Trimethyl-5-nitrobenzene                       | 610-91-3    | Methanol           | S-4377    |
| 1,3,5-Trimethyl-2-nitrobenzene                       | 603-71-4    | Methanol           | S-4378    |
| 2,3,4-Trimethyl-2-pentene                            | 565-77-5    | Methanol           | S-3752    |
| 2,4,4-Trimethyl-1-pentanol                           | 16325-63-6  | Methanol           | S-3745    |
| 2,4,4-Trimethyl-1-pentene                            | 107-39-1    | Methanol           | S-3750    |
| 2,4,4-Trimethyl-2-pentene                            | 107-40-4    | Methanol           | S-3755    |
| Trimethyl phosphate                                  | 512-56-1    | Methanol           | S-3740    |
| Trimethylamine                                       | 75-50-3     | Methanol           | S-3716    |
| Trimethylamine-a,a',a"-tricarboxylic acid            | N/A         | Methanol           | S-4554    |
| 2,4,5-Trimethylaniline                               | 137-17-7    | Methanol           | S-3718    |
| 1,2,3-Trimethylbenzene                               | 526-73-8    | Methanol           | S-3717    |
| 1,2,4-Trimethylbenzene                               | 95-63-6     | Methanol           | S-3720    |
| 1,3,5-Trimethylbenzene                               | 108-67-8    | Methanol           | S-3725    |
| 2,2,3-Trimethylbutane                                | 464-06-2    | Methanol           | S-3882    |
| 1,1,3-Trimethylcyclohexane                           | 3073-66-3   | Methanol           | S-3723    |
| 1,1,2-Trimethylcyclopentane                          | 4259-00-1   | Methanol           | S-3726    |
| 1,1,3-Trimethylcyclopentane                          | 4516-69-2   | Methanol           | S-3727    |
| 2,3,5-Trimethylnaphthalene                           | 2245-38-7   | Methanol           | S-3728    |
| 2,3,5-Trimethylnaphthalene                           | 2245-38-7   | Methylene Chloride | S-3728-MC |
| 2,3,6-Trimethylnaphthalene                           | 829-26-5    | Methanol           | S-3729    |
| 2,2,7-Trimethyloctane-3,5-dione                      | 69725-37-7  | Methanol           | S-4812    |
| Trimethylolpropane ethoxylate triacrylate            | 28961-43-5  | Methanol           | S-4106    |
| Trimethylolpropane propoxylate triacrylate           | 53879-54-2  | Methanol           | S-4107    |
| Trimethylolpropane triacrylate                       | 15625-89-5  | Methanol           | S-4108    |
| 2,2,4-Trimethylpentane                               | 540-84-1    | Methanol           | S-3730    |
| 2,3,4-Trimethylpentane                               | 565-75-3    | Methanol           | S-4258    |
| 2,3,5-Trimethylphenol                                | 697-82-5    | Methanol           | S-3733    |
| 2,3,6-Trimethylphenol                                | 2416-94-6   | Methanol           | S-4764    |
| 2,4,6-Trimethylphenol                                | 527-60-6    | Methanol           | S-3735    |
| 3,4,5-Trimethylphenol                                | 527-54-8    | Methanol           | S-4763    |
| Bis(trimethylsilyl)trifluoroacetamide 99% w/ 1% TMCS | 25561-30-2  | Methanol           | S-4618    |
| Trinexapac-ethyl                                     | 95266-40-3  | Methanol           | S-4839    |
| 1,3,5-Trinitrobenzene                                | 99-35-4     | Methanol           | S-3760    |
| 1,3,5-Trinitrobenzene                                | 99-35-4     | Acetone            | S-3760-AC |

| Component @ 1,000 µg/mL     | CAS#        | Matrix             | Catalog#    |
|-----------------------------|-------------|--------------------|-------------|
| Trioctyltin chloride        | 2587-76-0   | Methanol           | S-5515      |
| Triolein                    | 122-32-7    | Methanol           | S-4388      |
| Triphenyl phosphate         | 115-86-6    | Methanol           | S-3765      |
| Triphenyl phosphorothionate | 597-82-0    | Methanol           | S-6040      |
| Triphenylene                | 217-59-4    | Methylene Chloride | S-3764      |
| Triphenyltin chloride       | 639-58-7    | Methanol           | S-4642      |
| Tripentyl phosphate         | 513-08-6    | Hexane             | S-5702      |
| Tripentylene glycol         | 24800-44-0  | Methanol           | S-3766      |
| Triticonazole               | 131983-72-7 | Methanol           | S-4817      |
| Triticonazole               | 131983-72-7 | Acetonitrile       | S-4817-ACN  |
| Tritolyl phosphate          | 1330-78-5   | Methanol           | S-3770      |
| n-Tritriacontane            | 630-05-7    | Methanol           | S-3775      |
| Tropaeolin O indicator      | 547-57-9    | Methanol           | S-4507      |
| Tylosin                     | 1405-53-4   | Methanol           | S-5878      |
| n-Undecane                  | 1120-21-4   | Methanol           | S-3780      |
| 1-Undecanol                 | 112-42-5    | Methanol           | S-3781      |
| trans-2-Undecenal           | 53448-07-0  | Methanol           | S-4162      |
| Uracil                      | 66-22-8     | Methanol           | S-3782      |
| Urethane                    | 51-79-6     | Methanol           | S-1926      |
| Urox                        | 140-41-0    | Acetone            | S-3786      |
| Valeraldehyde               | 110-62-3    | Methanol           | S-3788      |
| Valeric acid                | 109-52-4    | Deionized Water    | S-3787      |
| Valeronitrile               | 110-59-8    | Methanol           | S-4239      |
| Vamidothion                 | 2275-23-2   | Methanol           | S-4695      |
| Vamidothion                 | 2275-23-2   | Acetonitrile       | S-4695-ACN  |
| Vamidothion-sulfoxide       | 20300-00-9  | Acetonitrile       | S-5931      |
| Vanillin                    | 121-33-5    | Methanol           | S-3884      |
| Velpar                      | 51235-04-2  | Methanol           | S-3790      |
| Vernolate                   | 1929-77-7   | Methanol           | S-3795      |
| Vinclozolin                 | 50471-44-8  | Methanol           | S-3796      |
| Vinclozolin                 | 50471-44-8  | Acetone            | S-3796-AC   |
| 1-Vinyl-2-pyrrolidinone     | 88-12-0     | Methanol           | S-3809      |
| 4-Vinyl-1-cyclohexene       | 100-40-3    | Methanol           | S-3813      |
| 5-Vinyl-2-norbornene        | 3048-64-4   | Methanol           | S-4041      |
| Vinyl acetate               | 108-05-4    | Methanol           | S-3800      |
| Vinyl bromide               | 593-60-2    | Methanol           | S-4049      |
| Vinyl chloride              | 75-01-4     | Methanol           | S-3805      |
| 4-Vinylphenol               | 2628-17-3   | Methanol           | S-4692      |
| 2-Vinylpyridine             | 100-69-6    | Methanol           | S-5119      |
| Vinyltoluene                | 25013-15-4  | Methanol           | S-3810      |
| Vinyltrimethoxysilane       | 2768-02-7   | Methanol           | S-5101      |
| Vitamin-A-alcohol           | 68-26-8     | Toluene            | S-3820      |
| Vitamin-A-alcohol           | 68-26-8     | Methanol           | S-3820-METH |
| Vitamin C                   | 50-81-7     | Methanol           | S-4034      |

| Component @ 1,000 µg/mL   | CAS#       | Matrix   | Catalog# |
|---------------------------|------------|----------|----------|
| Vitamin D3                | 67-97-0    | Methanol | S-3815   |
| Warfarin                  | 81-81-2    | Methanol | S-3825   |
| m-Xylene                  | 108-38-3   | Methanol | S-3830   |
| o-Xylene                  | 95-47-6    | Methanol | S-3835   |
| o-Xylene-d10              | 56004-61-6 | Methanol | S-3836   |
| p-Xylene                  | 106-42-3   | Methanol | S-3840   |
| p-Xylene-d10              | 41051-88-1 | Methanol | S-3839   |
| m&p-Xylenes               | NA         | Methanol | S-3844   |
| Xylenes (mixed)           | 1330-20-7  | Methanol | S-3845   |
| Zinc sulfate heptahydrate | 7446-20-0  | Methanol | S-3906   |
| Zineb                     | 12122-67-7 | Methanol | S-4696   |
| Zinophos                  | 297-97-2   | Methanol | S-3850   |
| Ziram                     | 137-30-4   | Methanol | S-3865   |



## HPLC/LC-MS Single-Component Organic 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 prefilled 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.

| Component @ 1,000 µg/mL | CAS#        | Matrix            | Catalog#     |
|-------------------------|-------------|-------------------|--------------|
| Abamectin               | 71751-41-2  | HPLC Acetonitrile | LCS-6014     |
| Abate                   | 3383-96-8   | HPLC Acetonitrile | LCS-102      |
| Acarol (Bromopropylate) | 18181-80-1  | HPLC Acetonitrile | LCS-103-ACN  |
| Acetaldehyde-2,4-DNPH   | 1019-57-4   | HPLC Acetonitrile | LCS-5756     |
| Acetamiprid             | 135410-20-7 | HPLC Acetonitrile | LCS-4677-ACN |
| Acrinathrin             | 101007-06-1 | HPLC Acetonitrile | LCS-6248     |
| Acrolein-2,4-DNPH       | 888-54-0    | HPLC Acetonitrile | LCS-5758     |
| Aldicarb                | 116-06-3    | HPLC Acetonitrile | LCS-190      |
| Allethrin               | 584-79-2    | HPLC Acetonitrile | LCS-4240     |
| Amidosulfuron           | 120923-37-7 | HPLC Acetonitrile | LCS-6228     |
| Amoxicillin             | 26787-78-0  | HPLC Acetonitrile | LCS-5936     |
| Antipyrine              | 60-80-0     | HPLC Methanol     | LCS-5896     |
| Arabinose               | 147-81-9    | HPLC Water        | LCS-4513     |
| Azaconazole             | 60207-31-0  | HPLC Acetonitrile | LCS-6276     |
| Azimsulfuron            | 120162-55-2 | HPLC Acetonitrile | LCS-6229     |
| Baygon (Propoxur)       | 114-26-1    | HPLC Acetonitrile | LCS-3200-ACN |
| Baytan (Triadimenol)    | 55219-65-3  | HPLC Acetonitrile | LCS-3996     |
| Baythroid               | 68359-37-5  | HPLC Acetonitrile | LCS-376      |
| Baythroid               | 68359-37-5  | Acetone           | LCS-376-AC   |
| Benalaxyl               | 71626-11-4  | HPLC Acetonitrile | LCS-4262     |
| Bentazon                | 25057-89-0  | HPLC Acetonitrile | LCS-395      |
| Benthiocarb             | 28249-77-6  | Acetone           | LCS-400-AC   |
| Benthiocarb             | 28249-77-6  | HPLC Acetonitrile | LCS-400-ACN  |
| Benzalkonium chloride   | 63449-41-2  | LCMS Water        | LCS-5115     |
| Benzo(b)fluoranthene    | 205-99-2    | Acetone           | LCS-435      |
| Benzotriazole           | 95-14-7     | HPLC Methanol     | LCS-4121     |
| gamma-BHC               | 58-89-9     | Acetone           | LCS-485-AC   |
| Bifenazate              | 149877-41-8 | HPLC Acetonitrile | LCS-6082     |
| Bifenthrin              | 82657-04-3  | HPLC Acetonitrile | LCS-494-ACN  |

| Component @ 1,000 µg/mL     | CAS#        | Matrix            | Catalog#     |
|-----------------------------|-------------|-------------------|--------------|
| Bioallethrin                | 28057-48-9  | Acetone           | LCS-496      |
| Bitertanol (mix of isomers) | 55179-31-2  | HPLC Acetonitrile | LCS-4679     |
| Boscalid                    | 188425-85-6 | HPLC Acetonitrile | LCS-4815     |
| Bromfevinfos                | 33399-00-7  | HPLC Methanol     | LCS-6043     |
| Bromoxynil                  | 1689-84-5   | HPLC Acetonitrile | LCS-575-ACN  |
| Bromuconazole               | 116255-48-2 | Acetone           | LCS-6007     |
| Bupirimate                  | 41483-43-6  | HPLC Acetonitrile | LCS-4272     |
| Butoxycarboxim              | 34681-23-7  | HPLC Acetonitrile | LCS-6176     |
| Cadusafos                   | 95465-99-9  | HPLC Acetonitrile | LCS-4826     |
| Caffeine-d9                 | 77238-85-8  | HPLC Methanol     | LCS-5493     |
| Carbendazim (100 µg/mL)     | 10605-21-7  | HPLC Methanol     | LCS-733      |
| Carboxin                    | 5234-68-4   | HPLC Acetonitrile | LCS-760-ACN  |
| Chlorantraniliprole         | 500008-45-7 | HPLC Acetonitrile | LCS-6127     |
| Chlorbromuron               | 13360-45-7  | HPLC Acetonitrile | LCS-769      |
| Chlorflazuron               | 71422-67-8  | HPLC Acetonitrile | LCS-4017     |
| Chlormequat chloride        | 999-81-5    | HPLC Acetonitrile | LCS-4838     |
| Chlorimuron-ethyl           | 90982-32-4  | LCMS Acetonitrile | LCS-3927     |
| Chlorobenzilate             | 510-15-6    | HPLC Acetonitrile | LCS-820-ACN  |
| Chlorosulfuron              | 64902-72-3  | HPLC Acetonitrile | LCS-4995-ACN |
| Chlorpyrifos oxon           | 5598-15-2   | HPLC Acetonitrile | LCS-968      |
| Chlozolate                  | 84332-86-5  | HPLC Acetonitrile | LCS-4286     |
| Cholesterol                 | 57-88-5     | HPLC Methanol     | LCS-4702     |
| Chromafenozide              | 143807-66-3 | HPLC Acetonitrile | LCS-6205     |
| Cimetidine                  | 51481-61-9  | HPLC Methanol     | LCS-5897     |
| Cinosulfuron                | 94593-91-6  | HPLC Acetonitrile | LCS-6230     |
| Clethodim                   | 99129-21-2  | HPLC Acetonitrile | LCS-6083-ACN |
| Clindamycin                 | 21462-39-5  | HPLC Methanol     | LCS-5569     |
| Clofentazine                | 74115-24-5  | HPLC Acetonitrile | LCS-5772     |
| Clothianidin                | 210880-92-5 | HPLC Acetonitrile | LCS-6027     |



| Component @ 1,000 µg/mL                       | CAS#        | Matrix            | Catalog#     |
|-----------------------------------------------|-------------|-------------------|--------------|
| Clothianidin                                  | 210880-92-5 | Acetone           | LCS-6027-AC  |
| Cyanofenphos                                  | 13067-93-1  | Acetone           | LCS-5958-AC  |
| Cyanophos                                     | 2636-26-2   | HPLC Acetonitrile | LCS-1006     |
| Cyazofamid                                    | 120116-88-3 | HPLC Acetonitrile | LCS-6008     |
| Cyclophosphamide                              | 6055-19-2   | HPLC Methanol     | LCS-5883     |
| Cycloprothrin                                 | 63935-38-6  | HPLC Acetonitrile | LCS-6292     |
| Cyhalofop-butyl                               | 122008-85-9 | HPLC Acetonitrile | LCS-6101     |
| gamma-Cyhalothrin                             | 76703-62-3  | Acetone           | LCS-6376     |
| zeta-Cypermethrin                             | 52315-07-8  | Acetone           | LCS-6401     |
| D-trans-Cyphenothrin<br>(mix of isomers)      | 39515-40-7  | Acetone           | LCS-4463     |
| Cyproconazole (mix of isomers)                | 94361-06-5  | HPLC Acetonitrile | LCS-4863     |
| Cyprodinil                                    | 121552-61-2 | HPLC Acetonitrile | LCS-4622     |
| Cyprofuram                                    | 69581-33-5  | HPLC Acetonitrile | LCS-6206     |
| DEF                                           | 78-48-8     | Acetone           | LCS-1130     |
| Demeton-S Sulfone                             | 2496-91-5   | HPLC Acetonitrile | LCS-5774-ACN |
| Devrinol                                      | 15299-99-7  | HPLC Acetonitrile | LCS-1150-ACN |
| Di-allate (mix of isomers)                    | 2303-16-4   | Acetone           | LCS-1155     |
| 2,4-Diaminoanisole sulfate salt<br>hydrate    | 123333-56-2 | HPLC Water        | LCS-6157     |
| Dichlorfenthion                               | 97-17-6     | Acetone           | LCS-1280     |
| Dichlorprop-P                                 | 15165-67-0  | HPLC Acetonitrile | LCS-6021     |
| Diclobutrazole                                | 75736-33-3  | HPLC Acetonitrile | LCS-6056     |
| Diclofenac                                    | 15307-79-6  | HPLC Methanol     | LCS-5886     |
| Dicrotophos                                   | 141-66-2    | HPLC Acetonitrile | LCS-1500     |
| Dieldrin                                      | 60-57-1     | Acetone           | LCS-1510-AC  |
| Diflubenzuron                                 | 35367-38-5  | HPLC Acetonitrile | LCS-1537-ACN |
| 3,5-Diiodo-4-hydroxybenzonitrile              | 1689-83-4   | Acetone           | LCS-1554     |
| 3,5-Diiodo-4-hydroxybenzonitrile              | 1689-83-4   | HPLC Acetonitrile | LCS-1554-ACN |
| Dimefuron                                     | 34205-21-5  | HPLC Methanol     | LCS-4617     |
| Dimethoate                                    | 60-51-5     | HPLC Acetonitrile | LCS-1560     |
| Dimethomorph                                  | 110488-70-5 | HPLC Acetonitrile | LCS-3970-ACN |
| Dimethyl-p-nitrophenylphosphate               | 950-35-6    | Acetone           | LCS-1669     |
| N-2,4-Dimethylphenyl-N'-<br>methylformamidine | 33089-74-6  | HPLC Acetonitrile | LCS-6279     |
| N-(2,4-Dimethylphenyl)formamide               | 60397-77-5  | HPLC Acetonitrile | LCS-6280     |
| Dimethylvinphos                               | 2274-67-1   | HPLC Methanol     | LCS-6042     |
| 1,7-Dimethylxanthine                          | 611-59-6    | HPLC Methanol     | LCS-5067     |
| Diniconazole                                  | 83657-24-3  | HPLC Acetonitrile | LCS-6057     |
| Dioxydemeton-S-methyl                         | 17040-19-6  | HPLC Acetonitrile | LCS-3969     |
| Diuron                                        | 330-54-1    | HPLC Acetonitrile | LCS-1760     |
| DMST                                          | 66840-71-9  | HPLC Acetonitrile | LCS-6018     |
| Dodine                                        | 2439-10-3   | HPLC Acetonitrile | LCS-1807-ACN |
| Doramectin                                    | 117704-25-3 | HPLC Acetonitrile | LCS-6224     |
| Dylox                                         | 52-68-6     | Acetone           | LCS-1816     |

| Component @ 1,000 µg/mL         | CAS#        | Matrix            | Catalog#      |
|---------------------------------|-------------|-------------------|---------------|
| Emamectin                       | 119791-41-2 | HPLC Acetonitrile | LCS-5507-ACN  |
| Emamectin-benzoate              | 155569-91-8 | HPLC Acetonitrile | LCS-6293      |
| Empenthrin                      | 54406-48-3  | HPLC Acetonitrile | LCS-6293      |
| Endosulfan                      | 115-29-7    | Acetone           | LCS-1824-AC   |
| Epoxiconazole                   | 133855-98-8 | HPLC Acetonitrile | LCS-4923-ACN  |
| Eprinomectin                    | 123997-26-2 | HPLC Acetonitrile | LCS-6226      |
| 17-alpha-Estradiol              | 57-91-0     | HPLC Methanol     | LCS-5068      |
| 17-beta-Estradiol               | 50-28-2     | HPLC Methanol     | LCS-5070      |
| Ethiofencarb-sulfoxide          | 53380-22-6  | HPLC Acetonitrile | LCS-6184      |
| Ethiofencarb sulfone            | 53380-23-7  | HPLC Acetonitrile | LCS-6183      |
| Ethoxysulfuron                  | 126801-58-9 | HPLC Acetonitrile | LCS-6231      |
| 2-Ethylhexyl diphenyl phosphate | 1241-94-7   | HPLC Methanol     | LCS-6041      |
| Etofenprox                      | 80844-07-1  | HPLC Acetonitrile | LCS-6104      |
| Etoazole                        | 153233-91-1 | HPLC Acetonitrile | LCS-5670      |
| Famoxadone                      | 131807-57-3 | HPLC Acetonitrile | LCS-5462      |
| Fenamidone                      | 161326-34-7 | HPLC Acetonitrile | LCS-4966      |
| Fenarimol                       | 60168-88-9  | HPLC Acetonitrile | LCS-1997      |
| Fenazaquin                      | 120928-09-8 | HPLC Acetonitrile | LCS-6019      |
| Fenbutatin-oxide                | 13356-08-6  | Acetone           | LCS-1999-AC   |
| Fenbutatin-oxide                | 13356-08-6  | HPLC Acetonitrile | LCS-1999-ACN  |
| Fenbutatin-oxide                | 13356-08-6  | HPLC Methanol     | LCS-1999-MEOH |
| Fenitrothion                    | 122-14-5    | Acetone           | LCS-2001-AC   |
| Fenpyroximate                   | 111812-58-9 | LCMS Acetonitrile | LCS-6387      |
| (E)-Fenpyroximate               | 134098-61-6 | HPLC Acetonitrile | LCS-6179      |
| Fensulfothion-oxon              | 6552-21-2   | HPLC Acetonitrile | LCS-6209      |
| Fensulfothion-oxon-sulfone      | 6132-17-8   | HPLC Acetonitrile | LCS-6210      |
| Fipronil                        | 120068-37-3 | HPLC Methanol     | LCS-4004      |
| Fipronil                        | 120068-37-3 | HPLC Acetonitrile | LCS-4004-ACN  |
| Fluazifop-butyl                 | 69806-50-4  | HPLC Methanol     | LCS-4905      |
| Flubenzimin                     | 37893-02-0  | Acetone           | LCS-6385      |
| Fludioxonil                     | 131341-86-1 | HPLC Acetonitrile | LCS-2061      |
| Flufenacet                      | 142459-58-3 | HPLC Acetonitrile | LCS-4906      |
| Flufenoxuron                    | 101463-69-8 | Acetone           | LCS-6009      |
| Flufenoxuron                    | 101463-69-8 | HPLC Acetonitrile | LCS-6009-ACN  |
| Flumetsulam                     | 98967-40-9  | LCMS Acetonitrile | LCS-5064      |
| Flumiclorac-pentyl              | 87546-18-7  | LCMS Acetonitrile | LCS-6416      |
| Fluometuron                     | 2164-17-2   | LCMS Acetonitrile | LCS-2026      |
| Fluquinconazole                 | 136426-54-5 | Acetone           | LCS-6103      |
| Flusilazole                     | 85509-19-9  | HPLC Acetonitrile | LCS-4832      |
| tau-Fluvalinate                 | 102851-06-9 | HPLC Acetonitrile | LCS-4161-ACN  |
| Folicur                         | 107534-96-3 | HPLC Acetonitrile | LCS-2056      |
| Folicur                         | 107534-96-3 | Acetone           | LCS-2056-AC   |
| Forchlorfenuron                 | 68157-60-8  | HPLC Acetonitrile | LCS-6022      |
| Formetanate HCl                 | 23422-53-9  | HPLC Acetonitrile | LCS-2066-ACN  |

| Component @ 1,000 µg/mL   | CAS#        | Matrix            | Catalog#       | Component @ 1,000 µg/mL                    | CAS#        | Matrix            | Catalog#     |
|---------------------------|-------------|-------------------|----------------|--------------------------------------------|-------------|-------------------|--------------|
| Fosthiazate               | 98886-44-3  | Acetone           | LCS-6080       | Mesotrione                                 | 104206-82-8 | HPLC Acetonitrile | LCS-5044     |
| Fructose                  | 57-48-7     | HPLC Water        | LCS-4189-HPLCW | Metaflumizone                              | 139968-49-3 | HPLC Acetonitrile | LCS-6015     |
| Fuberidazole              | 3878-19-1   | HPLC Acetonitrile | LCS-6318       | Metalaxyl                                  | 57837-19-1  | HPLC Acetonitrile | LCS-6334     |
| Furalaxyl                 | 57646-30-7  | HPLC Acetonitrile | LCS-6319       | Metasystox I (TM)                          | 919-86-8    | Acetone           | LCS-4205     |
| Furathiocarb              | 65907-30-4  | Acetone           | LCS-5464-AC    | Metconazole                                | 125116-23-6 | Acetone           | LCS-6010     |
| Furmecyclox               | 60568-05-0  | HPLC Acetonitrile | LCS-6180       | Methiocarb                                 | 2032-65-7   | HPLC Acetonitrile | LCS-2385     |
| Galactose                 | 59-23-4     | HPLC Water        | LCS-4512       | Methoxyfenozide                            | 161050-58-4 | HPLC Acetonitrile | LCS-6033     |
| d-Glucose                 | 921-60-8    | HPLC Water        | LCS-5539       | Metribuzin                                 | 21087-64-9  | HPLC Acetonitrile | LCS-2620     |
| Glucose                   | 50-99-7     | HPLC Acetonitrile | LCS-5489       | Monocrotophos                              | 6923-22-4   | HPLC Acetonitrile | LCS-2645     |
| Halosulfuron-methyl       | 100784-20-1 | HPLC Acetonitrile | LCS-6232       | Moxidectin                                 | 113507-06-5 | HPLC Acetonitrile | LCS-6198     |
| Haloxypop-methyl          | 69806-40-2  | HPLC Acetonitrile | LCS-6186       | Nitenpyram                                 | 150824-47-8 | HPLC Acetonitrile | LCS-6187     |
| Heptachlor                | 76-44-8     | Acetone           | LCS-2100-AC    | 4-Nitrophenol                              | 100-02-7    | Methanol          | LCS-2730     |
| Hexaconazole              | 79983-71-4  | HPLC Acetonitrile | LCS-5465       | Norflurazon                                | 27314-13-2  | HPLC Acetonitrile | LCS-2800-ACN |
| Hexaflumuron              | 86479-06-3  | HPLC Acetonitrile | LCS-6256       | Novaluron                                  | 116714-46-6 | HPLC Acetonitrile | LCS-6122     |
| Hexythiazox               | 78587-05-0  | Acetone           | LCS-6028       | Omite                                      | 2312-35-8   | Acetone           | LCS-2895     |
| Hydramethylnon            | 67485-29-4  | HPLC Acetonitrile | LCS-6196       | Omite                                      | 2312-35-8   | HPLC Acetonitrile | LCS-2895-ACN |
| Hyodeoxycholic acid       | 83-49-8     | HPLC Acetonitrile | LCS-6177       | Oxadixyl                                   | 77732-09-3  | Acetone           | LCS-2903-AC  |
| Imazalil                  | 35554-44-0  | HPLC Acetonitrile | LCS-2346-ACN   | Oxamyl Oxime                               | 30558-43-1  | HPLC Acetonitrile | LCS-6123     |
| Imazosulfuron             | 122548-33-8 | HPLC Acetonitrile | LCS-6233       | Paclobutrazol                              | 76738-62-0  | HPLC Acetonitrile | LCS-4345-ACN |
| Imibenconazole            | 86598-92-7  | HPLC Acetonitrile | LCS-6107       | Pencycuron                                 | 66063-05-6  | HPLC Acetonitrile | LCS-5171     |
| Imibenconazole            | 86598-92-7  | Acetone           | LCS-6107-AC    | Pencycuron                                 | 66063-05-6  | Acetone           | LCS-5171-AC  |
| Ipconazole                | 125225-28-7 | HPLC Acetonitrile | LCS-6278       | Pentachloronitrobenzene                    | 82-68-8     | Acetone           | LCS-2945-AC  |
| Iprovalicarb              | 140923-17-7 | Acetone           | LCS-6029       | Perfluoro-n-octane Sulfonate Sodium (PFOS) | 1763-23-1   | HPLC Methanol     | LCS-4951     |
| Iprovalicarb              | 140923-17-7 | HPLC Acetonitrile | LCS-6029-ACN   | Phorate sulfoxide                          | 2588-03-6   | Acetone           | LCS-5777     |
| Isocarbamid               | 30979-48-7  | HPLC Acetonitrile | LC-6215        | Phoxim                                     | 14816-18-3  | HPLC Acetonitrile | LCS-4689     |
| Isocarboxophos            | 24353-61-5  | HPLC Acetonitrile | LCS-6275       | Picoxystrobin                              | 117428-22-5 | HPLC Acetonitrile | LCS-5467     |
| Isofenphos-methyl         | 99675-03-3  | HPLC Methanol     | LCS-5998       | Piperonyl butoxide                         | 51-03-6     | HPLC Acetonitrile | LCS-3117-ACN |
| Isoxaben                  | 82558-50-7  | HPLC Acetonitrile | LCS-5275       | Piperophos                                 | 24151-93-7  | Acetone           | LCS-6099     |
| Isoxaflutole              | 141112-29-0 | HPLC Acetonitrile | LCS-6310       | Pirimicarb-desmethyl                       | 30614-22-3  | HPLC Acetonitrile | LCS-6023     |
| Kelthane 1.5%o,p'-95%p,p' | 115-32-2    | Acetone           | LCS-2335-AC    | Pirimiphos-ethyl                           | 23505-41-1  | HPLC Acetonitrile | LCS-3120     |
| 3-Keto-carbofuran         | 16709-30-1  | Acetone           | LCS-6129       | Prallethrin (mix of isomers)               | 23031-36-9  | HPLC Acetonitrile | LCS-5783     |
| Kresoxim-methyl           | 143390-89-0 | HPLC Acetonitrile | LCS-4833       | Pretilachlor                               | 51218-49-6  | HPLC Acetonitrile | LCS-6092     |
| Linuron                   | 330-55-2    | HPLC Acetonitrile | LCS-2350       | Procymidone                                | 32809-16-8  | HPLC Acetonitrile | LCS-3871-ACN |
| Lontrel (clopyralid)      | 1702-17-6   | LCMS Acetonitrile | LCS-2354       | Profenofos                                 | 41198-08-7  | HPLC Acetonitrile | LCS-3134-ACN |
| Lufenuron                 | 103055-07-8 | HPLC Acetonitrile | LCS-6181       | Propamocarb                                | 24579-73-5  | HPLC Acetonitrile | LCS-5468     |
| Maltodextrin              | 9050-36-6   | HPLC Water        | LCS-5705       | Propaquizafop                              | 111479-05-1 | HPLC Acetonitrile | LCS-6034     |
| Mandipropamid             | 374726-62-2 | HPLC Acetonitrile | LCS-6031       | Prophos                                    | 13194-48-4  | HPLC Acetonitrile | LCS-3185     |
| Mannose                   | 3458-28-4   | HPLC Water        | LCS-4514       | Prophos                                    | 13194-48-4  | Acetone           | LCS-3185-AC  |
| Mebendazole               | 31431-39-7  | HPLC Acetonitrile | LCS-4603-ACN   | Propiconazole (tilt)                       | 60207-90-1  | HPLC Acetonitrile | LCS-3186     |
| Mecarbam                  | 2595-54-2   | HPLC Acetonitrile | LCS-4847       | Propineb                                   | 12071-83-9  | Acetone           | LCS-4691     |
| D,L-Mecoprop              | 93-65-2     | HPLC Methanol     | LCS-6372       | Prothioconazole                            | 178928-70-6 | HPLC Methanol     | LCS-4904     |
| Mepanipyrim               | 110235-47-7 | HPLC Acetonitrile | LCS-6032       | Prothioconazole                            | 178928-70-6 | HPLC Acetonitrile | LCS-4904-ACN |
| Mephosfolan               | 950-10-7    | HPLC Acetonitrile | LCS-6288       | Prothioconazole-desthio                    | 120983-64-4 | HPLC Acetonitrile | LCS-6189     |
| Mepiquat chloride         | 24307-26-4  | HPLC Acetonitrile | LCS-6323       |                                            |             |                   |              |

| Component @ 1,000 µg/mL | CAS#        | Matrix            | Catalog#       | Component @ 1,000 µg/mL            | CAS#        | Matrix            | Catalog#     |
|-------------------------|-------------|-------------------|----------------|------------------------------------|-------------|-------------------|--------------|
| Pymetrozin              | 123312-89-0 | HPLC Acetonitrile | LCS-4967       | Tebutam                            | 35256-85-0  | HPLC Acetonitrile | LCS-6219     |
| Pyraflufen              | 129630-17-7 | LCMS Acetonitrile | LCS-6417       | Teflubenzuron                      | 83121-18-0  | HPLC Acetonitrile | LCS-5458     |
| Pyraflufen-ethyl        | 129630-19-9 | HPLC Acetonitrile | LCS-6024-ACN   | Tepraloxymdim                      | 149979-41-9 | HPLC Acetonitrile | LCS-6178     |
| Pyrasulfotole           | 365400-11-9 | HPLC Acetonitrile | LCS-5872       | Terbufos-sulfoxide                 | 10548-10-4  | LCMS Acetonitrile | LCS-6307     |
| Pyridaben               | 96489-71-3  | HPLC Acetonitrile | LCS-5779       | 1,2,4,5-Tetrachloro-3-nitrobenzene | 117-18-0    | HPLC Acetonitrile | LCS-3415-ACN |
| Pyridaphenthion         | 119-12-0    | HPLC Acetonitrile | LCS-4829       | Tetrachlorvinphos (Z)              | 22248-79-9  | HPLC Acetonitrile | LCS-6037     |
| Pyrifeno                | 88283-41-4  | Acetone           | LCS-5291-AC    | Tetraconazole                      | 112281-77-3 | Acetone           | LCS-6089     |
| Pyrimethanil            | 53112-28-0  | HPLC Acetonitrile | LCS-5225       | Thiabendazole                      | 148-79-8    | HPLC Acetonitrile | LCS-3490     |
| Pyriproxifen            | 95737-68-1  | Acetone           | LCS-4969       | Thiacloprid                        | 111988-49-9 | Acetone           | LCS-6026     |
| Pyriproxifen            | 95737-68-1  | HPLC Acetonitrile | LCS-4969-ACN   | Thiamethoxam                       | 153719-23-4 | HPLC Acetonitrile | LCS-5173     |
| Pyroxulam               | 422556-08-9 | HPLC Acetonitrile | LCS-5875       | Thiodicarb                         | 59669-26-0  | HPLC Acetonitrile | LCS-3493-ACN |
| Quinoxifen              | 124495-18-7 | Acetone           | LCS-6059       | Thiram                             | 137-26-8    | Acetone           | LCS-3499-AC  |
| Raffinose               | 512-69-6    | HPLC Water        | LCS-4844       | Tokuthion/Prothiophos              | 34643-46-4  | HPLC Acetonitrile | LCS-3225-ACN |
| Reserpine               | 50-55-5     | Methanol: Acetone | LCS-3249       | Tolclofos-methyl                   | 57018-04-9  | HPLC Acetonitrile | LCS-4835-ACN |
| Resorcinol              | 108-46-3    | Acetone           | LCS-3250-DMF   | Toltrazuril                        | 69004-03-1  | HPLC Acetonitrile | LCS-5874     |
| Roxithromycin           | 80214-83-1  | HPLC Methanol     | LCS-5876       | Tolytriazole                       | 29385-43-1  | HPLC Acetonitrile | LCS-5596     |
| Safrothin               | 31218-83-4  | Acetone           | LCS-3260       | Tralkoxydim                        | 87820-88-0  | HPLC Acetonitrile | LCS-5470     |
| Salbutamol              | 18559-94-9  | Methanol          | LCS-4748       | Tralkoxydim                        | 87820-88-0  | Acetone           | LCS-5470-AC  |
| Sanmarton               | 51630-58-1  | Acetone           | LCS-3261-AC    | Transluthrin                       | 118712-89-3 | Acetone           | LCS-6375     |
| Selamectin              | 165108-07-6 | HPLC Acetonitrile | LCS-6227       | Triasulfuron                       | 82097-50-5  | HPLC Acetonitrile | LCS-5003     |
| Sethoxydim              | 74051-80-2  | HPLC Acetonitrile | LCS-3266-ACN   | Tribenuron-methyl                  | 101200-48-0 | LCMS Acetonitrile | LCS-4998     |
| Spinetoram              | 187166-40-1 | HPLC Acetonitrile | LCS-6012       | Triclosan                          | 3380-34-5   | HPLC Methanol     | LCS-4382     |
| Spinosad A&D            | 168316-95-8 | HPLC Acetonitrile | LCS-6025       | Triflumizole                       | 68694-11-1  | HPLC Acetonitrile | LCS-4964     |
| Spirodiclofen           | 148477-71-8 | HPLC Acetonitrile | LCS-5295       | Triforine                          | 26644-46-2  | HPLC Acetonitrile | LCS-6273     |
| Spiromesifen            | 283594-90-1 | HPLC Acetonitrile | LCS-6035       | Triphenyl phosphate                | 115-86-6    | HPLC Acetonitrile | LCS-3765     |
| Sucrose                 | 57-50-1     | HPLC Water        | LCS-3308-HPLCW | Triphenyl phosphorothionate        | 597-82-0    | HPLC Methanol     | LCS-6040     |
| Sulfadimidine           | 57-68-1     | Acetone           | LCS-4587       | Tris(dichloroisopropyl)phosphate   | 13674-87-8  | HPLC Acetonitrile | LCS-4381-ACN |
| Sulfentrazone           | 122836-35-5 | Acetone           | LCS-6013       | Tritosulfuron                      | 142469-14-5 | HPLC Acetonitrile | LCS-6234     |
| Sulfentrazone           | 122836-35-5 | LCMS Acetonitrile | LCS-6013-ACN   | Velpar                             | 51235-04-2  | Acetone           | LCS-3790     |
| Systhane                | 88671-89-0  | Acetone           | LCS-3306       | Xylitol                            | 87-99-0     | HPLC Water        | LCS-6150     |
| Systhane                | 88671-89-0  | HPLC Acetonitrile | LCS-3306-ACN   | Xylose                             | 58-86-6     | HPLC Water        | LCS-4515     |
| Tebufenozide            | 112410-23-8 | Acetone           | LCS-6036       | Zinophos                           | 297-97-2    | Acetone           | LCS-3850     |
| Tebufenpyrad            | 119168-77-3 | HPLC Acetonitrile | LCS-5226       | Zoxamide                           | 156052-68-5 | HPLC Acetonitrile | LCS-6090     |

## Helpful Hint:

Looking for parts in Methanol?  
See pages 9-43.



## SECTION 2

# Volatiles

Single & Multi-Component Standards  
for GC & GC-MS

# THE 60 BIG MIX

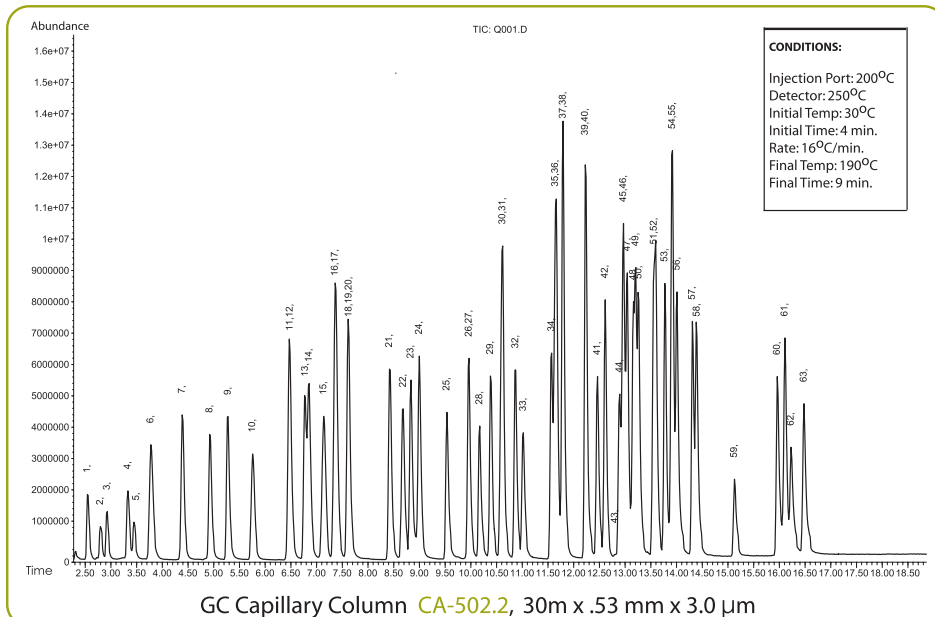
The Most routinely analyzed Volatile Compounds in ONE ampule  
All compounds checked on our GC-MS Systems  
Highest quality at an affordable price

## Compound List

Each at 1,000 µg/mL

- 1 Dichlorodifluoromethane
- 2 Chloromethane
- 3 Vinyl Chloride
- 4 Bromomethane
- 5 Chloroethane
- 6 Trichlorofluoromethane
- 7 1,1-Dichloroethene
- 8 Methylene Chloride
- 9 trans-1,2-Dichloroethene
- 10 1,1-Dichloroethane
- 11 2,2-Dichloropropane
- 12 cis-1,2-Dichloroethene
- 13 Bromochloromethane
- 14 Chloroform
- 15 1,1,1-Trichloroethane
- 16 1,1-Dichloropropene
- 17 Carbon Tetrachloride
- 18 1,2-Dichloroethane
- 19 1,2-Dichloroethane-d4\*
- 20 Benzene
- 21 Trichloroethene
- 22 1,2-Dichloropropane
- 23 Dibromomethane
- 24 Bromodichloromethane
- 25 cis-1,3-Dichloropropene
- 26 Toluene-d8\*
- 27 Toluene
- 28 trans-1,3-Dichloropropene
- 29 1,1,2-Trichloroethane
- 30 Tetrachloroethene
- 31 1,3-Dichloropropane
- 32 Dibromochloromethane
- 33 1,2-Dibromoethane
- 34 Chlorobenzene
- 35 1,1,1,2-Tetrachloroethane
- 36 Ethylbenzene
- 37 m-Xylene
- 38 p-Xylene
- 39 o-Xylene
- 40 Styrene
- 41 Bromoform
- 42 Isopropylbenzene
- 43 4-Bromofluorobenzene (BFB)\*
- 44 1,1,2,2-Tetrachloroethane
- 45 Bromobenzene
- 46 1,2,3-Trichloropropane
- 47 n-Propylbenzene
- 48 2-Chlorotoluene
- 49 1,3,5-Trimethylbenzene
- 50 4-Chlorotoluene
- 51 tert-Butylbenzene
- 52 1,2,4-Trimethylbenzene
- 53 sec-Butylbenzene
- 54 1,3-Dichlorobenzene
- 55 p-Isopropyltoluene
- 56 1,4-Dichlorobenzene
- 57 n-Butylbenzene
- 58 1,2-Dichlorobenzene
- 59 1,2-Dibromo-3-Chloropropane
- 60 1,2,4-Trichlorobenzene
- 61 Hexachlorobutadiene
- 62 Naphthalene
- 63 1,2,3-Trichlorobenzene

\* System Monitoring Compounds



## Also Available at:

|            |                         |
|------------|-------------------------|
| 200 µg/mL  | Part #: 60-BIG-MIX-200  |
| 1000 µg/mL | Part #: 60-BIG-MIX      |
| 2000 µg/mL | Part #: 60-BIG-MIX-2000 |

## Standard

Part #: 60-BIG-MIX  
1 mL ampule at 1000 µg/mL  
in Methanol P & T

Used for GC-MS Analysis of Volatile Organics.

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## Volatiles

## METHOD 502

EPA method 502.1 is a general analytical method for the monitoring of halogenated, portable VOCs in drinking water and raw water sources by GC and a Hall Detector.

## Mix A

## 15 Certified Components:

|                      |                           |
|----------------------|---------------------------|
| Bromoform            | trans-1,2-Dichloroethene  |
| Carbon tetrachloride | 1,2-Dichloropropane       |
| Chlorobenzene        | Methylene chloride        |
| Chloroform           | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane | Tetrachloroethene         |
| 1,1-Dichloroethane   | 1,1,2-Trichloroethane     |
| 1,2-Dichloroethane   | Trichloroethene           |
| 1,1-Dichloroethene   |                           |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-AH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: CLPV-A**

## Mix B - Purgeable gases

## 6 Certified Components:

|               |                         |
|---------------|-------------------------|
| Bromomethane  | Dichlorodifluoromethane |
| Chloroethane  | Trichlorofluoromethane  |
| Chloromethane | Vinyl chloride          |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5022-BH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5022-B**

## Need more helpful hints?

A wealth of technical tips and advice from our expert chemists can be found on our Web site:

- Get immediate answers by using our Live Chat function.
- Download a copy of one of our posters or presentations.
- Subscribe to our newsletter.
- View our archive of Ask a Chemist questions – technical questions asked by you and answered by our chemists.
- View our webinars on our YouTube channel.

## Did You Know?

SPEX CertiPrep is accredited by A2LA for Organic and Inorganic Certified Reference Materials. In addition to being registered as an ISO 9001 facility, SPEX CertiPrep is accredited by A2LA as complying with the requirements of ISO/IEC 17025 and ISO/IEC Guide 34. Our scope is the **most comprehensive** in the industry.



EPA 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 (PID) Detectors.

## "Big-Mix"

Volatile Organics Mix with 60 Certified Components

### 60 Certified Components:

|                             |                           |
|-----------------------------|---------------------------|
| Benzene                     | 1,1-Dichloropropene       |
| Bromobenzene                | cis-1,3-Dichloropropene   |
| Bromochloromethane          | trans-1,3-Dichloropropene |
| Bromodichloromethane        | 2,2-Dichloropropane       |
| Bromoform                   | 1,3-Dichloropropane       |
| Bromomethane                | Ethylbenzene              |
| n-Butylbenzene              | Hexachlorobutadiene       |
| sec-Butylbenzene            | Isopropylbenzene          |
| tert-Butylbenzene           | p-Isopropyltoluene        |
| Carbon Tetrachloride        | Methylene chloride        |
| Chlorobenzene               | Naphthalene               |
| Chloroethane                | n-Propylbenzene           |
| Chloroform                  | Styrene                   |
| Chloromethane               | 1,1,1,2-Tetrachloroethane |
| 2-Chlorotoluene             | 1,1,2,2-Tetrachloroethane |
| 4-Chlorotoluene             | Tetrachloroethene         |
| 1,2-Dibromo-3-chloropropane | Toluene                   |
| Dibromochloromethane        | 1,2,3-Trichlorobenzene    |
| 1,2-Dibromoethane           | 1,2,4-Trichlorobenzene    |
| Dibromomethane              | 1,1,1-Trichloroethane     |
| 1,2-Dichlorobenzene         | 1,1,2-Trichloroethane     |
| 1,3-Dichlorobenzene         | Trichloroethene           |
| 1,4-Dichlorobenzene         | Trichlorofluoromethane    |
| Dichlorodifluoromethane     | 1,2,3-Trichloropropane    |
| 1,1-Dichloroethane          | 1,2,4-Trimethylbenzene    |
| 1,2-Dichloroethane          | 1,3,5-Trimethylbenzene    |
| 1,1-Dichloroethene          | Vinyl chloride            |
| trans-1,2-Dichloroethene    | o-Xylene                  |
| cis-1,2-Dichloroethene      | m-Xylene                  |
| 1,2-Dichloropropane         | p-Xylene                  |

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: 60-BIG-MIX**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 60-BIG-MIX-200**

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 60-BIG-MIX-2000**

## Trihalomethanes

### 4 Certified Components:

|                      |                      |
|----------------------|----------------------|
| Bromodichloromethane | Chloroform           |
| Bromoform            | Dibromochloromethane |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: THM-XH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: THM-X**

## Internal Standards

### 1 Certified Component:

1-Chloro-2-fluorobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-935**

### 2 Certified Components:

2-Bromo-1-chloropropane  
Fluorobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: 5022-I**

## Alternate Internal Standards

### 1 Certified Component:

2-Bromo-1-chloropropane

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-580**

### 1 Certified Component:

1,4-Dichlorobutane

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-1365**

### 1 Certified Component:

Fluorobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-2040**

**Analyte Mix A****15 Certified Components:**

|                      |                           |
|----------------------|---------------------------|
| Bromoform            | trans-1,2-Dichloroethene  |
| Carbon tetrachloride | 1,2-Dichloropropane       |
| Chlorobenzene        | Methylene chloride        |
| Chloroform           | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane | Tetrachloroethene         |
| 1,1-Dichloroethane   | 1,1,2-Trichloroethane     |
| 1,2-Dichloroethane   | Trichloroethene           |
| 1,1-Dichloroethene   |                           |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-AH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: CLPV-A****Mix B - Purgeable Gases****6 Certified Components:**

|               |                         |
|---------------|-------------------------|
| Bromomethane  | Dichlorodifluoromethane |
| Chloroethane  | Trichlorofluoromethane  |
| Chloromethane | Vinyl chloride          |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5022-BH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5022-B****Analyte Mix C****22 Certified Components:**

|                        |                           |
|------------------------|---------------------------|
| Bromobenzene           | 1,3-Dichloropropane       |
| Bromochloromethane     | 1,1-Dichloropropene       |
| Bromodichloromethane   | cis-1, 3-Dichloropropene  |
| n-Butylbenzene         | trans-1,3-Dichloropropene |
| 2-Chlorotoluene        | Ethylbenzene              |
| 4-Chlorotoluene        | Isopropylbenzene          |
| 1,2-Dibromoethane      | Styrene                   |
| Dibromomethane         | 1,1,1,2-Tetrachloroethane |
| 1,2-Dichlorobenzene    | 1,1,1-Trichloroethane     |
| 1,3-Dichlorobenzene    | 1,2,3-Trichloropropane    |
| cis-1,2-Dichloroethene | p-Xylene                  |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-CH****Analyte Mix D****17 Certified Components:**

|                             |                        |
|-----------------------------|------------------------|
| Benzene                     | n-Propylbenzene        |
| sec-Butylbenzene            | Toluene                |
| tert-Butylbenzene           | 1,2,3-Trichlorobenzene |
| 1,2-Dibromo-3-chloropropane | 1,2,4-Trichlorobenzene |
| 1,4-Dichlorobenzene         | 1,2,4-Trimethylbenzene |
| 2,2-Dichloropropane         | 1,3,5-Trimethylbenzene |
| Hexachlorobutadiene         | o-Xylene               |
| p-Isopropyltoluene          | m-Xylene               |
| Naphthalene                 |                        |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-DH****Volatile Organics Combination Mix  
Analyte Mixes A, C & D**

Includes all analytes in Mixes A, C and D that also appear on this page.

**54 Certified Components:**

|                             |                           |
|-----------------------------|---------------------------|
| Benzene                     | cis-1,3-Dichloropropene   |
| Bromobenzene                | trans-1,3-Dichloropropene |
| Bromochloromethane          | 2,2-Dichloropropane       |
| Bromodichloromethane        | 1,3-Dichloropropane       |
| Bromoform                   | Ethylbenzene              |
| n-Butylbenzene              | Hexachlorobutadiene       |
| tert-Butylbenzene           | Isopropylbenzene          |
| sec-Butylbenzene            | p-Isopropyltoluene        |
| Carbon Tetrachloride        | Methylene Chloride        |
| Chlorobenzene               | Naphthalene               |
| Chloroform                  | n-Propylbenzene           |
| 2-Chlorotoluene             | Styrene                   |
| 4-Chlorotoluene             | 1,1,1,2-Tetrachloroethane |
| 1,2-Dibromo-3-chloropropane | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane        | Tetrachloroethene         |
| 1,2-Dibromoethane           | Toluene                   |
| Dibromomethane              | 1,2,3-Trichlorobenzene    |
| 1,2-Dichlorobenzene         | 1,2,4-Trichlorobenzene    |
| 1,3-Dichlorobenzene         | 1,1,1-Trichloroethane     |
| 1,4-Dichlorobenzene         | 1,1,2-Trichloroethane     |
| 1,1-Dichloroethane          | Trichloroethene           |
| 1,2-Dichloroethane          | 1,2,3-Trichloropropane    |
| 1,1-Dichloroethene          | 1,2,4-Trimethylbenzene    |
| trans-1,2-Dichloroethene    | 1,3,5-Trimethylbenzene    |
| cis-1,2-Dichloroethene      | o-Xylene                  |
| 1,2-Dichloropropane         | m-Xylene                  |
| 1,1-Dichloropropene         | p-Xylene                  |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-VCX**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5242-VCX-200**

1 mL @ 2,000 µg/mL in Methanol

Contains the same analytes as 5242-VCX, but with meta- and para-xylene at 1,000 µg/mL.

**Catalog#: HICAL-VOC**

## METHODS 504

EPA method 504 is an analytical method for the monitoring of 1,2-Dibromoethane (EDB), 1,2-Dibromo-3-Chloropropane (DBCP), and 1,2,3-Trichloropropane (123TCP) in Water by Microextraction and either GC-ECD or GC-MS techniques.

### Method 504 Analytes

#### 2 Certified Components:

1,2 Dibromo-3-chloropropane (DBCP)  
1,2-Dibromoethane (EDB)

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 504-AH

### Method 504.1 Analytes

#### 3 Certified Components:

1,2 Dibromo-3-chloropropane (DBCP)  
1,2-Dibromoethane (EDB)  
1,2,3-Trichloropropane

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 5041-AH

## Did You Know?

On SPEX CertiPrep's website you can search by CAS number or component name on our site search tool and on our Custom Standards Request Form for singles and mixes.

## METHOD 524

### WITH REVISION 4 COMPOUNDS

EPA Method 524.3 is a GC-MS method for the analysis of purgeable VOCs in finished drinking water. Analytes added to Method 524.3 in Revision 4 are supplied in a 24-component mix.

### Method 524.3 Mix A

#### 7 Certified Components:

|                       |                         |
|-----------------------|-------------------------|
| Bromomethane          | Dichlorodifluoromethane |
| 1,3-Butadiene         | Trichlorofluoromethane  |
| Chlorodifluoromethane | Vinyl Chloride          |
| Chloromethane         |                         |

1mL @ 2,000 µg/mL in Methanol

Catalog#: 5243-G

### Method 524.3 Supplemental Mix

#### 8 Certified Components:

|                          |                            |
|--------------------------|----------------------------|
| 1,3-Butadiene            | t-Amyl ethyl ether (TAEE)  |
| Chlorodifluoromethane    | t-Amyl methyl ether (TAME) |
| Diisopropyl ether (DIPE) | t-Butyl alcohol (TBA)      |
| Methyl acetate           | t-Butyl ethyl ether (ETBE) |

1mL @ 2,000 µg/mL in Methanol

Catalog#: 5243-A

### UCMR-3

This GC-MS standard (EPA 524.3) covers the seven volatile organic compounds included in the Unregulated Contaminant Monitoring Rule 3 (UCMR3), which requires monitoring of all public drinking water systems with 10,000 or more customers.

| Components             | Concentration µg/mL |
|------------------------|---------------------|
| Bromomethane           | 2000                |
| Chloromethane          | 2000                |
| 1,3-Butadiene          | 1000                |
| Chlorodifluoromethane  | 800                 |
| Bromochloromethane     | 600                 |
| sec-Butylbenzene       | 400                 |
| 1,1-Dichloroethane     | 300                 |
| 1,2,3-Trichloropropane | 300                 |
| n-Propylbenzene        | 300                 |

Volume: 1 mL

Catalog#: UCMR-3



**Analyte Mix A****15 Certified Components:**

|                      |                           |
|----------------------|---------------------------|
| Bromoform            | trans-1,2-Dichloroethene  |
| Carbon Tetrachloride | 1,2-Dichloropropane       |
| Chlorobenzene        | Methylene chloride        |
| Chloroform           | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane | Tetrachloroethene         |
| 1,1-Dichloroethane   | 1,1,2-Trichloroethane     |
| 1,2-Dichloroethane   | Trichloroethene           |
| 1,1-Dichloroethene   |                           |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-AH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: CLPV-A****Analyte Mix C****22 Certified Components:**

|                        |                           |
|------------------------|---------------------------|
| Bromobenzene           | 1,3-Dichloropropane       |
| Bromochloromethane     | 1,1-Dichloropropene       |
| Bromodichloromethane   | cis-1, 3-Dichloropropene  |
| n-Butylbenzene         | trans-1,3-Dichloropropene |
| 2-Chlorotoluene        | Ethylbenzene              |
| 4-Chlorotoluene        | Isopropylbenzene          |
| 1,2-Dibromoethane      | Styrene                   |
| Dibromomethane         | 1,1,1,2-Tetrachloroethane |
| 1,2-Dichlorobenzene    | 1,1,1-Trichloroethane     |
| 1,3-Dichlorobenzene    | 1,2,3-Trichloropropane    |
| cis-1,2-Dichloroethene | p-Xylene                  |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-CH****Method 524.2 Mix D****17 Certified Components:**

|                             |                        |
|-----------------------------|------------------------|
| Benzene                     | n-Propylbenzene        |
| sec-Butylbenzene            | Toluene                |
| tert-Butylbenzene           | 1,2,3-Trichlorobenzene |
| 1,2-Dibromo-3-chloropropane | 1,2,4-Trichlorobenzene |
| 1,4-Dichlorobenzene         | 1,2,4-Trimethylbenzene |
| 2,2-Dichloropropane         | 1,3,5-Trimethylbenzene |
| Hexachlorobutadiene         | o-Xylene               |
| p-Isopropyltoluene          | m-Xylene               |
| Naphthalene                 |                        |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-DH****Volatile Organics Combination Mix  
Analyte Mixes A, C & D**

Includes all analytes in Mixes A, C and D that also appear on this page.

**54 Certified Components:**

|                             |                           |
|-----------------------------|---------------------------|
| Benzene                     | cis-1,3-Dichloropropene   |
| Bromobenzene                | trans-1,3-Dichloropropene |
| Bromochloromethane          | 2,2-Dichloropropane       |
| Bromodichloromethane        | 1,3-Dichloropropane       |
| Bromoform                   | Ethylbenzene              |
| n-Butylbenzene              | Hexachlorobutadiene       |
| tert-Butylbenzene           | Isopropylbenzene          |
| sec-Butylbenzene            | p-Isopropyltoluene        |
| Carbon Tetrachloride        | Methylene Chloride        |
| Chlorobenzene               | Naphthalene               |
| Chloroform                  | n-Propylbenzene           |
| 2-Chlorotoluene             | Styrene                   |
| 4-Chlorotoluene             | 1,1,1,2-Tetrachloroethane |
| 1,2-Dibromo-3-chloropropane | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane        | Tetrachloroethene         |
| 1,2-Dibromoethane           | Toluene                   |
| Dibromomethane              | 1,2,3-Trichlorobenzene    |
| 1,2-Dichlorobenzene         | 1,2,4-Trichlorobenzene    |
| 1,3-Dichlorobenzene         | 1,1,1-Trichloroethane     |
| 1,4-Dichlorobenzene         | 1,1,2-Trichloroethane     |
| 1,1-Dichloroethane          | Trichloroethene           |
| 1,2-Dichloroethane          | 1,2,3-Trichloropropane    |
| 1,1-Dichloroethene          | 1,2,4-Trimethylbenzene    |
| trans-1,2-Dichloroethene    | 1,3,5-Trimethylbenzene    |
| cis-1,2-Dichloroethene      | o-Xylene                  |
| 1,2-Dichloropropane         | m-Xylene                  |
| 1,1-Dichloropropene         | p-Xylene                  |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-VCX**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5242-VCX-200**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5242-VCX-200G**

Contains the same analytes as 5242-VCX-200, plus the following additional analytes:

|               |                         |
|---------------|-------------------------|
| Bromomethane  | Dichlorodifluoromethane |
| Chloroethane  | Trichlorofluoromethane  |
| Chloromethane | Vinyl chloride          |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: HICAL-VOC**

Contains the same analytes as 5242-VCX, but with meta- and para-xylene each at 1,000 µg/mL.

## Method 524.2 Revision 4

### 24 Certified Components:

|                             |                         |
|-----------------------------|-------------------------|
| Acetone                     | 2-Hexanone              |
| Acrylonitrile               | Methyl Acrylate         |
| Allyl chloride              | Methacrylonitrile       |
| 2-Butanone                  | Iodomethane             |
| Carbon disulfide            | Methylmethacrylate      |
| Chloroacetonitrile          | 4-Methyl-2-pentanone    |
| 1-Chlorobutane              | methyl tert-butyl ether |
| trans-1,4-Dichloro-2-butene | Nitrobenzene            |
| 1,1-Dichloropropanone       | 2-Nitropropane          |
| Diethyl ether               | Pentachloroethane       |
| Ethyl methacrylate          | Propionitrile           |
| Hexachloroethane            | Tetrahydrofuran         |

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5242-R4200**

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-R4**

### Fortification Solution

#### 3 Certified Components:

4-Bromofluorobenzene  
1,2-Dichlorobenzene-d<sub>4</sub>  
Fluorobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: 5242-F**

### GC-MS Tuning Standard (BFB)

#### 1 Certified Component:

4-Bromofluorobenzene

1 mL @ 2,500 µg/mL in Methanol

**Catalog#: CLPV-TH**

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-550**

## Method 524.3 Mix B

### 69 Certified Components:

|                             |                           |
|-----------------------------|---------------------------|
| Allyl Chloride              | cis-1,3-Dichloropropene   |
| t-Amyl ethyl ether (TAEE)   | trans-1,3-Dichloropropene |
| t-Amyl methyl ether (TAME)  | Diethyl Ether             |
| Benzene                     | Diisopropyl ether (DIPE)  |
| Bromobenzene                | Ethylbenzene              |
| Bromochloromethane          | Ethyl Methacrylate        |
| Bromodichloromethane        | Hexachlorobutadiene       |
| Bromoform                   | Hexachloroethane          |
| t-Butyl alcohol             | Isopropylbenzene          |
| n-Butylbenzene              | 4-Isopropyltoluene        |
| sec-Butylbenzene            | Methyl acetate            |
| tert-Butylbenzene           | Methyl-t-butyl Ether      |
| t-Butyl ethyl ether (ETBE)  | Methylene Chloride        |
| Carbon Disulfide            | Naphthalene               |
| Carbon Tetrachloride        | Pentachloroethane         |
| Chlorobenzene               | n-Propylbenzene           |
| Chloroform                  | Styrene                   |
| 2-Chlorotoluene             | 1,1,1,2-Tetrachloroethane |
| 4-Chlorotoluene             | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane        | Tetrachloroethene         |
| 1,2-Dibromo-3-Chloropropane | Tetrahydrofuran           |
| 1,2-Dibromoethane           | Toluene                   |
| Dibromomethane              | 1,2,3-Trichlorobenzene    |
| 1,2-Dichlorobenzene         | 1,2,4-Trichlorobenzene    |
| 1,3-Dichlorobenzene         | 1,1,1-Trichloroethane     |
| 1,4-Dichlorobenzene         | 1,1,2-Trichloroethane     |
| 1,1-Dichloroethane          | Trichloroethene           |
| 1,2-Dichloroethane          | Trichlorofluoromethane    |
| 1,1-Dichloroethene          | 1,2,3-Trichloropropane    |
| cis-1,2-Dichloroethene      | 1,2,4-Trimethylbenzene    |
| trans-1,2-Dichloroethene    | 1,3,5-Trimethylbenzene    |
| 1,2-Dichloropropane         | o-Xylene                  |
| 1,3-Dichloropropane         | m-Xylene                  |
| 2,2-Dichloropropane         | p-Xylene                  |
| 1,1-Dichloropropene         |                           |

1mL @ 2,000 µg/mL in Methanol

**Catalog#: 5243-VCM**

### Helpful Hint:

Special packaging needs?  
Visit our web site for a sampling of our capabilities, or call us at **1-800-LAB-SPEX ext. 444.**

**Internal Standard****1 Certified Component:**

Fluorobenzene

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-I****Surrogate Standard****2 Certified Components:**

4-Bromofluorobenzene

1,2-Dichlorobenzene-d<sub>4</sub>

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: 5242-S****Surrogate****3 Certified Components:**

4-Bromofluorobenzene

1,2-Dichlorobenzene-d<sub>4</sub>Methyl-t-butyl-ether-d<sub>3</sub>

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5243-S****Internal Standard****3 Certified Components:**Chlorobenzene-d<sub>5</sub>

1,4-Difluorobenzene

1,4-Dichlorobenzene-d<sub>4</sub>

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5243-I****524.3 IS Singles****1 Certified Component:**

1,4-Difluorobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-1540****1 Certified Component:**Chlorobenzene-d<sub>5</sub>

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-815****1 Certified Component:**1,4-Dichlorobenzene-d<sub>4</sub>

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-1310****METHOD 551**

EPA Method 551 is an analytical method for the determination of chlorinated disinfection byproducts, chlorinated solvents and halogenated pesticides & herbicides in drinking water and raw source water using MTBE extraction and GC-ECD techniques.

**Chlorinated Disinfection By-Products, Solvents And Trihalomethanes Combination Mix****18 Certified Components:**

|                                    |                             |
|------------------------------------|-----------------------------|
| Bromodichloromethane               | 1,1-Dichloro-2-propanone    |
| Bromoform                          | Tetrachloroethene           |
| Carbon tetrachloride               | Trichloroacetonitrile       |
| Chloroform                         | 1,1,1-Trichloroethane       |
| Chloropicrin                       | 1,1,2-Trichloroethane       |
| Dibromoacetonitrile                | Trichloroethene             |
| Dibromochloromethane               | 1,2,3-Trichloropropane      |
| 1,2-Dibromoethane (EDB)            | 1,1,1-Trichloro-2-propanone |
| Dichloroacetonitrile               |                             |
| 1,2-Dibromo-3-chloropropane (DBCP) |                             |

1 mL @ 2,000 µg/mL in Acetone

**Catalog#: 5511-A****Halogenated Pesticides and Herbicides Mix****16 Certified Components:**

|                 |                           |
|-----------------|---------------------------|
| Alachlor        | Heptachlor epoxide        |
| Atrazine        | Hexachlorobenzene         |
| Bromacil        | Hexachlorocyclopentadiene |
| Cyanazine       | Lindane (g-BHC)           |
| Endrin          | Metolachlor               |
| Endrin aldehyde | Metribuzin                |
| Endrin ketone   | Methoxychlor              |
| Heptachlor      | Trifluralin               |

1 mL @ 2,000 µg/mL in Acetone

**Catalog#: 5511-PH****Surrogate Standard****1 Certified Component:**

Decafluorobiphenyl

1 mL @ 1,000 µg/mL in Acetone

**Catalog#: S-1103****Internal Standard****1 Certified Component:**

Bromofluorobenzene (BFB)

1 mL @ 10,000 µg/mL in Acetone

**Catalog#: 5511-I**

## Bromochloroacetonitrile Single

### 1 Certified Component:

Bromochloroacetonitrile

1 mL @ 1,000 µg/mL in Methanol

Catalog#: S-532

## Laboratory Performance Check Solution

### 7 Certified Components:

|                      | µg/mL |                           | µg/mL |
|----------------------|-------|---------------------------|-------|
| Alaclor              | 83    | Endrin                    | 30    |
| g-BHC (Lindane)      | 0.2   | Hexachlorocyclopentadiene | 20    |
| Bromacil             | 83    | Trichloroethene           | 30    |
| Bromodichloromethane | 30    |                           |       |

1 mL in Methyl tert-butyl ether

Catalog#: 5511-PC

## Custom Standards for Method 551.1

If you're not running the entire analyte list for method 551.1, custom standards may be the most cost-effective way to simplify your calibrations. Submit your custom design request at [www.spexcertiprep.com/customorganics](http://www.spexcertiprep.com/customorganics).

## METHOD 601

EPA method 601 is a general analytical method for the monitoring of halogenated VOCs in municipal and industrial wastewater by GC with a Hall detector.

## Volatile Organics Combination Mix

### 23 Certified Components:

|                          |                           |
|--------------------------|---------------------------|
| Bromoform                | trans-1,2-Dichloroethene  |
| Carbon Tetrachloride     | 1,1-Dichloroethene        |
| Chlorobenzene            | 1,2-Dichloropropane       |
| 2-Chloroethylvinyl ether | cis-1,3-Dichloropropene   |
| Chloroform               | trans-1,3-Dichloropropene |
| Bromodichloromethane     | Methylene chloride        |
| Dibromochloromethane     | 1,1,2,2-Tetrachloroethane |
| 1,2-Dichlorobenzene      | Tetrachloroethene         |
| 1,3-Dichlorobenzene      | 1,1,1-Trichloroethane     |
| 1,4-Dichlorobenzene      | 1,1,2-Trichloroethane     |
| 1,1-Dichloroethane       | Trichloroethene           |
| 1,2-Dichloroethane       |                           |

1 mL @ 200 µg/mL in Methanol

Catalog#: 601-A

## Mix B - Purgeable gases

### 6 Certified Components:

|               |                         |
|---------------|-------------------------|
| Bromomethane  | Dichlorodifluoromethane |
| Chloroethane  | Trichlorofluoromethane  |
| Chloromethane | Vinyl chloride          |

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 5022-BH

1 mL @ 200 µg/mL in Methanol

Catalog#: 5022-B

## Surrogate/Internal Standard

### 3 Certified Components:

|                         |
|-------------------------|
| Bromochloromethane      |
| 2-Bromo-1-chloropropane |
| 1,4-Dichlorobutane      |

1 mL @ 20,000 µg/mL in Methanol

Catalog#: 601-I

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for more information.

## METHOD 602

EPA method 602 is a general analytical method for the monitoring of halogenated aromatic compounds in municipal and industrial wastewater by GC-PID.

### Purgeable Aromatics for Gasoline Identification

#### 11 Certified Components:

|                     |                         |
|---------------------|-------------------------|
| Benzene             | Methyl tert-butyl ether |
| Chlorobenzene       | Toluene                 |
| 1,2-Dichlorobenzene | o-Xylene                |
| 1,3-Dichlorobenzene | m-Xylene                |
| 1,4-Dichlorobenzene | p-Xylene                |
| Ethylbenzene        |                         |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: P-GAS**

### BTEX Standard

#### 6 Certified Components:

|              |          |
|--------------|----------|
| Benzene      | m-Xylene |
| Ethylbenzene | o-Xylene |
| Toluene      | p-Xylene |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: BTEX-H**

1 mL @ 200 µg/mL in Methanol

**Catalog#: BTEX**

### Alternate BTEX Standard

#### 6 Certified Components:

|              | µg/mL |          | µg/mL |
|--------------|-------|----------|-------|
| Benzene      | 2,000 | m-Xylene | 1,000 |
| Ethylbenzene | 2,000 | o-Xylene | 2,000 |
| Toluene      | 2,000 | p-Xylene | 1,000 |

1 mL in Methanol

**Catalog#: BTEX-2-1H**

### Internal/Surrogate Standard

#### 1 Certified Component:

α,α,α-Trifluorotoluene

1 mL @ 200 µg/mL in Methanol

**Catalog#: 602-I**

## METHOD 603

EPA method 603 is a general analytical method for the separation of Acrolein and Acrylonitrile in municipal and industrial wastewater by GC-FID.

### Acrolein and Acrylonitrile in Water

#### 2 Certified Components:

Acrolein

Acrylonitrile

1 mL @ 2,000 µg/mL in DI Water

**Catalog#: 603-X**

*Acrolein is more stable in water.*

### Acrolein and Acrylonitrile in Methanol Purge & Trap

#### 2 Certified Components:

Acrolein

Acrylonitrile

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 603-XM**

### Helpful Hint:

Acrolein is more stable in water at pH 4-5.



## METHOD 624

EPA method 624 is a general analytical method for the monitoring of VOCs in municipal and industrial wastewater by GC-MS.

### Mix A

#### 15 Certified Components:

|                      |                           |
|----------------------|---------------------------|
| Bromoform            | trans-1,2-Dichloroethene  |
| Carbon tetrachloride | 1,2-Dichloropropane       |
| Chlorobenzene        | Methylene chloride        |
| Chloroform           | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane | Tetrachloroethene         |
| 1,1-Dichloroethane   | 1,1,2-Trichloroethane     |
| 1,2-Dichloroethane   | Trichloroethene           |
| 1,1-Dichloroethene   |                           |

1 mL @ 2,000 µg/mL in Methanol

Catalog#: CLPV-AH

1 mL @ 200 µg/mL in Methanol

Catalog#: CLPV-A

### Mix B - Purgeable gases

#### 5 Certified Components:

|               |                        |
|---------------|------------------------|
| Bromomethane  | Trichlorofluoromethane |
| Chloroethane  | Vinyl chloride         |
| Chloromethane |                        |

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 624-BH

1 mL @ 200 µg/mL in Methanol

Catalog#: 624-B

### Mix C

#### 8 Certified Components:

|                          |                           |
|--------------------------|---------------------------|
| Benzene                  | trans-1,3-Dichloropropene |
| Bromodichloromethane     | Ethylbenzene              |
| 2-Chloroethylvinyl ether | Toluene                   |
| cis-1,3-Dichloropropene  | 1,1,1-Trichloroethane     |

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 624-CH

1 mL @ 200 µg/mL in Methanol

Catalog#: 624-C

### Mix D

#### 3 Certified Components:

|                     |                     |
|---------------------|---------------------|
| 1,2-Dichlorobenzene | 1,4-Dichlorobenzene |
| 1,3-Dichlorobenzene |                     |

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 624-DH

1 mL @ 200 µg/mL in Methanol

Catalog#: 624-D

## Volatile Organics Combination Mix Analyte mixes A, C & D

Includes all analytes in Mixes A, C and D that also appear on this page.

### 26 Certified Components:

|                          |                           |
|--------------------------|---------------------------|
| Benzene                  | 1,1-Dichloroethene        |
| Bromodichloromethane     | trans-1,2-Dichloroethene  |
| Bromoform                | 1,2-Dichloropropane       |
| Carbon Tetrachloride     | cis-1,3-Dichloropropene   |
| 2-Chloroethylvinyl ether | trans-1,3-Dichloropropene |
| Chloroform               | Ethylbenzene              |
| Chlorobenzene            | Methylene chloride        |
| Dibromochloromethane     | Tetrachloroethene         |
| 1,4-Dichlorobenzene      | 1,1,2,2-Tetrachloroethane |
| 1,3-Dichlorobenzene      | Toluene                   |
| 1,2-Dichlorobenzene      | 1,1,1-Trichloroethane     |
| 1,1-Dichloroethane       | 1,1,2-Trichloroethane     |
| 1,2-Dichloroethane       | Trichloroethene           |

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 624-A

### Internal Standard

#### 3 Certified Components:

|                         |
|-------------------------|
| Bromochloromethane      |
| 2-Bromo-1-chloropropane |
| 1,4-Difluorobenzene     |

1 mL @ 1,000 µg/mL in Methanol

Catalog#: 624-I

### Surrogate Standard

#### 3 Certified Components:

|                      |
|----------------------|
| 4-Bromofluorobenzene |
| Fluorobenzene        |
| Pentafluorobenzene   |

1 mL @ 1,000 µg/mL in Methanol

Catalog#: 624-S

## 624 Alternate Internal/Surrogate Standard Singles

| Component<br>@ 1,000 µg/mL: | Matrix   | Catalog# |
|-----------------------------|----------|----------|
| Benzene-d6                  | Methanol | S-0406   |
| 4-Bromofluorobenzene        | Methanol | S-550    |
| 1,2-Dichloroethane-d4       | Methanol | S-1385   |
| 1,4-Dichlorobutane          | Methanol | S-1365   |
| Ethyl-d5-benzene            | Methanol | S-1924   |
| Ethylbenzene-d10            | Methanol | S-1941   |

**METHOD 8011**

EPA method 8011 is an analytical method for the monitoring of EDB and DBCP in drinking water and ground water by GC-MS.

**EDB/DBCP****2 Certified Components:**

1,2 Dibromo-3-chloropropane (DBCP)  
1,2-Dibromoethane (EDB)

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 504-AH**

**METHOD 8015**

EPA method 8015 is a general analytical method for the monitoring of certain non-halogenated VOCs and SVOCs by GC-FID.

**Alcohols Mix****9 Certified Components:**

|                 |                   |
|-----------------|-------------------|
| Allyl alcohol   | Isobutyl alcohol  |
| 1-Butanol       | Isopropyl alcohol |
| t-Butyl alcohol | Methanol          |
| Ethanol         | 1-Propanol        |
| Ethylene glycol |                   |

1 mL @ 2,000 µg/mL in water

**Catalog#: 8015B-A**

**Analyte Mix B****16 Certified Components:**

|                |                           |
|----------------|---------------------------|
| Acetone        | Methyl ethyl ketone       |
| Acrylamide     | Methyl isobutyl ketone    |
| Acetonitrile   | N-Nitroso-di-n-butylamine |
| Crotonaldehyde | 2-Pentanone               |
| Diethyl ether  | 2-Picoline                |
| 1,4-Dioxane    | Propionitrile             |
| Ethyl acetate  | Pyridine                  |
| Ethylene oxide | o-Toluidine               |

1 mL @ 2,000 µg/mL in water

**Catalog#: 8015B-B**

**New Part # 8015-OX****5 Certified Components:**

|                            |                                |
|----------------------------|--------------------------------|
| t-Amyl methyl ether (TAME) | Ethyl tert-butyl ether (ETBE)  |
| t-Butyl alcohol            | Methyl tert-butyl ether (MTBE) |
| Diisopropyl ether (DIPE)   |                                |

1mL @ 2,000 µg/mL in Methanol

**Catalog#: 8015-OX**

**Acrolein and Acrylonitrile****2 Certified Components:**

Acrolein  
Acrylonitrile

1 mL @ 2,000 µg/mL in water

**Catalog#: 603-X**

## 8015 Singles

| Component<br>@ 1,000 ug/mL:          | Matrix   | Catalog# |
|--------------------------------------|----------|----------|
| t-Amyl alcohol (TAA)                 | Methanol | S-260    |
| t-Amyl ethyl ether (TAEE)            | Methanol | S-4459   |
| Paraldehyde                          | Methanol | S-2913   |
| Triethylamine                        | Methanol | S-3702   |
| Reference<br>Gasoline Range Organics | Methanol | GRO-1000 |
| Reference<br>Diesel Range Organics   | Methanol | DRO-1000 |

## Internal Standard

### 3 Certified Components:

2-Chloroacrylonitrile  
Hexafluoro-2-propanol  
Hexafluoro-2-methyl-2-propanol

1 mL @ 5,000 µg/mL in water  
Catalog#: 8015B-I

## METHOD 8021

EPA method 8021 is a general analytical method for the monitoring VOCs by GC megabore capillary column techniques and Hall and Photoionization (PID) Detectors.

## 8021 Singles

| Component<br>@ 1,000 ug/mL: | Matrix   | Catalog# |
|-----------------------------|----------|----------|
| Allyl chloride              | Methanol | S-210    |
| Benzyl chloride             | Methanol | S-465    |
| Bromoacetone                | Methanol | S-522    |
| 2-Chloroethanol             | Methanol | S-847    |
| 2-Chloroethyl vinyl ether   | Methanol | S-855    |
| Chloromethyl methyl ether   | Methanol | S-877    |
| Chloroprene                 | Methanol | S-930    |
| Epichlorohydrin             | Methanol | S-1860   |

## 8021 Surrogate

### 1 Certified Component:

4-Bromochlorobenzene

1 mL @ 1,000 µg/mL in Methanol  
Catalog#: S-534

### 1 Certified Component:

1,4-Dichlorobutane

1 mL @ 1,000 µg/mL in Methanol  
Catalog#: S-1365

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**Volatile Organics Combination Mix****54 Certified Components:**

|                             |                           |
|-----------------------------|---------------------------|
| Benzene                     | cis-1,3-Dichloropropene   |
| Bromobenzene                | trans-1,3-Dichloropropene |
| Bromochloromethane          | 2,2-Dichloropropane       |
| Bromodichloromethane        | 1,3-Dichloropropane       |
| Bromoform                   | Ethylbenzene              |
| n-Butylbenzene              | Hexachlorobutadiene       |
| tert-Butylbenzene           | Isopropylbenzene          |
| sec-Butylbenzene            | p-Isopropyltoluene        |
| Carbon Tetrachloride        | Methylene Chloride        |
| Chlorobenzene               | Naphthalene               |
| Chloroform                  | n-Propylbenzene           |
| 2-Chlorotoluene             | Styrene                   |
| 4-Chlorotoluene             | 1,1,1,2-Tetrachloroethane |
| 1,2-Dibromo-3-chloropropane | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane        | Tetrachloroethene         |
| 1,2-Dibromoethane           | Toluene                   |
| Dibromomethane              | 1,2,3-Trichlorobenzene    |
| 1,2-Dichlorobenzene         | 1,2,4-Trichlorobenzene    |
| 1,3-Dichlorobenzene         | 1,1,1-Trichloroethane     |
| 1,4-Dichlorobenzene         | 1,1,2-Trichloroethane     |
| 1,1-Dichloroethane          | Trichloroethene           |
| 1,2-Dichloroethane          | 1,2,3-Trichloropropane    |
| 1,1-Dichloroethene          | 1,2,4-Trimethylbenzene    |
| trans-1,2-Dichloroethene    | 1,3,5-Trimethylbenzene    |
| cis-1,2-Dichloroethene      | o-Xylene                  |
| 1,2-Dichloropropane         | m-Xylene                  |
| 1,1-Dichloropropene         | p-Xylene                  |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-VCX**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5242-VCX-200****Mix A****10 Certified Components:**

|                     |              |
|---------------------|--------------|
| Benzene             | Ethylbenzene |
| Chlorobenzene       | Toluene      |
| 1,2-Dichlorobenzene | o-Xylene     |
| 1,3-Dichlorobenzene | m-Xylene     |
| 1,4-Dichlorobenzene | p-Xylene     |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8020-A****Mix B - Purgeable Gases****6 Certified Components:**

|               |                         |
|---------------|-------------------------|
| Bromomethane  | Dichlorodifluoromethane |
| Chloroethane  | Trichlorofluoromethane  |
| Chloromethane | Vinyl chloride          |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5022-BH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5022-B****Method 8021B Analytes (Purge & Trap)****4 Certified Components:**

Allyl chloride  
 2-Chloroethylvinyl ether  
 Bis-(2-chloroisopropyl)ether  
 Chloroprene(2-Chloro-1,3-butadiene)

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8021B-XA****Method 8021B Analytes (Direct Injection)****6 Certified Components:**

Benzyl Chloride                      2-Chloroethanol  
 1-Bromo-2-propanone              1,3-Dichloro-2-propanol  
 (Bromoacetone)                      Epichlorhydrin  
 Chloromethyl methyl ether

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8021B-XB****Internal Standard****1 Certified Component:** $\alpha,\alpha,\alpha$ -Trifluorotoluene

1 mL @ 200 µg/mL in Methanol

**Catalog#: 602-I****Internal Standard****2 Certified Components:**

2-Bromo-1-chloropropane  
 Fluorobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: 5022-I****Surrogate Standard****2 Certified Components:**

Bromochlorobenzene  
 1,4-Dichlorobutane

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: 8021B-S**

## METHOD 8260

EPA method 8263 is a general analytical method for the monitoring VOCs by GC-MS.

### "Big-Mix"

Volatile Organics Mix with 60 Certified Components

#### 60 Certified Components:

|                             |                           |
|-----------------------------|---------------------------|
| Benzene                     | 1,1-Dichloropropene       |
| Bromobenzene                | cis-1,3-Dichloropropene   |
| Bromochloromethane          | trans-1,3-Dichloropropene |
| Bromodichloromethane        | 2,2-Dichloropropane       |
| Bromoform                   | 1,3-Dichloropropane       |
| Bromomethane                | Ethylbenzene              |
| n-Butylbenzene              | Hexachlorobutadiene       |
| sec-Butylbenzene            | Isopropylbenzene          |
| tert-Butylbenzene           | p-Isopropyltoluene        |
| Carbon Tetrachloride        | Methylene chloride        |
| Chlorobenzene               | Naphthalene               |
| Chloroethane                | n-Propylbenzene           |
| Chloroform                  | Styrene                   |
| Chloromethane               | 1,1,1,2-Tetrachloroethane |
| 2-Chlorotoluene             | 1,1,2,2-Tetrachloroethane |
| 4-Chlorotoluene             | Tetrachloroethene         |
| 1,2-Dibromo-3-chloropropane | Toluene                   |
| Dibromochloromethane        | 1,2,3-Trichlorobenzene    |
| 1,2-Dibromoethane           | 1,2,4-Trichlorobenzene    |
| Dibromomethane              | 1,1,1-Trichloroethane     |
| 1,2-Dichlorobenzene         | 1,1,2-Trichloroethane     |
| 1,3-Dichlorobenzene         | Trichloroethene           |
| 1,4-Dichlorobenzene         | Trichlorofluoromethane    |
| Dichlorodifluoromethane     | 1,2,3-Trichloropropane    |
| 1,1-Dichloroethane          | 1,2,4-Trimethylbenzene    |
| 1,2-Dichloroethane          | 1,3,5-Trimethylbenzene    |
| 1,1-Dichloroethene          | Vinyl chloride            |
| trans-1,2-Dichloroethene    | o-Xylene                  |
| cis-1,2-Dichloroethene      | m-Xylene                  |
| 1,2-Dichloropropane         | p-Xylene                  |

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: 60-BIG-MIX**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 60-BIG-MIX-200**

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 60-BIG-MIX-2000**

### Mix A

#### 15 Certified Components:

|                      |                           |
|----------------------|---------------------------|
| Bromoform            | trans-1,2-Dichloroethene  |
| Carbon tetrachloride | 1,2-Dichloropropane       |
| Chlorobenzene        | Methylene chloride        |
| Chloroform           | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane | Tetrachloroethene         |
| 1,1-Dichloroethane   | 1,1,2-Trichloroethane     |
| 1,2-Dichloroethane   | Trichloroethene           |
| 1,1-Dichloroethene   |                           |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-AH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: CLPV-A**

### Mix B - Purgeable Gases

#### 6 Certified Components:

|               |                         |
|---------------|-------------------------|
| Bromomethane  | Dichlorodifluoromethane |
| Chloroethane  | Trichlorofluoromethane  |
| Chloromethane | Vinyl chloride          |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5022-BH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5022-B**

### Mix C

#### 22 Certified Components:

|                        |                           |
|------------------------|---------------------------|
| Bromobenzene           | 1,3-Dichloropropane       |
| Bromochloromethane     | 1,1-Dichloropropene       |
| Bromodichloromethane   | cis-1,3-Dichloropropene   |
| n-Butylbenzene         | trans-1,3-Dichloropropene |
| 2-Chlorotoluene        | Ethylbenzene              |
| 4-Chlorotoluene        | Isopropylbenzene          |
| 1,2-Dibromoethane      | Styrene                   |
| Dibromomethane         | 1,1,1,2-Tetrachloroethane |
| 1,2-Dichlorobenzene    | 1,1,1-Trichloroethane     |
| 1,3-Dichlorobenzene    | 1,2,3-Trichloropropane    |
| cis-1,2-Dichloroethene | p-Xylene                  |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-CH**

### Mix D

#### 17 Certified Components:

|                             |                        |
|-----------------------------|------------------------|
| Benzene                     | n-Propylbenzene        |
| sec-Butylbenzene            | Toluene                |
| tert-Butylbenzene           | 1,2,3-Trichlorobenzene |
| 1,2-Dibromo-3-chloropropane | 1,2,4-Trichlorobenzene |
| 1,4-Dichlorobenzene         | 1,2,4-Trimethylbenzene |
| 2,2-Dichloropropane         | 1,3,5-Trimethylbenzene |
| Hexachlorobutadiene         | o-Xylene               |
| p-Isopropyltoluene          | m-Xylene               |
| Naphthalene                 |                        |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-DH**



**Volatile Organics Combination Mix**

Contains all analytes in Mixes A, C and D that appear on the previous page.

**54 Certified Components:**

|                             |                           |
|-----------------------------|---------------------------|
| Benzene                     | cis-1,3-Dichloropropene   |
| Bromobenzene                | trans-1,3-Dichloropropene |
| Bromochloromethane          | 2,2-Dichloropropane       |
| Bromodichloromethane        | 1,3-Dichloropropane       |
| Bromoform                   | Ethylbenzene              |
| n-Butylbenzene              | Hexachlorobutadiene       |
| tert-Butylbenzene           | Isopropylbenzene          |
| sec-Butylbenzene            | p-Isopropyltoluene        |
| Carbon Tetrachloride        | Methylene Chloride        |
| Chlorobenzene               | Naphthalene               |
| Chloroform                  | n-Propylbenzene           |
| 2-Chlorotoluene             | Styrene                   |
| 4-Chlorotoluene             | 1,1,1,2-Tetrachloroethane |
| 1,2-Dibromo-3-chloropropane | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane        | Tetrachloroethene         |
| 1,2-Dibromoethane           | Toluene                   |
| Dibromomethane              | 1,2,3-Trichlorobenzene    |
| 1,2-Dichlorobenzene         | 1,2,4-Trichlorobenzene    |
| 1,3-Dichlorobenzene         | 1,1,1-Trichloroethane     |
| 1,4-Dichlorobenzene         | 1,1,2-Trichloroethane     |
| 1,1-Dichloroethane          | Trichloroethene           |
| 1,2-Dichloroethane          | 1,2,3-Trichloropropane    |
| 1,1-Dichloroethene          | 1,2,4-Trimethylbenzene    |
| trans-1,2-Dichloroethene    | 1,3,5-Trimethylbenzene    |
| cis-1,2-Dichloroethene      | o-Xylene                  |
| 1,2-Dichloropropane         | m-Xylene                  |
| 1,1-Dichloropropene         | p-Xylene                  |

**54 Certified Components:**

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5242-VCX**

**54 Certified Components:**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5242-VCX-200**

*Alternate combination blend, V53-524, contains all analytes in 5242-VCX except bromochloromethane and is useful for those who use the CLP internal standards.*

**53 Certified Components:**

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: V53-524**

**"Big-Mix"**

Volatile Organics Mix with 76 Certified Components

**76 Certified Components:**

|                             |                                |
|-----------------------------|--------------------------------|
| Acetonitrile                | trans-1,3-Dichloropropene      |
| Acrylonitrile               | 1,4-Dioxane                    |
| Allyl chloride              | Ether                          |
| Benzene                     | Ethylbenzene                   |
| Bromobenzene                | Ethyl methacrylate             |
| Bromochloromethane          | Hexachlorobutadiene            |
| Bromodichloromethane        | Iodomethane                    |
| Bromoform                   | Isopropylbenzene               |
| n-Butylbenzene              | p-Isopropyltoluene             |
| sec-Butylbenzene            | Methacrylonitrile              |
| tert-Butylbenzene           | Methyl acrylate                |
| Carbon disulfide            | Methyl methacrylate            |
| Carbon tetrachloride        | Methylene chloride             |
| Chlorobenzene               | 2-Methyl-1-propanol            |
| 2-Chloro-1,3-butadiene      | Naphthalene                    |
| 2-Chloroethanol             | Nitrobenzene                   |
| Chloroform                  | 2-Nitropropane                 |
| 2-Chlorotoluene             | Pentachloroethane              |
| 4-Chlorotoluene             | Propionitrile                  |
| Dibromochloromethane        | n-Propylbenzene                |
| 1,2-Dibromo-3-chloropropane | Styrene                        |
| 1,2-Dibromoethane           | 1,1,1,2-Tetrachloroethane      |
| Dibromomethane              | 1,1,2,2-Tetrachloroethane      |
| 1,2-Dichlorobenzene         | Tetrachloroethene              |
| 1,3-Dichlorobenzene         | Tetrahydrofuran                |
| 1,4-Dichlorobenzene         | Toluene                        |
| cis-1,4-Dichloro-2-butene   | 1,2,3-Trichlorobenzene         |
| trans-1,4-Dichloro-2-butene | 1,2,4-Trichlorobenzene         |
| 1,1-Dichloroethane          | 1,1,1-Trichloroethane          |
| 1,2-Dichloroethane          | 1,1,2-Trichloroethane          |
| 1,1-Dichloroethene          | Trichloroethene                |
| cis-1,2-Dichloroethene      | 1,2,3-Trichloropropane         |
| trans-1,2-Dichloroethene    | 1,1,2-Trichlorotrifluoroethane |
| 1,2-Dichloropropane         | 1,2,4-Trimethylbenzene         |
| 1,3-Dichloropropane         | 1,3,5-Trimethylbenzene         |
| 2,2-Dichloropropane         | m-Xylene                       |
| 1,1-Dichloropropene         | o-Xylene                       |
| cis-1,3-Dichloropropene     | p-Xylene                       |

1mL @ 2,000 µg/mL in Methanol

**Catalog#: 8260-BIG-MIX**

### 8260-KET

#### 4 Certified Components:

|            |                        |
|------------|------------------------|
| Acetone    | 2-Hexanone             |
| 2-Butanone | Methyl isobutyl ketone |

1 mL @ 5,000 µg/mL in Methanol:DIH<sub>2</sub>O (9:1)

**Catalog#: 8260-KET**

### 8260 Volatile Organics Combination Mix

#### 26 Certified Components:

|                           |                           |
|---------------------------|---------------------------|
| Benzene                   | Ethylbenzene              |
| Bromodichloromethane      | Methylene chloride        |
| Bromoform                 | Styrene                   |
| Carbon Tetrachloride      | 1,1,2,2-Tetrachloroethane |
| Chlorobenzene             | Tetrachloroethene         |
| Chloroform                | Toluene                   |
| Dibromochloromethane      | 1,1,1-Trichloroethane     |
| 1,1-Dichloroethane        | 1,1,2-Trichloroethane     |
| 1,2-Dichloroethane        | trans-1,2-Dichloroethene  |
| 1,1-Dichloroethene        | Trichloroethene           |
| 1,2-Dichloropropane       | o-Xylene                  |
| cis-1,3-Dichloropropene   | m-Xylene                  |
| trans-1,3-Dichloropropene | p-Xylene                  |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8240-25**

### Volatile 3 Matrix Spike

#### 5 Certified Components:

|                    |                 |
|--------------------|-----------------|
| Benzene            | Toluene         |
| Chlorobenzene      | Trichloroethene |
| 1,1-Dichloroethene |                 |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-MH**

### GC-MS Tuning Standard (BFB)

#### 1 Certified Component:

4-Bromofluorobenzene

1 mL @ 2,500 µg/mL in Methanol

**Catalog#: CLPV-TH**

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-550**

### Surrogate Standard

#### 3 Certified Components:

4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d<sub>8</sub>

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8260-S**

### 8240 Surrogate Standard

#### 3 Certified Components:

4-Bromofluorobenzene  
1,2-Dichloroethane-d<sub>4</sub>  
Toluene-d<sub>8</sub>

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-SH**

### Alternate Four-Component Surrogate Standard

#### 4 Certified Components:

4-Bromofluorobenzene  
Dibromofluoromethane  
1,2-Dichloroethane-d<sub>4</sub>  
Toluene-d<sub>8</sub>

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8260A-S**

### Internal Standard

#### 4 Certified Components:

Chlorobenzene-d<sub>5</sub>  
1,4-Dichlorobenzene-d<sub>4</sub>  
1,4-Difluorobenzene  
Pentafluorobenzene

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8260-I**

### Internal Standard

#### 3 Certified Components:

Chlorobenzene-d<sub>5</sub>  
1,4-Dichlorobenzene-d<sub>4</sub>  
Fluorobenzene

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8260A-I**

## "LONG LIST" APPENDIX IX COMPOUNDS FOR 8260B

### Mix E

#### 7 Certified Components:

|                          |                      |
|--------------------------|----------------------|
| Acetone                  | 2-Hexanone           |
| 2-Butanone               | 4-Methyl-2-pentanone |
| Carbon disulfide         | Vinyl acetate        |
| 2-Chloroethylvinyl ether |                      |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 8260-EH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 8260-E**

### 2-Chloroethylvinyl Ether Stock Standard

#### 1 Certified Component:

2-Chloroethylvinyl ether

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-855**

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: S-855-2K**

### Vinyl Acetate Stock Standard

#### 1 Certified Component:

Vinyl acetate

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-3800**

### Combined Stock Standard

#### 2 Certified Components:

2-Chloroethylvinyl ether

Vinyl acetate

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CNVA**

### Ethylene Oxide Stock Standard

#### 1 Certified Component:

Ethylene oxide

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-1960**

### Xylene-Free Chloroprene Stock Standard

#### 1 Certified Component:

Chloroprene (2-chloro-1,3-butadiene)

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-930**

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: S-930-2K**

## CLP SERIES - VOLATILES

The US EPA retains analytical services through the Contract Lab 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.

### SOM 2.0 Volatiles

#### 42 Certified Components:

|                             |                                       |
|-----------------------------|---------------------------------------|
| Benzene                     | cis-1,3-Dichloropropene               |
| Bromochloromethane          | trans-1,3-Dichloropropene             |
| Bromodichloromethane        | Dibromochloromethane                  |
| Bromoform                   | Ethylbenzene                          |
| Carbon disulfide            | Isopropylbenzene                      |
| Carbon tetrachloride        | Methyl acetate                        |
| Chlorobenzene               | Methyl tert-butyl ether               |
| Chloroform                  | Methylcyclohexane                     |
| Cyclohexane                 | Methylene chloride                    |
| 1,2-Dichlorobenzene         | Styrene                               |
| 1,3-Dichlorobenzene         | Tetrachloroethene                     |
| 1,4-Dichlorobenzene         | 1,1,2,2-Tetrachloroethane             |
| 1,2-Dibromo-3-chloropropane | Toluene                               |
| 1,2-Dibromoethane           | 1,2,3-Trichlorobenzene                |
| 1,1-Dichloroethane          | 1,2,4-Trichlorobenzene                |
| 1,2-Dichloroethane          | 1,1,1-Trichloroethane                 |
| 1,1-Dichloroethene          | 1,1,2-Trichloroethane                 |
| cis-1,2-Dichloroethene      | 1,1,2-Trichloro-1,2,2-trifluoroethane |
| trans-1,2-Dichloroethene    | m-Xylene                              |
| trans-1,3-Dichloropropene   | o-Xylene                              |
| 1,2-Dichloropropane         | p-Xylene                              |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-SOM2**

### Volatiles Mix for OLM04.1

#### 43 Certified Components:

|                             |                                |
|-----------------------------|--------------------------------|
| Acetone                     | 1,2-Dichloropropane            |
| Benzene                     | cis-1,3-Dichloropropene        |
| Bromodichloromethane        | trans-1,3-Dichloropropene      |
| Bromoform                   | Ethylbenzene                   |
| 2-Butanone                  | 2-Hexanone                     |
| tert-Butyl methyl ether     | Isopropylbenzene               |
| Carbon disulfide            | Methyl acetate                 |
| Carbon tetrachloride        | Methylene chloride             |
| Chlorobenzene               | 4-Methyl-2-pentanone           |
| Chloroform                  | Styrene                        |
| Cyclohexane                 | 1,1,2,2-Tetrachloroethane      |
| Dibromochloromethane        | Tetrachloroethene              |
| 1,2-Dibromo-3-chloropropane | Toluene                        |
| 1,2-Dibromoethane           | 1,2,4-Trichlorobenzene         |
| 1,2-Dichlorobenzene         | 1,1,2-Trichloroethane          |
| 1,3-Dichlorobenzene         | 1,1,1-Trichloroethane          |
| 1,4-Dichlorobenzene         | Trichloroethene                |
| 1,1-Dichloroethane          | 1,1,2-Trichlorotrifluoroethane |
| 1,1-Dichloroethene          | m-Xylene                       |
| 1,2-Dichloroethane          | o-Xylene                       |
| cis-1,2-Dichloroethene      | p-Xylene                       |
| trans-1,2-Dichloroethene    |                                |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-43CH**

### Mix B - Purgeable Gases for OLM04.1

#### 6 Certified Components:

|               |                         |
|---------------|-------------------------|
| Bromomethane  | Dichlorodifluoromethane |
| Chloroethane  | Trichlorofluoromethane  |
| Chloromethane | Vinyl chloride          |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 5022-BH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: 5022-B**

### Volatile Organics Combination Standard

#### CLP Volatiles Mix

#### 32 Certified Components:

|                          |                           |
|--------------------------|---------------------------|
| Acetone                  | cis-1,3-Dichloropropene   |
| Benzene                  | trans-1,3-Dichloropropene |
| Bromodichloromethane     | Ethylbenzene              |
| Bromoform                | 2-Hexanone                |
| 2-Butanone               | Methylene chloride        |
| Carbon disulfide         | 4-Methyl-2-pentanone      |
| Carbon tetrachloride     | Styrene                   |
| Chlorobenzene            | 1,1,2,2-Tetrachloroethane |
| Chloroform               | Tetrachloroethene         |
| Dibromochloromethane     | Toluene                   |
| 1,1-Dichloroethane       | Trichloroethene           |
| 1,1-Dichloroethene       | 1,1,1-Trichloroethane     |
| 1,2-Dichloroethane       | 1,1,2-Trichloroethane     |
| cis-1,2-Dichloroethene   | m-Xylene                  |
| trans-1,2-Dichloroethene | o-Xylene                  |
| 1,2-Dichloropropane      | p-Xylene                  |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-32CH**

### Mix B - Purgeable gases

#### 4 Certified Components:

|              |                |
|--------------|----------------|
| Bromomethane | Chloromethane  |
| Chloroethane | Vinyl chloride |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-BH**

### Helpful Hint:

We value your input!  
Please call **1-800-LAB-SPEX ext. 444** with  
any suggestions, questions or comments.

**Volatiles Mix A****15 Certified Components:**

|                      |                           |
|----------------------|---------------------------|
| Bromoform            | trans-1,2-Dichloroethene  |
| Carbon Tetrachloride | 1,2-Dichloropropane       |
| Chlorobenzene        | Methylene chloride        |
| Chloroform           | 1,1,2,2-Tetrachloroethane |
| Dibromochloromethane | Tetrachloroethene         |
| 1,1-Dichloroethane   | 1,1,2-Trichloroethane     |
| 1,2-Dichloroethane   | Trichloroethene           |
| 1,1-Dichloroethene   |                           |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-AH**

1 mL @ 200 µg/mL in Methanol

**Catalog#: CLPV-A****Volatiles Mix D****8 Certified Components:**

|                        |                      |
|------------------------|----------------------|
| Acetone                | 2-Hexanone           |
| 2-Butanone             | 4-Methyl-2-pentanone |
| Carbon disulfide       | Styrene              |
| cis-1,2-Dichloroethene | p-Xylene             |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-D90H****Volatiles Mix D  
for CLP SOW Alternate****9 Certified Components:**

|                        |                      |
|------------------------|----------------------|
| Acetone                | 4-Methyl-2-pentanone |
| 2-Butanone             | Styrene              |
| Carbon disulfide       | Vinyl acetate        |
| cis-1,2-Dichloroethene | p-Xylene             |
| 2-Hexanone             |                      |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-DH****Supplementary Volatiles Mix  
for CLP OLM04.1****11 Certified Components:**

|                                |                                |
|--------------------------------|--------------------------------|
| tert-Butyl methyl ether (MTBE) | 1,4-Dichlorobenzene            |
| Cyclohexane                    | Isopropylbenzene               |
| 1,2-Dibromo-3-chloropropane    | Methyl acetate                 |
| 1,2-Dibromoethane              | 1,2,4-Trichlorobenzene         |
| 1,2-Dichlorobenzene            | 1,1,2-Trichlorotrifluoroethane |
| 1,3-Dichlorobenzene            |                                |

1 mL @ 200 µg/mL in Methanol

**Catalog#: CLPV-041X****2-Chloroethylvinyl Ether Stock Standard****1 Certified Component:**

2-Chloroethylvinyl Ether

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-855****Vinyl Acetate Stock Standard****1 Certified Component:**

Vinyl Acetate

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-3800****Combined Stock Standard****2 Certified Components:**2-Chloroethylvinyl ether  
Vinyl acetate

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CNVA****Volatile Surrogate Standard  
(System Monitoring Compounds)****3 Certified Components:**4-Bromofluorobenzene  
1,2-Dichloroethane-d<sub>4</sub>  
Toluene-d<sub>8</sub>

1 mL @ 2,500 µg/mL in Methanol

**Catalog#: CLPV-SH****Matrix Spike****5 Certified Components:**Benzene  
Chlorobenzene  
1,1-Dichloroethene  
Trichloroethene  
Toluene

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPV-MH****GC-MS Tuning Standard (BFB)****1 Certified Component:**

4-Bromofluorobenzene

1 mL @ 2,500 µg/mL in Methanol

**Catalog#: CLPV-TH**

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-550**



## TCLP VOLATILES STANDARDS

### TCLP Volatiles Spike

#### 11 Certified Components:

|                      |                     |
|----------------------|---------------------|
| Benzene              | 1,2-Dichloroethane  |
| 2-Butanone           | 1,4-Dichlorobenzene |
| Carbon tetrachloride | Tetrachloroethene   |
| Chlorobenzene        | Trichloroethene     |
| Chloroform           | Vinyl chloride      |
| 1,1-Dichloroethylene |                     |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: TCLP-VX**

### TCLP Volatiles Spike - Alternate Formulation

#### 11 Certified Components:

|                          |                     |
|--------------------------|---------------------|
| Benzene                  | 1,2-Dichloroethane  |
| 2-Butanone (4,000 µg/mL) | 1,4-Dichlorobenzene |
| Carbon tetrachloride     | Tetrachloroethene   |
| Chlorobenzene            | Trichloroethene     |
| Chloroform               | Vinyl chloride      |
| 1,1-Dichloroethylene     |                     |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: TCLP-VA**

### TCLP Volatiles Spike without Vinyl Chloride

#### 10 Certified Components:

|                           |                      |
|---------------------------|----------------------|
| Benzene                   | 1,1-Dichloroethylene |
| 2-Butanone (10,000 µg/mL) | 1,2-Dichloroethane   |
| Carbon tetrachloride      | 1,4-Dichlorobenzene  |
| Chlorobenzene             | Tetrachloroethene    |
| Chloroform                | Trichloroethene      |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: TCLP-V**

## SPECIALTY VOLATILES APPLICATION STANDARDS

### Acetaldehyde Standards

| Concentration        | Volume | Catalog#          |
|----------------------|--------|-------------------|
| 1,000 µg/mL in water | 1.8 mL | <b>S-125-W1.8</b> |

Alternate concentrations and volumes are readily available. Please call our sales department at **1-800-LAB-SPEX** to discuss your requirements.

### Chlorofluorocarbon Refrigerant Standards

| Component<br>@ 1,000 µg/mL:        | Synonym    | Catalog#      |
|------------------------------------|------------|---------------|
| Chlorodifluoromethane              | FREON 22   | <b>S-840</b>  |
| 2-Chloro-1-1-1-trifluoroethane     | HCFC-133a  | <b>S-958</b>  |
| 1,2-Dichloro-1,1-difluoroethane    | HCFC-132b  | <b>S-1477</b> |
| Dichlorodifluoromethane            | FREON 12   | <b>S-1370</b> |
| 1,1-Dichlorofluoroethane           | FREON 141b | <b>S-1480</b> |
| Dichlorofluoromethane              | FREON 21   | <b>S-1405</b> |
| 1,2-Dichlorotetrafluoroethane      | FREON 114  | <b>S-1470</b> |
| 2,2-Dichloro-1,1,1-trifluoroethane | FREON 123  | <b>S-1476</b> |
| 1,2-Dichlorotrifluoroethane        | HCFC-123a  | <b>S-1479</b> |
| 1,1,2-Trichlorofluoroethane        | —          | <b>S-3617</b> |
| Trichlorofluoromethane             | FREON 11   | <b>S-3620</b> |
| 1,1,2-Trichlorotrifluoroethane     | FREON 113  | <b>S-3675</b> |

Additional CFC's may be available. Please call our sales department at **1-800-LAB-SPEX ext. 444** to discuss your requirements.

# Semivolatiles

Single & Multi-Component Standards  
for GC, GC-MS, LC & LC-MS



Serving the Chromatography Community, One Peak at a Time.™

# THE 76 BIG MIX

The Most routinely analyzed Base Neutral and Acid compounds in ONE ampule  
All compounds checked on our GC-MS Systems  
Highest quality at an affordable price

## Compound List

Each at 1,000 µg/mL\*

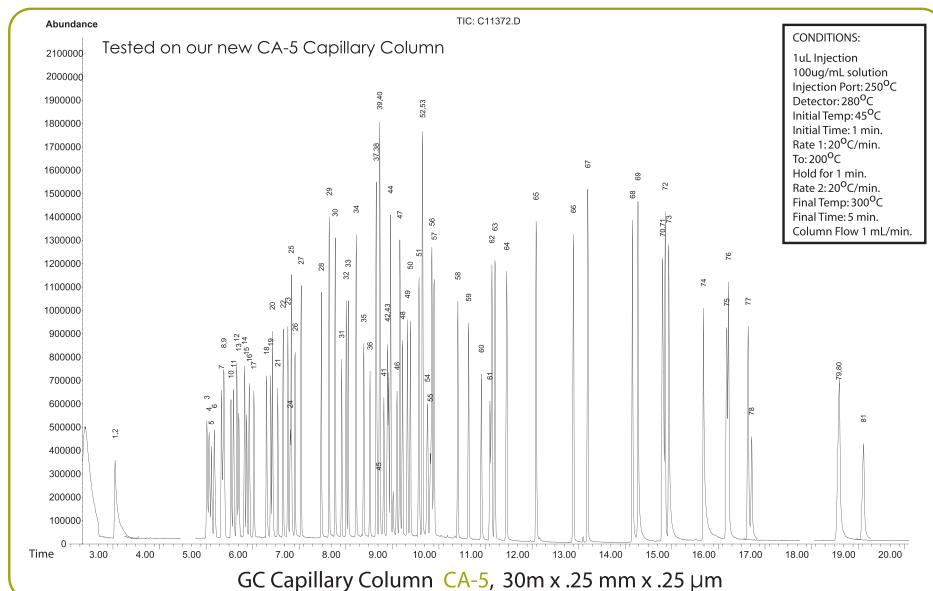
- 1 Pyridine
- 2 n-Nitrosodimethylamine
- 3 Phenol
- 4 Aniline
- 5 bis(2-Chloroethyl)ether
- 6 2-Chlorophenol
- 7 1,3-Dichlorobenzene
- 8 **1,4-Dichlorobenzene-d4 IS<sup>§</sup>**
- 9 1,4-Dichlorobenzene
- 10 Benzyl Alcohol
- 11 1,2-Dichlorobenzene
- 12 2-Methylphenol
- 13 2,2'-oxybis(1-Chloropropane)
- 14 3+4-Methylphenols\*
- 15 n-Nitroso-di-n-propylamine
- 16 Hexachloroethane
- 17 Nitrobenzene
- 18 Isophorone
- 19 2-Nitrophenol
- 20 2,4-Dimethylphenol
- 21 bis(2-Chloroethoxy)methane
- 22 2,4-Dichlorophenol
- 23 1,2,4-Trichlorobenzene
- 24 **Naphthalene-d8 IS<sup>§</sup>**
- 25 Naphthalene
- 26 4-Chloroaniline
- 27 Hexachlorobutadiene
- 28 4-Chloro-3-methylphenol
- 29 1-Methylnaphthalene
- 30 2-Methylnaphthalene
- 31 Hexachlorocyclopentadiene
- 32 2,4,6-Trichlorophenol
- 33 2,4,5-Trichlorophenol
- 34 2-Chloronaphthalene
- 35 2-Nitroaniline
- 36 1,4-Dinitrobenzene
- 37 1,3-Dinitrobenzene
- 38 Dimethylphthalate
- 39 Acenaphthylene

- 40 2,6-Dinitrotoluene
- 41 1,2-Dinitrobenzene
- 42 3-Nitroaniline
- 43 **Acenaphthene-d10 IS<sup>§</sup>**
- 44 Acenaphthene
- 45 2,4-Dinitrophenol
- 46 4-Nitrophenol
- 47 Dibenzofuran
- 48 2,4-Dinitrotoluene
- 49 2,3,5,6-Tetrachlorophenol
- 50 2,3,4,6-Tetrachlorophenol
- 51 Diethylphthalate

- 52 Fluorene
- 53 4-Chlorophenyl-phenylether
- 54 4-Nitroaniline
- 55 4,6-Dinitro-2-methylphenol
- 56 n-Nitrosodiphenylamine<sup>2</sup>
- 57 Azobenzene<sup>1</sup>
- 58 4-Bromophenyl-phenylether
- 59 Hexachlorobenzene
- 60 Pentachlorophenol
- 61 **Phenanthrene-d10 IS<sup>§</sup>**
- 62 Phenanthrene
- 63 Anthracene

- 64 Carbazole
- 65 Di-n-butylphthalate
- 66 Fluoranthene
- 67 Pyrene
- 68 Butylbenzylphthalate
- 69 Bis(2-ethylhexyl)adipate
- 70 Benzo(a)anthracene
- 71 **Chrysene-d12 IS<sup>§</sup>**
- 72 Chrysene
- 73 Bis(2-ethylhexyl)phthalate
- 74 Di-n-octyl phthalate
- 75 Benzo(b)fluoranthene

- 76 Benzo(k)fluoranthene
- 77 Benzo(a)pyrene
- 78 **Perylene-d12 IS<sup>§</sup>**
- 79 Indeno(1,2,3-cd)pyrene
- 80 Dibenzo(a,h)anthracene
- 81 Benzo(g,h,i)perylene



**CONDITIONS:**  
1µL Injection  
100µg/mL solution  
Injection Port: 250°C  
Detector: 280°C  
Initial Temp: 45°C  
Initial Time: 1 min.  
Rate: 1:20°C/min.  
To: 200°C  
Hold for 1 min.  
Rate: 2:20°C/min.  
Final Temp: 300°C  
Final Time: 5 min.  
Column Flow 1 mL/min.

1. - 1,2-Diphenylhydrazine (8270-listed analyte) decomposes to Azobenzene (mix component)  
2. - N-Nitrosodiphenylamine (8270-listed analyte) decomposes to Diphenylamine (mix component)  
\*3. - Methylphenol and 4-Methylphenol concentration each are 500 µg/mL  
§. - Internal standard mix CLPS-I2 sold separately

## Standard

Part #: 76-BIG-MIX  
1mL ampule at 1000 µg/mL  
in Methylene Chloride

Used for GC-MS Analysis of Semi-Volatile Organic

To find out more information call your sales representative at 800-LAB-SPEX x444

**IT DOESN'T GET ANY BIGGER THAN THIS!**

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## Semivolatiles

## METHOD 506

EPA method 506 is an analytical method for the monitoring of phthalate and adipate esters in drinking water by GC-PID.

## Method 506 Analyte Mix

## 7 Certified Components:

|                       |                            |
|-----------------------|----------------------------|
| Butylbenzyl phthalate | Dimethyl phthalate         |
| Di-n-butyl phthalate  | bis(2-Ethylhexyl)adipate   |
| Di-n-octyl phthalate  | bis(2-Ethylhexyl)phthalate |
| Diethyl phthalate     |                            |

1 mL @ 2,000 µg/mL in Isooctane

Catalog#: 506-AH

## METHOD 525

EPA method 525 is an analytical method for the monitoring of SVOAs in drinking water and raw water sources by GC-MS.

## Method 525.3 Mix A

## 18 Certified Components:

|                                 |                   |
|---------------------------------|-------------------|
| Acetochlor                      | Nitrofen          |
| Butylated hydroxytoluene (BHT)  | Oxyfluorfen       |
| Chlorfenvinphos                 | Phorate           |
| DEET (N,N Diethylmetatoluamide) | Phosphamidon      |
| Dimethipin                      | Profenofos        |
| 2,4-Dinitrotoluene              | Tebuconazole      |
| 2,6-Dinitrotoluene              | Tetrachlorvinphos |
| Ethyl parathion                 | Tribufos          |
| Methyl parathion                | Vinclozolin       |

1mL @ 1,000 µg/mL in Acetone

Catalog#: 5253-A

## Method 525.3 PCB Mix

## 14 Certified Components:

- 2- Chlorobiphenyl (1)
- 4-Chlorobiphenyl (3)
- 2,4'-Dichlorobiphenyl (8)
- 2,2',5-Trichlorobiphenyl (18)
- 2,4,4'-Trichlorobiphenyl (28)
- 2,2',3,5'-Tetrachlorobiphenyl (44)
- 2,2',5,5'-Tetrachlorobiphenyl (52)
- 2,3',4',5-Tetrachlorobiphenyl (70)
- 2,3,3',4',6-Pentachlorobiphenyl (110)
- 2,3',4,4',5-Pentachlorobiphenyl (118)
- 2,2',3,4,4',5'- Hexachlorobiphenyl (138)
- 2,2',3,4',5',6-Hexachlorobiphenyl (149)
- 2,2',4,4',5,5'-Hexachlorobiphenyl (153)
- 2,2',3,4,4',5,5'-Heptachlorobiphenyl (180)

1mL @ 200 µg/mL in Acetone

Catalog#: 5253-PCB



## Semivolatile Organics - Mix A

### 24 Certified Components:

|                            |                                 |
|----------------------------|---------------------------------|
| Acenaphthylene             | Dibenz(a,h)anthracene           |
| Anthracene                 | Diethyl phthalate               |
| Benzo(a)anthracene         | Dimethyl phthalate              |
| Benzo(a)pyrene             | Di-n-butyl phthalate            |
| Benzo(b)fluoranthene       | Fluorene                        |
| Benzo(g,h,i)perylene       | Hexachlorobenzene               |
| Benzo(k)fluoranthene       | Hexachlorocyclopentadiene       |
| bis(2-Ethylhexyl)adipate   | Indeno(1,2,3-cd)pyrene          |
| bis(2-Ethylhexyl)phthalate | Isophorone                      |
| Butylbenzyl phthalate      | Pentachlorophenol (2,000 µg/mL) |
| Chlorobenzilate            | Phenanthrene                    |
| Chrysene                   | Pyrene                          |

1 mL @ 500 µg/mL in Acetone

Catalog#: 5252-A

## Organochlorine Pesticides Mix A

### 18 Certified Components:

|          |                    |
|----------|--------------------|
| Aldrin   | Endosulfan I       |
| γ-BHC    | Endosulfan II      |
| α-BHC    | Endosulfan sulfate |
| δ-BHC    | Endrin             |
| β-BHC    | Endrin aldehyde    |
| 4,4'-DDD | Endrin ketone      |
| 4,4'-DDE | Heptachlor         |
| 4,4'-DDT | Heptachlor epoxide |
| Dieldrin | Methoxychlor       |

1 mL @ 200 µg/mL in Acetone

Catalog#: 5252-PA

## Organochlorine Pesticides Mix B

### 15 Certified Components:

|                 |                          |
|-----------------|--------------------------|
| Alachlor        | Dacthal (DCPA)           |
| α-Chlordane     | Etridiazole              |
| γ-Chlordane     | Hexachlorobenzene        |
| Chlorobenzilate | trans-Nonachlor          |
| Chloroneb       | Permethrin (cis & trans) |
| Chlorothalonil  | Propachlor               |
| Chlorpyrifos    | Trifluralin              |
| Cyanazine       |                          |

1 mL @ 200 µg/mL in Acetone

Catalog#: 5252-PB

# Need larger quantities?

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for more information.

## Nitrogen-Phosphorous Pesticides Mix C

### 34 Certified Components:

|                    |             |           |
|--------------------|-------------|-----------|
| Ametryn            | EPTC        | Prometon  |
| Atraton            | Ethoprop    | Prometryn |
| Atrazine           | Merphos     | Pronamide |
| Bromacil           | Metolachlor | Propazine |
| Butachlor          | Metribuzin  | Simetryn  |
| Butylate           | Methyl      | Simazine  |
| Chloropropham      | Paraoxon    | Terbacil  |
| Cycloate           | Mevinphos   | Terbufos  |
| Diazinon           | MGK 264     | Terbutryn |
| Dichlorovos        | Molinate    | Vernolate |
| Diphenamid         | Napropamide |           |
| Disulfoton sulfone | Pebulate    |           |

1 mL @ 200 µg/mL in Acetone

Catalog#: 5252-PC

## Nitrogen-Phosphorous Pesticides Mix D

### 9 Certified Components:

|            |             |              |
|------------|-------------|--------------|
| Fenamiphos | Hexazinone  | Terbuthiuron |
| Fenarimol  | Norflurazon | Triademefon  |
| Fluridone  | Stirofo     | Tricyclazole |

1 mL @ 200 µg/mL in Acetone

Catalog#: 5252-PD

## Nitrogen-Phosphorous Pesticides Mix E

### 4 Certified Components:

|            |                      |
|------------|----------------------|
| Carboxin   | Disulfoton sulfoxide |
| Disulfoton | Merphos              |

1 mL @ 200 µg/mL in Acetone

Catalog#: 5252-E

## Toxaphene

### 1 Certified Component:

Toxaphene

1 mL @ 200 µg/mL in Hexane

Catalog#: TOX-X

1 mL @ 1,000 µg/mL in Hexane

Catalog#: S-3535

## Chlordane Standard

### 1 Certified Component:

Technical Chlordane

1 mL @ 200 µg/mL in Hexane

Catalog#: CDANE-X

1 mL @ 1,000 µg/mL in Hexane

Catalog#: S-780

1 mL @ 2,000 µg/mL in Hexane

Catalog#: CDANE-XH



**Internal Standard****3 Certified Components:**

Acenaphthene-d<sub>10</sub>  
 Chrysene-d<sub>12</sub>  
 Phenanthrene-d<sub>10</sub>

1 mL @ 500 µg/mL in Acetone

**Catalog#: 5252-I**

**Internal Standard Single****1 Certified Component:**

13C-Pentachlorophenol (IS-4)

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-4202**

**525.3 Surrogate****3 Certified Components:**

Benzo[a]pyrene-d<sub>12</sub>  
 2-Nitro-m-xylene  
 Triphenyl phosphate

1mL @ 1,000 µg/mL in Acetone

**Catalog#: 5253-S**

**Surrogate Standard****3 Certified Components:**

1,3-Dimethyl -2-nitrobenzene  
 Perylene-d<sub>12</sub>  
 Triphenylphosphate

1 mL @ 500 µg/mL in Acetone

**Catalog#: 5252-S**

**Performance Check Solution****3 Certified Components:**

4,4'-DDT  
 DFTPP  
 Endrin

1 mL @ 500 µg/mL in Methylene chloride

**Catalog#: 5252-PCS**

**Fortification Solution****1 Certified Component:**

Terphenyl-d<sub>14</sub>

1 mL @ 500 µg/mL in Methylene chloride

**Catalog#: 5252-FS**

**METHOD 535**

EPA 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.

**Chloroacetanilide and Acetamide Herbicide Degradates Standard****6 Certified Components:**

|                |               |
|----------------|---------------|
| Acetochlor ESA | Alachlor OA   |
| Acetochlor OA  | Metochlor ESA |
| Alachlor ESA   | Metochlor OA  |

1 mL @ 500 µg/mL in Methanol

**Catalog#: 535-A**

**1 Certified Component:**

Dimethachlor ESA

1 mL @ 500 µg/mL in Methanol

**Catalog#: 535-I**

**1 Certified Component:**

Butachlor ESA

1 mL @ 500 µg/mL in Methanol

**Catalog#: 535-S**

**Helpful Hint:**

We value your input!  
 Please call **1-800-LAB-SPEX ext. 444** with any suggestions, questions or comments.

## METHOD 550

EPA methods 550 and 550.1 are an analytical methods for the monitoring of PAHs in drinking water by HPLC with UV and fluorescence detectors.

### PAH Analyte Mix

#### 16 Certified Components:

|                      | $\mu\text{g/mL}$ |                        | $\mu\text{g/mL}$ |
|----------------------|------------------|------------------------|------------------|
| Acenaphthene         | 1,000            | Chrysene               | 50               |
| Acenaphthylene       | 1,000            | Dibenzo(a,h)anthracene | 10               |
| Anthracene           | 50               | Fluoranthene           | 5                |
| Benzo(a)anthracene   | 1                | Fluorene               | 100              |
| Benzo(a)pyrene       | 5                | Indeno(1,2,3-cd)pyrene | 10               |
| Benzo(b)fluoranthene | 1                | Naphthalene            | 1,000            |
| Benzo(g,h,i)perylene | 5                | Phenanthrene           | 50               |
| Benzo(k)fluoranthene | 1                | Pyrene                 | 50               |

1 mL in Acetonitrile

**Catalog#: 550-A**

### Internal Standard

#### 1 Certified Component:

4,4'-Difluorobiphenyl

1 mL @ 100  $\mu\text{g/mL}$  in Acetonitrile

**Catalog#: 550-I**

## METHOD 552

EPA method 552 is an analytical method for the monitoring of haloacetic acids and phenolic disinfectant byproducts in drinking water by GC-ECD.

### Free Acids

#### 8 Certified Components:

|                        |                       |
|------------------------|-----------------------|
| Bromochloroacetic acid | Monobromoacetic acid  |
| Dibromoacetic acid     | Monochloroacetic acid |
| Dichloroacetic acid    | Trichloroacetic acid  |
| 2,4-Dichlorophenol     | 2,4,6-Trichlorophenol |

1 mL @ 200  $\mu\text{g/mL}$  in Methyl tert-butyl ether

**Catalog#: 552-A**

### Methyl Esters

#### 8 Certified Components:

|                           |                         |
|---------------------------|-------------------------|
| 2,4-Dichloroanisole       | Methyl dibromoacetate   |
| Methyl bromoacetate       | Methyl dichloroacetate  |
| Methyl bromochloroacetate | Methyl trichloroacetate |
| Methyl chloroacetate      | 2,4,6-Trichloroanisole  |

1 mL @ 200  $\mu\text{g/mL}$  in Methyl tert-butyl ether

**Catalog#: 552-MEO**

### Analyte Mix A

#### 7 Certified Components:

|                        | $\mu\text{g/mL}$ |                       | $\mu\text{g/mL}$ |
|------------------------|------------------|-----------------------|------------------|
| Bromochloroacetic acid | 200              | Monobromoacetic acid  | 200              |
| Dalapon                | 200              | Monochloroacetic acid | 200              |
| Dibromoacetic acid     | 200              | Trichloroacetic acid  | 200              |
| Dichloroacetic acid    | 200              |                       |                  |

1 mL in Methyl tert-butyl ether

**Catalog#: 5521-A**

### Helpful Hint:

Custom standards? No problem!  
Visit our web site to submit your request online:  
[www.spexcertiprep.com/customorganics](http://www.spexcertiprep.com/customorganics).

**Method 552.2 Analytes as Free Acids****11 Certified Components:**

|                                       | $\mu\text{g/mL}$ |
|---------------------------------------|------------------|
| Bromochloroacetic acid                | 400              |
| Bromodichloroacetic acid              | 400              |
| Chlorodibromoacetic acid              | 1,000            |
| Dalapon                               | 400              |
| Dibromoacetic acid                    | 200              |
| 2,3-Dibromopropionic acid (surrogate) | 1,000            |
| Dichloroacetic acid                   | 600              |
| Monobromoacetic acid                  | 400              |
| Monochloroacetic acid                 | 600              |
| Tribromoacetic acid                   | 2,000            |
| Trichloroacetic acid                  | 200              |

1 mL in Methyl tert-butyl ether

**Catalog#: 5522-AS***(same as Method 552.2 Analytes as Free Acids, but without surrogate)***10 Certified Components:**

1 mL in Methyl tert-butyl ether

**Catalog#: 5522-A****Methyl Esters****11 Certified Components:**

|                                          | $\mu\text{g/mL}$ |
|------------------------------------------|------------------|
| Dalapon methyl ester                     | 400              |
| Methyl monochloroacetate                 | 600              |
| Methyl monobromoacetate                  | 400              |
| Methyl bromochloroacetate                | 400              |
| Methyl bromodichloroacetate              | 400              |
| Methyl chlorodibromoacetate              | 1,000            |
| Methyl dibromoacetate                    | 200              |
| Methyl 2,3-dibromopropionate (surrogate) | 1,000            |
| Methyl dichloroacetate                   | 600              |
| Methyl tribromoacetate                   | 2,000            |
| Methyl trichloroacetate                  | 200              |

1 mL in Methyl tert-butyl ether

**Catalog#: 5522-MEOS***(same as Method 552.2 Analytes as Free Acids, but without surrogate)***10 Certified Components:**

1 mL in Methyl tert-butyl ether

**Catalog#: 5522-MEO****Internal Standard****1 Certified Component:**

1,2,3-Trichloropropane

1 mL @ 1,000  $\mu\text{g/mL}$  in Methyl tert-butyl ether**Catalog#: S-3665****Surrogate Standard****1 Certified Component:**

2-Bromopropionic acid

1 mL @ 1,000  $\mu\text{g/mL}$  in Methyl tert-butyl ether**Catalog#: S-3895****552 Surrogate****1 Certified Component:**

2,3-Dichloropropanoic acid

1 mL @ 1,000  $\mu\text{g/mL}$  in Methyl tert-butyl ether**Catalog#: S-2598****Did You Know?**

On SPEX CertiPrep's website you can search by CAS number or component name on our site search tool and on our Custom Standards Request Form for singles and mixes.

## METHOD 604

EPA method 604 is an analytical method for the monitoring of phenols in municipal and industrial wastewater by GC-FID

### Analytes

#### 11 Certified Components:

|                            |                       |
|----------------------------|-----------------------|
| 4-Chloro-3-methylphenol    | 2-Nitrophenol         |
| 2-Chlorophenol             | 4-Nitrophenol         |
| 2,4-Dichlorophenol         | Pentachlorophenol     |
| 2,4-Dimethylphenol         | Phenol                |
| 4,6-Dinitro-2-methylphenol | 2,4,6-Trichlorophenol |
| 2,4-Dinitrophenol          |                       |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-A**

## METHOD 605

EPA method 605 is an analytical method for the monitoring of benzidines in municipal and industrial wastewater by HPLC and an electrochemical detector.

### Analyte Mix

#### 2 Certified Components:

Benzidine  
3,3'-Dichlorobenzidine

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 605-X**

5 mL @ 2,000 µg/mL in Methanol

**Catalog#: 605-X5**

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## METHOD 606

EPA method 606 is an analytical method for the monitoring of phthalate esters in municipal and industrial wastewater by GC-ECD.

### Analyte Mix

#### 6 Certified Components:

|                       |                             |
|-----------------------|-----------------------------|
| Butylbenzyl phthalate | Dimethyl phthalate          |
| Di-n-Butyl phthalate  | Di-n-Octyl phthalate        |
| Diethyl phthalate     | bis(2-Ethylhexyl) phthalate |

1 mL @ 2,000 µg/mL in Isooctane

Catalog#: 606-XH

## METHOD 612

EPA method 612 is an analytical method for the monitoring of chlorinated hydrocarbons in municipal and industrial wastewater by GC-ECD.

### Chlorinated Hydrocarbons Mix

#### 9 Certified Components:

|                     |                           |
|---------------------|---------------------------|
| 2-Chloronaphthalene | Hexachlorobutadiene       |
| 1,2-Dichlorobenzene | Hexachlorocyclopentadiene |
| 1,3-Dichlorobenzene | Hexachloroethane          |
| 1,4-Dichlorobenzene | 1,2,4-Trichlorobenzene    |
| Hexachlorobenzene   |                           |

1 mL @ 2,000 µg/mL in Isooctane

Catalog#: 612-X





## METHOD 625

EPA method 625 is an analytical method for the monitoring of acid and base-neutral extractable fractions in municipal and industrial wastewater by GC-MS.

### "Big-Mix" - Base Neutral & Acid Combination Calibration Standard

Semivolatile Organics Mix with 76 Certified Components

#### 76 Certified Components:

|                                   |                            |
|-----------------------------------|----------------------------|
| Acenaphthene                      | Di-n-butyl phthalate       |
| Acenaphthylene                    | Di-n-octyl phthalate       |
| Azobenzene*                       | bis-(2-Ethylhexyl)adipate  |
| Benz(a)anthracene                 | bis(2-Ethylhexyl)phthalate |
| Benzo(a)pyrene                    | Fluoranthene               |
| Benzo(b)fluoranthene              | Fluorene                   |
| Benzo(g,h,i)perylene              | Hexachlorobenzene          |
| Benzo(k)fluoranthene              | Hexachlorobutadiene        |
| Benzyl alcohol                    | Hexachlorocyclopentadiene  |
| 4-Bromodiphenyl ether             | Hexachloroethane           |
| Butylbenzyl phthalate             | Indeno(1,2,3-c,d)pyrene    |
| Carbazole                         | Isophorone                 |
| 4-Chloroaniline (p-Chloroaniline) | 1-Methylnaphthalene        |
| bis(2-Chloroethoxy)methane        | 2-Methylnaphthalene        |
| bis(2-Chloroethyl)ether           | 2-Methylphenol***          |
| bis(2-Chloro-1-methylethyl) ether | 3-Methylphenol***          |
| 2-Chloronaphthalene               | 4-Methylphenol             |
| 2-Chlorophenol                    | Naphthalene                |
| 4-Chlorophenyl-phenyl ether       | 2-Nitroaniline             |
| 4-Chloro-3-methylphenol           | 3-Nitroaniline             |
| Chrysene                          | 4-Nitroaniline             |
| Dibenzofuran                      | Nitrobenzene               |
| Dibenz(a,h)anthracene             | 2-Nitrophenol              |
| 1,2-Dichlorobenzene               | 4-Nitrophenol              |
| 1,3-Dichlorobenzene               | Aniline                    |
| 1,4-Dichlorobenzene               | N-Nitrosodimethylamine**   |
| 2,4-Dichlorophenol                | N-Nitrosodi-n-propylamine  |
| Diethyl phthalate                 | Anthracene                 |
| Dimethyl phthalate                | Pentachlorophenol          |
| 2,4-Dimethylphenol                | Phenanthrene               |
| 1,2-Dinitrobenzene                | Phenol                     |
| 1,3-Dinitrobenzene                | Pyrene                     |
| 1,4-Dinitrobenzene                | Pyridine                   |
| 2,4-Dinitrophenol                 | 2,3,4,6-Tetrachlorophenol  |
| 2,4-Dinitrotoluene                | 2,3,5,6-Tetrachlorophenol  |
| 2,6-Dinitrotoluene                | 1,2,4-Trichlorobenzene     |
| 4,6-Dinitro-2-methylphenol        | 2,4,5-Trichlorophenol      |
| Diphenylamine**                   | 2,4,6-Trichlorophenol      |

\*1,2-Diphenylhydrazine (8270-listed analyte)  
decomposes to Azobenzene (mix component)

\*\* N-Nitrosodiphenylamine (8270-listed analyte)  
decomposes to Diphenylamine (mix component)

\*\*\* 3-Methylphenol and 4-Methylphenol  
concentration each are 500 µg/mL

1 mL @ 1,000 µg/mL in Methylene chloride

Catalog#: 76-BIG-MIX

### BIG-BN-2 - Base Neutral & Acid Combination Calibration Standard

Semivolatile Calibration Standard containing  
all 49 base-neutrals contained in blends:  
CLPS-B, CLPS-C, CLPS-D, and CLPS-G at 2,000 µg/mL

#### 49 Certified Components:

|                             |                            |
|-----------------------------|----------------------------|
| Acenaphthene                | Dimethyl phthalate         |
| Acenaphthylene              | Di-n-butyl phthalate       |
| Anthracene                  | 2,4-Dinitrotoluene         |
| Benzo(a)anthracene          | 2,6-Dinitrotoluene         |
| Benzo(a)pyrene              | Di-n-octyl phthalate       |
| Benzo(b)fluoranthene        | Fluoranthene               |
| Benzo(g,h,i)perylene        | Fluorene                   |
| Benzo(k)fluoranthene        | Hexachlorobenzene          |
| Benzyl alcohol              | Hexachlorobutadiene        |
| bis(2-Chloroethoxy)methane  | Hexachlorocyclopentadiene  |
| bis(2-Chloroethyl)ether     | Hexachloroethane           |
| bis(2-Chloroisopropyl)ether | Indeno(1,2,3-cd)pyrene     |
| bis(2-Ethylhexyl)phthalate  | Isophorone                 |
| 4-Bromophenyl phenyl ether  | 2-Methylnaphthalene        |
| Butylbenzyl phthalate       | Naphthalene                |
| 4-Chloroaniline             | 2-Nitroaniline             |
| 2-Chloronaphthalene         | 3-Nitroaniline             |
| 4-Chlorophenyl-phenyl ether | 4-Nitroaniline             |
| Chrysene                    | Nitrobenzene               |
| Dibenz(a,h)anthracene       | N-Nitroso-di-n-propylamine |
| Dibenzofuran                | N-Nitrosodiphenylamine     |
| 1,2-Dichlorobenzene         | Phenanthrene               |
| 1,3-Dichlorobenzene         | Pyrene                     |
| 1,4-Dichlorobenzene         | 1,2,4-Trichlorobenzene     |
| Diethyl phthalate           |                            |

1 mL @ 2,000 µg/mL in Methylene chloride:benzene

Catalog#: BIG-BN-2

5 mL

Catalog#: BIG-BN-2-5

### Phenolics

#### 11 Certified Components:

|                            |                       |
|----------------------------|-----------------------|
| 4-Chloro-3-methylphenol    | 2-Nitrophenol         |
| 2-Chlorophenol             | 4-Nitrophenol         |
| 2,4-Dichlorophenol         | Phenol                |
| 2,4-Dimethylphenol         | Pentachlorophenol     |
| 4,6-Dinitro-2-methylphenol | 2,4,6-Trichlorophenol |
| 2,4-Dinitrophenol          |                       |

1 mL @ 2,000 µg/mL in Methylene chloride

Catalog#: CLPS-A

### Helpful Hint:

**Note:** The 76-BIG-MIX is made with freshly distilled and preserved Methylene Chloride to assure the stability of Benzidines and Phenolics.

**Polynuclear Aromatic Hydrocarbons****16 Certified Components:**

|                      |                        |
|----------------------|------------------------|
| Acenaphthene         | Chrysene               |
| Acenaphthylene       | Dibenz(a,h)anthracene  |
| Anthracene           | Fluoranthene           |
| Benzo(a)anthracene   | Fluorene               |
| Benzo(a)pyrene       | Indeno(1,2,3-cd)pyrene |
| Benzo(b)fluoranthene | Naphthalene            |
| Benzo(g,h,i)perylene | Phenanthrene           |
| Benzo(k)fluoranthene | Pyrene                 |

1 mL @ 2,000 µg/mL in Methylene chloride: Benzene

**Catalog#: CLPS-B****Haloethers & Phthalates****13 Certified Components:**

|                             |                            |
|-----------------------------|----------------------------|
| bis(2-Chloroethoxy)methane  | Di-n-butyl phthalate       |
| bis(2-Chloroethyl)ether     | Diethyl phthalate          |
| bis(2-Chloroisopropyl)ether | Dimethyl phthalate         |
| bis(2-Ethylhexyl)phthalate  | Di-n-Octyl phthalate       |
| 4-Bromophenyl phenyl ether  | N-Nitroso-di-n-propylamine |
| Butylbenzyl phthalate       | N-Nitrosodiphenylamine     |
| 4-Chlorophenyl-phenyl ether |                            |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-C****Chlorinated/Nitrated Hydrocarbons****13 Certified Components:**

|                     |                           |
|---------------------|---------------------------|
| 2-Chloronaphthalene | Hexachlorobutadiene       |
| 1,2-Dichlorobenzene | Hexachlorocyclopentadiene |
| 1,3-Dichlorobenzene | Hexachloroethane          |
| 1,4-Dichlorobenzene | Isophorone                |
| 2,4-Dinitrotoluene  | Nitrobenzene              |
| 2,6-Dinitrotoluene  | 1,2,4-Trichlorobenzene    |
| Hexachlorobenzene   |                           |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-D****3,3'-Dichlorobenzidine****1 Certified Component:**

3,3'-Dichlorobenzidine

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 625-E****Additional Analytes****2 Certified Components:**

Benzidine  
N-Nitrosodimethylamine

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 625-F****Additional Analytes****7 Certified Components:**

|                     |                |
|---------------------|----------------|
| Benzyl alcohol      | 2-Nitroaniline |
| 4-Chloroaniline     | 3-Nitroaniline |
| Dibenzofuran        | 4-Nitroaniline |
| 2-Methylnaphthalene |                |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-G****Pesticides****18 Certified Components:**

|                 |                               |
|-----------------|-------------------------------|
| Aldrin          | Endosulfan II                 |
| α-BHC           | Endosulfan sulfate            |
| β-BHC           | Endrin                        |
| γ-BHC (Lindane) | Endrin aldehyde               |
| δ-BHC           | Endrin ketone                 |
| 4,4'-DDD        | Dieldrin                      |
| 4,4'-DDE        | Heptachlor                    |
| 4,4'-DDT        | Heptachlor epoxide (Isomer B) |
| Endosulfan I    | Methoxychlor                  |

1 mL @ 2,000 µg/mL in Benzene

**Catalog#: 625-PH****Toxaphene Standard****1 Certified Component:**

Toxaphene

1 mL @ 200 µg/mL in Hexane

**Catalog#: TOX-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-3535**

1 mL @ 2,000 µg/mL in Hexane

**Catalog#: TOX-XH****Chlordane Standard****1 Certified Component:**

Technical Chlordane

1 mL @ 200 µg/mL in Hexane

**Catalog#: CDANE-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-780**

1 mL @ 2,000 µg/mL in Hexane

**Catalog#: CDANE-XH**

### Aroclor Mix 1

Mix one contains the following Aroclors:

#### 4 Certified Components:

Aroclor 1016                      Aroclor 1232  
Aroclor 1248                      Aroclor 1260

1 mL @ 200 µg/mL in Hexane

Catalog#: PCB-M1

### Aroclor Mix 2

Mix two contains the following Aroclors:

#### 3 Certified Components:

Aroclor 1221  
Aroclor 1254  
Aroclor 1242

1 mL @ 200 µg/mL in Hexane

Catalog#: PCB-M2

### Individual Aroclors

Two concentrations available:

200 µg/mL and 1,000 µg/mL, 1 mL each in Hexane

| Concentration | Certified Components | Catalog#  |
|---------------|----------------------|-----------|
| 200 µg/mL     | 1                    | PCB-1016  |
| 1,000 µg/mL   | 1                    | PCB-1016H |
| 200 µg/mL     | 1                    | PCB-1221  |
| 1,000 µg/mL   | 1                    | PCB-1221H |
| 200 µg/mL     | 1                    | PCB-1232  |
| 1,000 µg/mL   | 1                    | PCB-1232H |
| 200 µg/mL     | 1                    | PCB-1242  |
| 1,000 µg/mL   | 1                    | PCB-1242H |
| 200 µg/mL     | 1                    | PCB-1248  |
| 1,000 µg/mL   | 1                    | PCB-1248H |
| 200 µg/mL     | 1                    | PCB-1254  |
| 1,000 µg/mL   | 1                    | PCB-1254H |
| 200 µg/mL     | 1                    | PCB-1260  |
| 1,000 µg/mL   | 1                    | PCB-1260H |
| 200 µg/mL     | 1                    | PCB-1262  |
| 1,000 µg/mL   | 1                    | PCB-1262H |
| 200 µg/mL     | 1                    | PCB-1268  |
| 1,000 µg/mL   | 1                    | PCB-1268H |

### PCB Kit H

1 mL @ 1,000 µg/mL of each of the following in a kit:

PCB-1016H                      PCB-1221H                      PCB-1232H  
PCB-1242H                      PCB-1248H                      PCB-1254H  
PCB-1260H

Catalog#: PCB-KH

### PCB Kit 200

1 mL @ 200 µg/mL of each of the following in a kit:

PCB-1016                      PCB-1221                      PCB-1232  
PCB-1242                      PCB-1248                      PCB-1254  
PCB-1260

Catalog#: PCB-200K

### Base/Neutral Surrogate

#### 3 Certified Components:

2-Fluorobiphenyl  
Nitrobenzene-d<sub>5</sub>  
Terphenyl-d<sub>14</sub>

1 mL @ 1,000 µg/mL in  
50:50 Methylene chloride:Acetone

Catalog#: CLPS-SB

5 mL

Catalog#: CLPS-SB5

1 mL @ 5,000 µg/mL in  
Methylene chloride:Acetone:Benzene

Catalog#: CLPS-SBH

5 mL

Catalog#: CLPS-SBH5

## Need larger quantities?

Volume discounts are available!  
Call us at **1-800-LAB-SPEX**  
for more information.

### Optional: 625 Base Neutral IS/SS

| Component<br>@ 1,000 ug/mL:    | Matrix            | Catalog# |
|--------------------------------|-------------------|----------|
| Anthracene-d10                 | MeCl <sub>2</sub> | S-291    |
| Benzo(a)anthracene-d12         | Methanol          | S-4759   |
| 4,4'-Dibromobiphenyl           | Acetone           | S-1228   |
| 4,4'-Dibromooctafluorobiphenyl | MTBE              | S-1250   |
| Decafluorobiphenyl             | Methanol          | S-1103   |
| 2,2'-Difluorobiphenyl          | Methanol          | S-1542   |
| 4-Fluoroaniline                | Methanol          | S-4048   |
| 1-Fluoronaphthalene            | Methanol          | S-2047   |
| 2-Fluoronaphthalene            | Methanol          | S-4308   |
| Naphthalene-d8                 | Methanol          | S-2660   |
| Nitrobenzene-d5                | Methanol          | S-2710   |
| Phenanthrene-d10               | MeCl <sub>2</sub> | S-3020   |
| Pyridine-d5                    | Methanol          | S-3937   |

### High Concentration Organic Tinted Indicator Surrogates

#### 4 Certified Components:

|                             |        |
|-----------------------------|--------|
| 2-Fluorobiphenyl            | 5,000  |
| Nitrobenzene-d <sub>5</sub> | 5,000  |
| p-Terphenyl-d <sub>14</sub> | 5,000  |
| Methyl Orange               | 12,500 |

1 mL in Methylene chloride:Acetone:Benzene

**Catalog#: CLPS-SBH-TI**

5 mL

**Catalog#: CLPS-SBH5-TI**

### Acid Surrogate

#### 3 Certified Components:

2-Fluorophenol  
Phenol-d<sub>5</sub>  
2,4,6-Tribromophenol

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-SA**

5 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-SA5**

1 mL @ 10,000 µg/mL in Methanol

**Catalog#: CLPS-SAH**

### 625 Acid IS/SS

| Component<br>@ 1,000 ug/mL: | Matrix            | Catalog#  |
|-----------------------------|-------------------|-----------|
| 2-Fluorophenol              | Methanol          | S-2050    |
| Pentafluorophenol           | Methanol          | S-4047    |
| Phenol-d5                   | MeCl <sub>2</sub> | S-4195-MC |

### Internal Standard

#### 6 Certified Components:

Acenaphthene-d<sub>10</sub>      Naphthalene-d<sub>8</sub>  
Chrysene-d<sub>12</sub>      Perylene-d<sub>12</sub>  
1,4-Dichlorobenzene-d<sub>4</sub>      Phenanthrene-d<sub>10</sub>

1 mL @ 4,000 µg/mL in Methylene chloride:Benzene

**Catalog#: CLPS-I**

2 mL @ 2,000 µg/mL in Methylene chloride:Benzene

**Catalog#: CLPS-I2**

### Alternate Internal Standard

#### 6 Certified Components:

Acenaphthene-d<sub>10</sub>      Naphthalene-d<sub>8</sub>  
Chrysene-d<sub>12</sub>      Perylene-d<sub>12</sub>  
1,4-Dichlorobenzene-d<sub>4</sub>      Phenanthrene-d<sub>10</sub>

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-I90**

### Acids Matrix Spike

#### 5 Certified Components:

4-Chloro-3-Methylphenol      Pentachlorophenol  
2-Chlorophenol      Phenol  
4-Nitrophenol

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-MSA**

5 mL

**Catalog#: CLPS-MSA5**

## Base/Neutrals Matrix Spike

### 6 Certified Components:

|                     |                            |
|---------------------|----------------------------|
| Acenaphthene        | N-Nitroso-di-n-propylamine |
| 1,4-Dichlorobenzene | Pyrene                     |
| 2,4-Dinitrotoluene  | 1,2,4-Trichlorobenzene     |

1 mL @ 1,000 µg/mL in Methylene chloride

Catalog#: CLPS-MSB

## Base/Neutrals Tinted Matrix Spike

### 7 Certified Components:

|                        |                           |
|------------------------|---------------------------|
| 1,2,4-Trichlorobenzene | Bromophenol blue          |
| 1,4-Dichlorobenzene    | N-Nitrosodi-n-propylamine |
| 2,4-Dinitrotoluene     | Pyrene                    |
| Acenaphthene           |                           |

1 mL @ 1,000 µg/mL in Methanol

Catalog#: CLPS-MSB-TI

## GC/MS Tuning Standard

### 1 Certified Component:

Decafluorotriphenylphosphine

1 mL @ 2,500 µg/mL in Methanol

Catalog#: CLPS-T

## 4-Component GC-MS Tuning Standard

### 4 Certified Components:

|           |                              |
|-----------|------------------------------|
| Benzidine | Decafluorotriphenylphosphine |
| 4,4-DDT   | Pentachlorophenol            |

1 mL @ 2,500 µg/mL in Methanol

Catalog#: CLPS-T4

## GC-MS Test Mix

### 2 Certified Components:

DFTPP  
Pentachlorophenol

1 mL @ 250 µg/mL in Methylene Chloride

Catalog#: 625-T2

## METHOD 8041

EPA method 8041 is a general analytical method for the monitoring of phenols by GC-FID or GC-ECD.

## RCRA Target Analytes

### 21 Certified Components:

|                                         |                           |
|-----------------------------------------|---------------------------|
| 4-Chloro-3-methylphenol                 | 3-Methylphenol            |
| 2-Chlorophenol                          | 4-Methylphenol            |
| 2-Cyclohexyl-4,6-dinitrophenol          | 2-Nitrophenol             |
| 2,4-Dichlorophenol                      | 4-Nitrophenol             |
| 2,6-Dichlorophenol                      | Pentachlorophenol         |
| 2,4-Dimethylphenol                      | Phenol                    |
| 4,6-Dinitro-2-methylphenol              | 2,3,4,5-Tetrachlorophenol |
| 2,4-Dinitrophenol                       | 2,3,4,6-Tetrachlorophenol |
| Dinoseb (2-sec-Butyl-4,6-dinitrophenol) | 2,3,5,6-Tetrachlorophenol |
| 2-Methylphenol                          | 2,4,5-Trichlorophenol     |
|                                         | 2,4,6-Trichlorophenol     |

1 mL @ 1,000 µg/mL in Isopropanol

Catalog#: 8041-A

## Non-RCRA Singles

| Component<br>@ 1,000 ug/mL: | Matrix   | Catalog# |
|-----------------------------|----------|----------|
| 2-Chloro-5-methylphenol     | Methanol | S-946    |
| 4-Chloro-2-methylphenol     | Methanol | S-3979   |
| 3-Chlorophenol              | Methanol | S-901    |
| 4-Chlorophenol              | Methanol | S-906    |
| 2,3-Dichlorophenol          | Methanol | S-1406   |
| 2,5-Dichlorophenol          | Methanol | S-1412   |
| 3,4-Dichlorophenol          | Methanol | S-1416   |
| 3,5-Dichlorophenol          | Methanol | S-1417   |
| 2,3-Dimethylphenol          | Methanol | S-1659   |
| 2,5-Dimethylphenol          | Acetone  | S-1661   |
| 2,6-Dimethylphenol          | Methanol | S-1662   |
| 3,4-Dimethylphenol          | Methanol | S-1664   |
| 2,5-Dinitrophenol           | Methanol | S-3980   |
| 3-Nitrophenol               | Methanol | S-2728   |
| 2,3,4-Trichlorophenol       | Methanol | S-3625   |
| 2,3,5-Trichlorophenol       | Methanol | S-3630   |
| 2,3,6-Trichlorophenol       | Methanol | S-3635   |

## Helpful Hint:

In CLPS-I the Perylene-d<sub>12</sub> may crystallize and drop from solution when stored at subzero temperatures. It can be redissolved by sonication.



**Phenolics Mix B****7 Certified Components:**

|                                         |                           |
|-----------------------------------------|---------------------------|
| 2,6-Dichlorophenol                      | 4-Methylphenol            |
| 2-Methylphenol                          | 2,3,4,6-Tetrachlorophenol |
| 3-Methylphenol                          | 2,4,5-Trichlorophenol     |
| Dinoseb (2-sec-Butyl-4,6-dinitrophenol) |                           |

1 mL @ 2,000 µg/mL in Isopropanol

**Catalog#: 8040-B****Surrogate Standard****1 Certified Component:**

2,4-Dibromophenol

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-5148****Internal Standard****2 Certified Components:**

2,5-Dibromotoluene  
2,2',5,5'-Tetrabromobiphenyl

1 mL @ 1,000 µg/mL in Isopropanol

**Catalog#: 8041-I****Internal Standards****1 Certified Component:**

2,5-Dibromotoluene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-1251****1 Certified Component:**

2,2',5,5'-Tetrabromobiphenyl

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-4144****METHOD 8061**

EPA method 8061 is an analytical method for the monitoring of phthalate esters in aqueous and solid samples by GC-MS or GC-ECD.

**Phthalate Esters****6 Certified Components:**

|                             |                      |
|-----------------------------|----------------------|
| bis(2-Ethylhexyl) phthalate | Dimethyl phthalate   |
| Butylbenzyl phthalate       | Diethyl phthalate    |
| Di-n-Butyl phthalate        | Di-n-Octyl phthalate |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 606-XH****QC Check Solution****6 Certified Components:**

|                            | µg/mL |                      | µg/mL |
|----------------------------|-------|----------------------|-------|
| bis(2-Ethylhexyl)phthalate | 50    | Diethyl phthalate    | 25    |
| Butylbenzyl phthalate      | 10    | Dimethyl phthalate   | 25    |
| Di-n-Butyl phthalate       | 25    | Di-n-Octyl phthalate | 50    |

1 mL in Acetone

**Catalog#: 8060-QC****Internal Standard****1 Certified Component:**

Benzyl benzoate

1 mL @ 5,000 µg/mL in Hexane

**Catalog#: 8060-I****Surrogate Standard****3 Certified Components:**

Dibenzyl phthalate  
Diphenyl isophthalate  
Diphenyl phthalate

1 mL @ 500 µg/mL in Hexane

**Catalog#: 8060-S****Did You Know?**

SPEX CertiPrep's chemists have decades of experience and are available to answer your questions. Submit your questions to [askachemist@spex.com](mailto:askachemist@spex.com) and receive a free gift if we post your question on our website.

## Method 8061 Additional Analytes

| Component<br>@ 1,000 ug/mL:     | Matrix   | Catalog# |
|---------------------------------|----------|----------|
| Bis(2-n-butoxyethyl)phthalate   | Methanol | S-4152   |
| Bis(2-ethoxyethyl)phthalate     | Methanol | S-4550   |
| Bis(2-methoxyethyl)phthalate    | Methanol | S-4156   |
| Bis(4-methyl-2-pentyl)phthalate | Methanol | S-4154   |
| Diamyl phthalate                | Methanol | S-4157   |
| Dicyclohexyl phthalate          | Methanol | S-4151   |
| Di-n-hexyl phthalate            | Methanol | S-4155   |
| Diisobutyl phthalate            | Methanol | S-4150   |
| Dinonyl phthalate               | Methanol | S-4153   |
| Hexyl 2-ethylhexyl phthalate    | Methanol | S-4158   |

## METHOD 8100

EPA method 8100 is an analytical method for the monitoring of PNA hydrocarbons in aqueous and solid samples by GC-FID.

### Polynuclear Aromatic Hydrocarbons Mix A

#### 16 Certified Components:

|                      |                        |
|----------------------|------------------------|
| Acenaphthene         | Chrysene               |
| Acenaphthylene       | Dibenz(a,h)anthracene  |
| Anthracene           | Fluoranthene           |
| Benzo(a)anthracene   | Fluorene               |
| Benzo(b)fluoranthene | Indeno(1,2,3-cd)pyrene |
| Benzo(k)fluoranthene | Naphthalene            |
| Benzo(g,h,i)perylene | Phenanthrene           |
| Benzo(a)pyrene       | Pyrene                 |

1 mL @ 2,000 µg/mL in Methylene chloride: Benzene

Catalog#: CLPS-B

### Polynuclear Aromatic Hydrocarbons Mix B

#### 8 Certified Components:

|                          |                      |
|--------------------------|----------------------|
| Benzo(j)fluoranthene     | Dibenzo(a,e)pyrene   |
| Dibenz(a,h)acridine      | Dibenzo(a,h)pyrene   |
| Dibenz(a,i)acridine      | Dibenzo(a,i)pyrene   |
| 7H-Dibenzo(c,g)carbazole | 3-Methylcholanthrene |

1 mL @ 1,000 µg/mL in Methylene chloride: Benzene

Catalog#: 8100-B

### Surrogate Standard

#### 2 Certified Components:

2-Fluorobiphenyl  
1-Fluoronaphthalene

1 mL @ 2,000 µg/mL in Methylene chloride

Catalog#: 8100-S

## Did You Know?

SPEX CertiPrep has many more individual standards that can be seen online at [www.spexcertiprep.com](http://www.spexcertiprep.com)

## METHOD 8121

EPA method 8121 is an analytical method for the monitoring of chlorinated hydrocarbons in environmental and waste samples by GC-ECD.

### Method 8120/8120A Chlorinated Hydrocarbons

#### 9 Certified Components:

|                     |                           |
|---------------------|---------------------------|
| 2-Chloronaphthalene | Hexachlorobutadiene       |
| 1,2-Dichlorobenzene | Hexachlorocyclopentadiene |
| 1,3-Dichlorobenzene | Hexachloroethane          |
| 1,4-Dichlorobenzene | 1,2,4-Trichlorobenzene    |
| Hexachlorobenzene   |                           |

1 mL @ 2,000 µg/mL in Isooctane

Catalog#: 612-X

### Method 8121 Chlorinated Hydrocarbons QC Mix

#### 22 Certified Components:

|                     |                            |
|---------------------|----------------------------|
| Benzal Chloride     | gamma-BHC                  |
| Benzotrichloride    | delta-BHC                  |
| Benzyl Chloride     | Hexachlorocyclopentadiene  |
| 2-Chloronaphthalene | Hexachloroethane           |
| 1,2-Dichlorobenzene | Pentachlorobenzene         |
| 1,3-Dichlorobenzene | 1,2,3,4-Tetrachlorobenzene |
| 1,4-Dichlorobenzene | 1,2,4,5-Tetrachlorobenzene |
| Hexachlorobenzene   | 1,2,3,5-Tetrachlorobenzene |
| Hexachlorobutadiene | 1,2,4-Trichlorobenzene     |
| alpha-BHC           | 1,2,3-Trichlorobenzene     |
| beta-BHC            | 1,3,5-Trichlorobenzene     |

1 mL @ 100 µg/mL in Acetone

Catalog#: 8121-B

### 3-Component Internal Standard

#### 3 Certified Components:

|                       |
|-----------------------|
| 2,5-Dibromotoluene    |
| α,α-Dibromo-m-xylene  |
| 1,3,5-Tribromobenzene |

1 mL @ 500 µg/mL in Acetone

Catalog#: 8121-I

### Single-Component Internal Standard

#### 1 Certified Component:

|                       |
|-----------------------|
| 1,3,5-Tribromobenzene |
|-----------------------|

1 mL @ 1,000 µg/mL in Acetone

Catalog#: S-3552

### Surrogate Standard

#### 3 Certified Components:

|                              |
|------------------------------|
| α,2,6-Trichlorotoluene       |
| 2,3,4,5,6-Pentachlorotoluene |
| 1,4-Dichloronaphthalene      |

1 mL @ 1,000 µg/mL in Acetone

Catalog#: 8121-S

## METHOD 8270

EPA method 8270 is a general analytical method for the monitoring of SVOA in environmental and waste samples by GC-MS.

### "Big-Mix" - Base Neutral & Acid Combination Calibration Standard

Semivolatile Organics Mix with 76 Certified Components

#### 76 Certified Components:

|                                   |                            |
|-----------------------------------|----------------------------|
| Acenaphthene                      | 2,6-Dinitrotoluene         |
| Acenaphthylene                    | 4,6-Dinitro-2-methylphenol |
| Aniline                           | Diphenylamine**            |
| Anthracene                        | Di-n-butyl phthalate       |
| Azobenzene                        | Di-n-octyl phthalate       |
| *Benz(a)anthracene                | bis-(2-Ethylhexyl)adipate  |
| Benzo(a)pyrene                    | Fluoranthene               |
| Benzo(b)fluoranthene              | Fluorene                   |
| bis(2-Ethylhexyl)phthalate        | Hexachlorobenzene          |
| Benzo(g,h,i)perylene              | Hexachlorobutadiene        |
| Benzo(k)fluoranthene              | Hexachlorocyclopentadiene  |
| Benzyl alcohol                    | Hexachloroethane           |
| 4-Bromodiphenyl ether             | Indeno(1,2,3-c,d)pyrene    |
| Butylbenzyl phthalate             | Isophorone                 |
| Carbazole                         | 1-Methylnaphthalene        |
| 4-Chloroaniline (p-Chloroaniline) | 2-Methylnaphthalene        |
| bis(2-Chloroethoxy)methane        | 2-Methylphenol***          |
| bis(2-Chloroethyl)ether           | 3-Methylphenol***          |
| bis(2-Chloro-1-methylethyl) ether | 4-Methylphenol             |
| 2-Chloronaphthalene               | Naphthalene                |
| 2-Chlorophenol                    | 2-Nitroaniline             |
| 4-Chlorophenyl-phenyl ether       | 3-Nitroaniline             |
| 4-Chloro-3-methylphenol           | 4-Nitroaniline             |
| Chrysene                          | Nitrobenzene               |
| Dibenzofuran                      | 2-Nitrophenol              |
| Dibenz(a,h)anthracene             | 4-Nitrophenol              |
| 1,2-Dichlorobenzene               | N-Nitrosodimethylamine**   |
| 1,3-Dichlorobenzene               | N-Nitrosodi-n-propylamine  |
| 1,4-Dichlorobenzene               | Pentachlorophenol          |
| 2,4-Dichlorophenol                | Phenanthrene               |
| Diethyl phthalate                 | Phenol                     |
| Dimethyl phthalate                | Pyrene                     |
| 2,4-Dimethylphenol                | Pyridine                   |
| 1,2-Dinitrobenzene                | 2,3,4,6-Tetrachlorophenol  |
| 1,3-Dinitrobenzene                | 2,3,5,6-Tetrachlorophenol  |
| 1,4-Dinitrobenzene                | 1,2,4-Trichlorobenzene     |
| 2,4-Dinitrophenol                 | 2,4,5-Trichlorophenol      |
| 2,4-Dinitrotoluene                | 2,4,6-Trichlorophenol      |

\*1,2-Diphenylhydrazine (8270-listed analyte)  
decomposes to Azobenzene (mix component)

\*\*N-Nitrosodiphenylamine (8270-listed analyte)  
decomposes to Diphenylamine (mix component)

\*\*\*3-Methylphenol and 4-Methylphenol concentration  
each are 500 µg/mL

1 mL @ 1,000 µg/mL in Methylene Chloride

Catalog#: 76-BIG-MIX

## Method 8270 Singles

| Component<br>@ 1,000 ug/mL:               | Matrix                             | Catalog# |
|-------------------------------------------|------------------------------------|----------|
| 2-Acetylaminofluorene                     | Methanol                           | S-130    |
| 1-Acetyl-2-thiourea                       | Methanol                           | S-160    |
| 2-Aminoanthraquinone                      | MeCl <sub>2</sub> :<br>Benzene:THF | S-220    |
| Aminoazobenzene                           | Methanol                           | S-3065   |
| 3-Amino-9-ethylcarbazole                  | Methanol                           | S-0226   |
| Anilazine                                 | Methanol                           | S-275    |
| o-Anisidine                               | Methanol                           | S-285    |
| Aramite                                   | MeCl <sub>2</sub>                  | S-305    |
| Barban                                    | Methanol                           | S-375    |
| p-Benzoquinone                            | Methanol                           | S-420    |
| Bromoxynil                                | Methanol                           | S-575    |
| Carbophenothion                           | Methanol                           | S-755    |
| Chlorfenvinphos                           | Acetone                            | S-785    |
| 5-Chloro-2-methylaniline                  | Methanol                           | S-0941   |
| 3-(Chloromethyl)pyridine<br>Hydrochloride | Methanol                           | S-3116   |
| 4-Chloro-1,<br>2-phenylenediamine         | Acetonitrile                       | S-954    |
| 4-Chloro-1,<br>3-phenylenediamine         | Acetone                            | S-907    |
| p-Cresidine                               | Methanol                           | S-2415   |
| 2-Cyclohexyl-4,<br>6-dinitro-phenol       | MeCl <sub>2</sub>                  | S-1029   |
| 2,4-Diaminotoluene                        | Methanol                           | S-1160   |
| Dibenzo(a,e)pyrene                        | MeCl: Benzene                      | S-1200   |
| 1,2-Dibromo-3-chloropropane               | Methanol                           | S-1255   |
| Dichlone                                  | Methanol                           | S-1275   |
| Dichlorovos                               | Methanol                           | S-1475   |
| Diethylstilbestrol                        | Methanol                           | S-1530   |

| Component<br>@ 1,000 ug/mL:                 | Matrix            | Catalog# |
|---------------------------------------------|-------------------|----------|
| Diethyl sulfate                             | Methanol          | S-1520   |
| 3,3'-Dimethoxybenzidine                     | Methanol          | S-1565   |
| a,a-Dimethylphenethylamine                  | Methanol          | S-3899   |
| Dinocap                                     | Methanol          | S-1705   |
| 5,5-Diphenylhydantoin                       | Methanol          | S-1745   |
| Ethyl carbamate                             | Methanol          | S-3785   |
| 2-Fluorobiphenyl (surr)                     | Methanol          | S-2045   |
| 2-Fluorophenol (surr)                       | Methanol          | S-2050   |
| Hexachlorophene                             | MeCl <sub>2</sub> | S-2160   |
| Hexamethylphosphoramide                     | Methanol          | S-2185   |
| Hydroquinone                                | Methanol          | S-2235   |
| Kepone                                      | Methanol          | S-2340   |
| Leptophos                                   | Methanol          | S-2345   |
| Maleic anhydride                            | Methanol          | S-2357   |
| Mestranol                                   | Methanol          | S-2369   |
| 4,4'-Methylenebis<br>(2-chloroaniline)      | Methanol          | S-5941   |
| 4,4'-Methylenebis<br>(N,N-dimethyl-aniline) | Methanol          | S-1661   |
| Mirex                                       | Hexane:Toluene    | S-2635   |
| Naled                                       | MeCl <sub>2</sub> | S-2650   |
| Nicotine                                    | Methanol          | S-2680   |
| 5-Nitroacenaphthene                         | Methanol          | S-2685   |
| 5-Nitro-o-anisidine                         | Methanol          | S-2420   |
| 4-Nitrobiphenyl                             | Methanol          | S-2715   |
| Nitrofen                                    | Methanol          | S-2720   |
| 4,4'-Oxydianiline                           | Methanol          | S-240    |
| Phenacetin                                  | MeCl <sub>2</sub> | S-150    |

## METHOD 8270C

## "SHORT LIST" ORIGINAL FORMULATIONS

| Component<br>@ 1,000 ug/mL:       | Matrix            | Catalog# |
|-----------------------------------|-------------------|----------|
| 1,4-Phenylenediamine              | Methanol          | S-3070   |
| Phthalic anhydride                | Methanol          | S-3100   |
| Propylthiouracil                  | Methanol          | S-2242   |
| Resorcinol                        | Methanol          | S-3250   |
| Strychnine                        | Methanol          | S-3295   |
| Tetrachlorvinphos                 | Acetone           | S-3425   |
| Tetraethyl dithiopyrophosphate    | Methanol          | S-3455   |
| Tetraethyl pyrophosphate          | Methanol          | S-3315   |
| Thiophenol (Benzenethiol)         | Methanol          | S-3495   |
| Toluene diisocyanate              | Methanol          | S-3530   |
| Trifluralin                       | Methanol          | S-3715   |
| 2,4,5-Trimethylaniline            | Methanol          | S-3718   |
| Trimethyl phosphate               | Methanol          | S-3740   |
| 1,3,5-Trinitrobenzene             | Methanol          | S-3760   |
| Tris(2,3-dibromopropyl) phosphate | MeCl <sub>2</sub> | S-3773   |

**BIG-BN-2 - Base Neutral & Acid  
Combination Calibration Standard**

Semivolatile Calibration Standard containing all 49 base-neutrals contained in blends: CLPS-B, CLPS-C, CLPS-D, and CLPS-G at 2,000 µg/mL

**49 Certified Components:**

|                             |                            |
|-----------------------------|----------------------------|
| Acenaphthene                | Dimethyl phthalate         |
| Acenaphthylene              | Di-n-butyl phthalate       |
| Anthracene                  | 2,4-Dinitrotoluene         |
| Benzo(a)anthracene          | 2,6-Dinitrotoluene         |
| Benzo(a)pyrene              | Di-n-octyl phthalate       |
| Benzo(b)fluoranthene        | Fluoranthene               |
| Benzo(g,h,i)perylene        | Fluorene                   |
| Benzo(k)fluoranthene        | Hexachlorobenzene          |
| Benzyl alcohol              | Hexachlorobutadiene        |
| bis(2-Chloroethoxy)methane  | Hexachlorocyclopentadiene  |
| bis(2-Chloroethyl)ether     | Hexachloroethane           |
| bis(2-Chloroisopropyl)ether | Indeno(1,2,3-cd)pyrene     |
| bis(2-Ethylhexyl)phthalate  | Isophorone                 |
| 4-Bromophenyl phenyl ether  | 2-Methylnaphthalene        |
| Butylbenzyl phthalate       | Naphthalene                |
| 4-Chloroaniline             | 2-Nitroaniline             |
| 2-Chloronaphthalene         | 3-Nitroaniline             |
| 4-Chlorophenyl-phenyl ether | 4-Nitroaniline             |
| Chrysene                    | Nitrobenzene               |
| Dibenz(a,h)anthracene       | N-Nitroso-di-n-propylamine |
| Dibenzofuran                | N-Nitrosodiphenylamine     |
| 1,2-Dichlorobenzene         | Phenanthrene               |
| 1,3-Dichlorobenzene         | Pyrene                     |
| 1,4-Dichlorobenzene         | 1,2,4-Trichlorobenzene     |
| Diethyl phthalate           |                            |

1 mL @ 2,000 µg/mL in Methylene chloride:Benzene

**Catalog#: BIG-BN-2**

5 mL @ 2,000 µg/mL in Methylene chloride:Benzene

**Catalog#: BIG-BN-2-5**

## Did You Know?

On SPEX CertiPrep's website you can search by CAS number or component name on our site search tool and on our Custom Standards Request Form for singles and mixes.



## HICAL-ACIDS

### 15 Certified Components:

|                            |                           |
|----------------------------|---------------------------|
| Benzoic acid               | 4-Methylphenol (p-Cresol) |
| 4-Chloro-3-methylphenol    | Phenol                    |
| 2-Chlorophenol             | 4-Nitrophenol             |
| 2,4-Dichlorophenol         | 2-Nitrophenol             |
| 2,4-Dimethylphenol         | Pentachlorophenol         |
| 4,6-Dinitro-2-methylphenol | 2,4,5-Trichlorophenol     |
| 2,4-Dinitrophenol          | 2,4,6-Trichlorophenol     |
| 2-Methylphenol (o-Cresol)  |                           |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: HICAL-ACIDS**

5 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: HICAL-ACIDS-5**

## Benzidines Mix

### 2 Certified Components:

Benidine  
3,3'-Dichlorobenzidine

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 605-X**

5 mL @ 2,000 µg/mL in Methanol

**Catalog#: 605-X5**

## Balance Mix - Option A

### 6 Certified Components:

|            |                           |
|------------|---------------------------|
| Aniline    | 3-Methylphenol (m-Cresol) |
| Azobenzene | N-Nitrosodimethylamine    |
| Carbazole  | Pyridine                  |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: SV-X**

5 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: SV-X5**

## Phenolics Mix

### 11 Certified Components:

|                            |                       |
|----------------------------|-----------------------|
| 4-Chloro-3-methylphenol    | 2-Nitrophenol         |
| 2-Chlorophenol             | 4-Nitrophenol         |
| 2,4-Dichlorophenol         | Pentachlorophenol     |
| 2,4-Dimethylphenol         | Phenol                |
| 4,6-Dinitro-2-methylphenol | 2,4,6-Trichlorophenol |
| 2,4-Dinitrophenol          |                       |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-A**

## Polynuclear Aromatic Hydrocarbons

### 16 Certified Components:

|                      |                        |
|----------------------|------------------------|
| Acenaphthene         | Chrysene               |
| Acenaphthylene       | Phenanthrene           |
| Anthracene           | Dibenz(a,h)anthracene  |
| Benzo(a)anthracene   | Fluorene               |
| Benzo(a)pyrene       | Indeno(1,2,3-cd)pyrene |
| Benzo(b)fluoranthene | Naphthalene            |
| Benzo(g,h,i)perylene | Pyrene                 |
| Benzo(k)fluoranthene | Phenanthrene           |

1 mL @ 2,000 µg/mL in Methylene chloride: Benzene

**Catalog#: CLPS-B**

## Haloethers & Phthalates

### 13 Certified Components:

|                             |                            |
|-----------------------------|----------------------------|
| bis(2-Chloroethoxy)methane  | Di-n-butyl phthalate       |
| bis(2-Chloroethyl)ether     | Diethyl phthalate          |
| bis(2-Chloroisopropyl)ether | Dimethyl phthalate         |
| bis(2-Ethylhexyl)phthalate  | Di-n-Octyl phthalate       |
| 4-Bromophenyl phenyl ether  | N-Nitroso-di-n-propylamine |
| Butylbenzyl phthalate       | N-Nitrosodiphenylamine     |
| 4-Chlorophenyl-phenyl ether |                            |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-C**

## Chlorinated/Nitrated Hydrocarbons Mix

### 13 Certified Components:

|                     |                           |
|---------------------|---------------------------|
| 2-Chloronaphthalene | Hexachlorobutadiene       |
| 1,2-Dichlorobenzene | Hexachlorocyclopentadiene |
| 1,3-Dichlorobenzene | Hexachloroethane          |
| 1,4-Dichlorobenzene | Isophorone                |
| 2,4-Dinitrotoluene  | Nitrobenzene              |
| 2,6-Dinitrotoluene  | 1,2,4-Trichlorobenzene    |
| Hexachlorobenzene   |                           |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-D**

## CLP Mix G

### 7 Certified Components:

|                     |                |
|---------------------|----------------|
| Benzyl alcohol      | 2-Nitroaniline |
| 4-Chloroaniline     | 3-Nitroaniline |
| Dibenzofuran        | 4-Nitroaniline |
| 2-Methylnaphthalene |                |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-G**

**Appendix IX Mix A****33 Certified Components:**

|                             |                           |
|-----------------------------|---------------------------|
| 2-Acetyl aminofluorene      | N-Nitrosodiethylamine     |
| 4-Aminobiphenyl             | N-Nitrosodimethylamine    |
| Aniline                     | N-Nitroso-di-n-butylamine |
| 1-Chloronaphthalene         | N-Nitrosomethylethylamine |
| Dibenz(a,j)acridine         | N-Nitrosomorpholine       |
| p-Dimethylaminoazobenzene   | N-Nitrosopiperidine       |
| 7,12-Dimethylbenzanthracene | N-Nitrosopyrrolidine      |
| 3,3'-Dimethylbenzidine      | 5-Nitro-o-toluidine       |
| m-Dinitrobenzene            | 2-Picoline                |
| p-Dinitrobenzene            | Pentachloronitrobenzene   |
| Diphenylamine               | Phenacetin                |
| Ethyl methanesulfonate      | p-Phenylenediamine        |
| 3-Methylcholanthrene        | Pronamide                 |
| Methyl methanesulfonate     | Pyridine                  |
| 1-Naphthylamine             | Thionazin                 |
| 2-Naphthylamine             | o-Toluidine               |
| 4-Nitroquinoline-1-oxide    |                           |

1 mL @ 2,000 µg/mL in  
Methylene chloride:Acetone:Benzene

**Catalog#: 8270-IXA**

**Appendix IX Mix B****4 Certified Components:**

|                    |                           |
|--------------------|---------------------------|
| 2,6-Dichlorophenol | 3-Methylphenol(m-cresol)  |
| Dinoseb            | 2,3,4,6-Tetrachlorophenol |

1 mL @ 2,000 µg/mL in  
Methylene chloride:Acetone:Benzene

**Catalog#: 8270-IXB**

**Appendix IX Mix C****22 Certified Components:**

|                   |                                |
|-------------------|--------------------------------|
| Acetophenone      | Methapyrilene                  |
| Azobenzene        | Methyl parathion               |
| Chlorobenzilate   | 1,4-Naphthoquinone             |
| Diallate          | Parathion                      |
| Dimethoate        | Pentachlorobenzene             |
| Disulfoton        | Pentachloroethane              |
| Famphur           | Phorate                        |
| Hexachlorophene   | Safrole                        |
| Hexachloropropene | Sulfotep                       |
| Isodrin           | 1,2,4,5-Tetrachlorobenzene     |
| Isosafrole        | o,o,o-Triethylphosphorothioate |

1 mL @ 2,000 µg/mL in  
Methylene chloride:Acetone:Benzene

**Catalog#: 8270-IXC**

**Organochlorine Pesticides****18 Certified Components:**

|                 |                               |
|-----------------|-------------------------------|
| Aldrin          | Endosulfan I                  |
| α-BHC           | Endosulfan II                 |
| β-BHC           | Endosulfan sulfate            |
| γ-BHC (Lindane) | Endrin                        |
| δ-BHC           | Endrin aldehyde               |
| 4,4'-DDD        | Endrin ketone                 |
| 4,4'-DDE        | Heptachlor                    |
| 4,4'-DDT        | Heptachlor epoxide (Isomer B) |
| Dieldrin        | Methoxychlor                  |

1 mL @ 2,000 µg/mL in Benzene

**Catalog#: 625-PH**

**Appendix IX Organophosphorous/  
Nitrogen Pesticides and Herbicides****24 Certified Components:**

|                 |                                                  |
|-----------------|--------------------------------------------------|
| Azinphos methyl | Fenthion                                         |
| Captafol        | Malathion                                        |
| Captan          | Mevinphos                                        |
| Carbaryl        | Mexacarbate                                      |
| Carbofuran      | Monocrotophos                                    |
| Coumaphos       | Octamethyl pyrophosphoramide<br>(OMPA, Schraden) |
| Crotoxyphos     | Phosalone                                        |
| Demeton-(O+S)   | Phosmet                                          |
| Dicrotophos     | Phosphamidon                                     |
| Dioxathion      | Sulfallate                                       |
| EPN             | Terbufos                                         |
| Ethion          |                                                  |
| Fensulfothion   |                                                  |

1 mL @ 2,000 µg/mL in Acetone

**Catalog#: 8270-IXJ**

**Chlorinated Hydrocarbons****13 Certified Components:**

|                           |                            |
|---------------------------|----------------------------|
| 2-Chloronaphthalene       | Hexachloroethane           |
| 1,2-Dichlorobenzene       | Hexachloropropane          |
| 1,3-Dichlorobenzene       | Pentachlorobenzene         |
| 1,4-Dichlorobenzene       | Pentachloroethane          |
| Hexachlorobenzene         | 1,2,4,5-Tetrachlorobenzene |
| Hexachlorobutadiene       | 1,2,4-Trichlorobenzene     |
| Hexachlorocyclopentadiene |                            |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: 8270-AF-B**

## Nitrosamines

### 9 Certified Components:

|                           |                           |
|---------------------------|---------------------------|
| N-Nitroso-di-n-butylamine | N-Nitrosomethylethylamine |
| N-Nitrosodiethylamine     | N-Nitrosomorpholine       |
| N-Nitrosodimethylamine    | N-Nitrosopiperidine       |
| N-Nitrosodiphenylamine    | N-Nitrosopyrrolidine      |
| N-Nitrosodi-n-propylamine |                           |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: 8270-AF-C**

## Phenols

### 11 Certified Components:

|                            |                       |
|----------------------------|-----------------------|
| 4-Chloro-3-methylphenol    | 2-Nitrophenol         |
| 2-Chlorophenol             | 4-Nitrophenol         |
| 2,4-Dichlorophenol         | Pentachlorophenol     |
| 2,4-Dimethylphenol         | Phenol                |
| 4,6-Dinitro-2-methylphenol | 2,4,6-Trichlorophenol |
| 2,4-Dinitrophenol          |                       |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: 8270-AF-L**

## Polynuclear Aromatic Hydrocarbons

### 16 Certified Components:

|                      |                        |
|----------------------|------------------------|
| Acenaphthene         | Chrysene               |
| Acenaphthylene       | Dibenz(a,h)anthracene  |
| Anthracene           | Fluoranthene           |
| Benzo(a)anthracene   | Fluorene               |
| Benzo(a)pyrene       | Indeno(1,2,3-cd)pyrene |
| Benzo(b)fluoranthene | Naphthalene            |
| Benzo(g,h,i)perylene | Phenanthrene           |
| Benzo(k)fluoranthene | Pyrene                 |

1 mL @ 2,000 µg/mL in MeCl<sub>2</sub>:Benzene

**Catalog#: 8270-AF-M**

## Did You Know?

SPEX CertiPrep has a library of YouTube webinars on a variety of interesting subjects such as trace metals in wine, analysis of phthalates and BPA in children's toys, and clean laboratory techniques.

View these videos at

[www.spexcertiprep.com/knowledge-base/webinars](http://www.spexcertiprep.com/knowledge-base/webinars)

## "LONG LIST" APPENDIX IX COMPOUNDS - ALTERNATIVE FORMULATIONS

## Polynuclear Aromatic Hydrocarbons

### 2 Certified Components:

7,12-Dimethylbenz[a]anthracene  
3-Methylcholanthrene

1 mL @ 2,000 µg/mL in

1:1 Methylene chloride:Benzene

**Catalog#: 8270-AF-F**

## Organophosphorous Pesticides

### 9 Certified Components:

|            |                                  |
|------------|----------------------------------|
| Dimethoate | o,o,o-Triethyl-phosphorothionate |
| Disulfoton | Methyl parathion                 |
| Famfur     | Parathion                        |
| Thionazin  | Phorate                          |
| Sulfotep   |                                  |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: 8270-AF-I**

## Organochlorine Pesticides

### 17 Certified Components:

|                 |                    |
|-----------------|--------------------|
| Aldrin          | Endosulfan I       |
| α-BHC           | Endosulfan II      |
| β-BHC           | Endosulfan sulfate |
| γ-BHC (Lindane) | Endrin             |
| δ-BHC           | Endrin aldehyde    |
| 4,4'-DDD        | Heptachlor         |
| 4,4'-DDE        | Heptachlor epoxide |
| 4,4'-DDT        | Methoxychlor       |
| Dieldrin        |                    |

1 mL @ 2,000 µg/mL in Acetone

**Catalog#: 8270-N**

## Toxaphene Stock Standard

### 1 Certified Component:

Toxaphene

1 mL @ 200 µg/mL in Hexane

**Catalog#: TOX-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-3535**

**Chlordane Stock Standard****1 Certified Component:**

Technical Chlordane

1 mL @ 200 µg/mL in Hexane

**Catalog#: CDANE-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-780****Decachlorobiphenyl Stock Standard****1 Certified Component:**

Decachlorobiphenyl

1 mL @ 5,000 µg/mL in Toluene

**Catalog#: DCBP-XH****Aroclor Mix 1**

Mix one contains the following Aroclors:

**4 Certified Components:**

|              |              |
|--------------|--------------|
| Aroclor 1016 | Aroclor 1232 |
| Aroclor 1248 | Aroclor 1260 |

1 mL @ 200 µg/mL in Hexane

**Catalog#: PCB-M1****Aroclor Mix 2**

Mix two contains the following Aroclors:

**3 Certified Components:**

Aroclor 1221  
Aroclor 1254  
Aroclor 1242

1 mL @ 200 µg/mL in Hexane

**Catalog#: PCB-M2****Individual Aroclors**

Two concentrations available:

200 µg/mL and 1,000 µg/mL at 1 mL each in Hexane.

| Concentration | Certified Components | Catalog#  |
|---------------|----------------------|-----------|
| 200 µg/mL     | 1                    | PCB-1016  |
| 1,000 µg/mL   | 1                    | PCB-1016H |
| 200 µg/mL     | 1                    | PCB-1221  |
| 1,000 µg/mL   | 1                    | PCB-1221H |
| 200 µg/mL     | 1                    | PCB-1232  |
| 1,000 µg/mL   | 1                    | PCB-1232H |
| 200 µg/mL     | 1                    | PCB-1242  |
| 1,000 µg/mL   | 1                    | PCB-1242H |
| 200 µg/mL     | 1                    | PCB-1248  |
| 1,000 µg/mL   | 1                    | PCB-1248H |
| 200 µg/mL     | 1                    | PCB-1254  |
| 1,000 µg/mL   | 1                    | PCB-1254H |
| 200 µg/mL     | 1                    | PCB-1260  |
| 1,000 µg/mL   | 1                    | PCB-1260H |
| 200 µg/mL     | 1                    | PCB-1262  |
| 1,000 µg/mL   | 1                    | PCB-1262H |
| 200 µg/mL     | 1                    | PCB-1268  |
| 1,000 µg/mL   | 1                    | PCB-1268H |

## Did you Know?

SPEX CertiPrep offers a number of informative Application Notes on our website with topics ranging from "Analysis of Laboratory Water for BPA and Phthalates" to "Analysis of Lipstick for Toxic Elements Using ICP-MS."

### Base/Neutral Surrogate

#### 3 Certified Components:

2-Fluorobiphenyl  
Nitrobenzene-d<sub>5</sub>  
Terphenyl-d<sub>14</sub>

1 mL @ 1,000 µg/mL in  
50:50 Methylene chloride:Acetone

**Catalog#: CLPS-SB**

5 mL @ 1,000 µg/mL in

50:50 Methylene chloride:Acetone

**Catalog#: CLPS-SB5**

### Acid Surrogate

#### 3 Certified Components:

2-Fluorophenol  
Phenol-d<sub>5</sub>  
2,4,6-Tribromophenol

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-SA**

5 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-SA5**

### Internal Standard

#### 6 Certified Components:

|                                    |                              |
|------------------------------------|------------------------------|
| Acenaphthene-d <sub>10</sub>       | Naphthalene-d <sub>8</sub>   |
| Chrysene-d <sub>12</sub>           | Perylene-d <sub>12</sub>     |
| 1,4-Dichlorobenzene-d <sub>4</sub> | Phenanthrene-d <sub>10</sub> |

1 mL @ 4,000 µg/mL in Methylene chloride:Benzene

**Catalog#: CLPS-I**

2 mL @ 2,000 µg/mL in Methylene chloride:Benzene

**Catalog#: CLPS-I2**

### Acids Matrix Spike

#### 5 Certified Components:

4-Chloro-3-Methylphenol  
2-Chlorophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-MSA**

5 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-MSA5**

### Base/Neutrals Matrix Spike

#### 6 Certified Components:

|                     |                            |
|---------------------|----------------------------|
| Acenaphthene        | N-Nitroso-di-n-propylamine |
| 1,4-Dichlorobenzene | Pyrene                     |
| 2,4-Dinitrotoluene  | 1,2,4-Trichlorobenzene     |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-MSB**

### Base/Neutrals Tinted Matrix Spike

#### 7 Certified Components:

|                        |                           |
|------------------------|---------------------------|
| 1,2,4-Trichlorobenzene | Bromophenol blue          |
| 1,4-Dichlorobenzene    | N-Nitrosodi-n-propylamine |
| 2,4-Dinitrotoluene     | Pyrene                    |
| Acenaphthene           |                           |

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: CLPS-MSB-TI**

### GC-MS Tuning Standard

#### 1 Certified Component:

Decafluorotriphenylphosphine

1 mL @ 2,500 µg/mL in Methanol

**Catalog#: CLPS-T**

### 4-Component GC-MS Tuning Standard

#### 4 Certified Components:

Decafluorotriphenylphosphine  
4,4-DDT  
Benzidine  
Pentachlorophenol

1 mL @ 2,500 µg/mL in Methylene chloride

**Catalog#: CLPS-T4**

### Base/Neutral Fraction Calibration Check Compounds

#### 7 Certified Components:

|                      |                            |
|----------------------|----------------------------|
| Acenaphthene         | Fluoranthene               |
| Benzo(a)pyrene       | Hexachlorobutadiene        |
| 1,4-Dichlorobenzene  | N-Nitroso-di-n-phenylamine |
| Di-n-octyl phthalate |                            |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: 8270-CCB**



**Skinner List Acid Extractables****4 Certified Analytes:**

|                    |                   |
|--------------------|-------------------|
| o-Cresol           | 2,4-Dinitrophenol |
| m-Cresol           | 4-Nitrophenol     |
| p-Cresol           | Phenol            |
| 2,4-Dimethylphenol | Thiophenol        |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: SKINNER-AE****Skinner List Semivolatiles****25 Certified Analytes:**

|                                 |                       |
|---------------------------------|-----------------------|
| Anthracene                      | 1,4 Dichlorobenzene   |
| Benzo(a)anthracene              | Di(n)octyl phthalate  |
| Benzo(a)pyrene                  | Dibenz(a,h)Anthracene |
| Benzo(b)fluoranthene            | Diethyl phthalate     |
| Benzo(k)fluoranthene            | Dimethyl phthalate    |
| Bis(2-ethylhexyl)phthalate      | Fluoranthene          |
| Butylbenzyl phthalate           | Indene                |
| Chrysene                        | 1-Methylnaphthalene   |
| Di(n)butyl phthalate            | Naphthalene           |
| 7,12-Dimethyl-benz(a)anthracene | Phenanthrene          |
| Pyrene                          | Pyridine              |
| 1,2-Dichlorobenzene             | Quinoline             |
| 1,3-Dichlorobenzene             |                       |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: SKINNER-SV****METHOD 8310**

EPA method 8370 is an analytical method for the monitoring of PNA hydrocarbons in groundwater and waste samples by HPLC using UV and fluorescence detectors.

**PAH Calibration Mix****16 Certified Components:**

|                      |                        |
|----------------------|------------------------|
| Acenaphthene         | Chrysene               |
| Acenaphthylene       | Dibenzo(a,h)anthracene |
| Anthracene           | Fluoranthene           |
| Benzo(a)anthracene   | Fluorene               |
| Benzo(a)pyrene       | Indeno(1,2,3-cd)pyrene |
| Benzo(b)fluoranthene | Naphthalene            |
| Benzo(g,h,i)perylene | Phenanthrene           |
| Benzo(k)fluoranthene | Pyrene                 |

1 mL @ 500 µg/mL in Acetonitrile

**Catalog#: 8310-A****PAH Quality Control Mix****16 Certified Components:**

|                      | µg/mL |                        | µg/mL |
|----------------------|-------|------------------------|-------|
| Acenaphthene         | 100   | Chrysene               | 50    |
| Acenaphthylene       | 100   | Dibenzo(a,h)anthracene | 10    |
| Anthracene           | 100   | Fluoranthene           | 5     |
| Benzo(a)anthracene   | 10    | Fluorene               | 100   |
| Benzo(a)pyrene       | 10    | Indeno(1,2,3-cd)pyrene | 10    |
| Benzo(b)fluoranthene | 5     | Naphthalene            | 100   |
| Benzo(g,h,i)perylene | 10    | Phenanthrene           | 100   |
| Benzo(k)fluoranthene | 10    | Pyrene                 | 10    |

1 mL in Acetonitrile

**Catalog#: 8310-QCM****Surrogate Standard****1 Certified Component:**

Decafluorobiphenyl

1 mL @ 100 µg/mL in Acetonitrile

**Catalog#: 8310-I**

## CLP SERIES – SEMIVOLATILES

The US EPA retains analytical services through the Contract Lab 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.

### CLPS-SOM2A

#### 65 Certified Components:

|                             |                                   |
|-----------------------------|-----------------------------------|
| 1,1'-Biphenyl               | Benzo(b)fluoranthene              |
| 1,2,4,5-Tetrachlorobenzene  | Benzo(g,h,i)perylene              |
| 4-Chloroaniline             | Benzo(k)fluoranthene              |
| 2,3,4,6-Tetrachlorophenol   | Bis(2-chloro-1-methylethyl) ether |
| 2,4,5-Trichlorophenol       | Bis(2-chloroethoxy)methane        |
| 2,4,6-Trichlorophenol       | Bis(2-chloroethyl)ether           |
| 2,4-Dichlorophenol          | Bis(2-ethylhexyl)phthalate        |
| 2,4-Dimethylphenol          | Butylbenzyl phthalate             |
| 2,4-Dinitrophenol           | Carbazole                         |
| 2,4-Dinitrotoluene          | Chrysene                          |
| 2,6-Dinitrotoluene          | Dibenz(a,h)anthracene             |
| 2-Chloronaphthalene         | Dibenzofuran                      |
| 2-Chlorophenol              | Diethyl phthalate                 |
| 2-Methylnaphthalene         | Dimethyl phthalate                |
| 2-Methylphenol              | Di-n-butyl phthalate              |
| 2-Nitroaniline              | Di-n-octyl phthalate              |
| 2-Nitrophenol               | Fluoranthene                      |
| 3,3'-Dichlorobenzidine      | Fluorene                          |
| 3-Methylphenol*             | Hexachlorobenzene                 |
| 3-Nitroaniline              | Hexachlorobutadiene               |
| 4,6-Dinitro-2-methylphenol  | Hexachlorocyclopentadiene         |
| 4-Bromodiphenyl ether       | Hexachloroethane                  |
| 4-Chloro-3-methylphenol     | Indeno(1,2,3-c,d)pyrene           |
| 4-Chlorophenyl-phenyl ether | Isophorone                        |
| 4-Methylphenol*             | Naphthalene                       |
| 4-Nitroaniline              | Nitrobenzene                      |
| 4-Nitrophenol               | N-Nitroso-di-n-propylamine        |
| Acenaphthene                | N-Nitrosodiphenylamine            |
| Acenaphthylene              | Pentachlorophenol                 |
| Acetophenone                | Phenanthrene                      |
| Anthracene                  | Phenol                            |
| Benz(a)anthracene           | Pyrene                            |
| Benzo(a)pyrene              |                                   |

\*3-methylphenol and 4-methylphenol concentration is 500 µg/mL.

1 mL @ 1,000 µg/mL in Methylene chloride

Catalog#: CLPS-SOM2A

### CLPS-SOM2B

#### 3 Certified Components:

Benzaldehyde  
Caprolactam  
Atrazine

1 mL @ 1,000 µg/mL in Methylene chloride

Catalog#: CLPS-SOM2B

## SOM 02.0 Deuterated Monitoring Compounds Standard Spiking Solution

#### 16 Certified Components:

|                            |                               |
|----------------------------|-------------------------------|
| Acenaphthylene-d8          | 4,6-Dinitro-2-methylphenol-d2 |
| Anthracene-d10             | Fluorene-d10                  |
| Benzo(a)pyrene-d12         | 4-Methylphenol-d8             |
| 4-Chloroaniline-d4         | Nitrobenzene-d5               |
| Bis(2-chloroethyl)ether-d8 | 2-Nitrophenol-d4              |
| 2-Chlorophenol-d4          | 4-Nitrophenol-d4              |
| 2,4-Dichlorophenol-d3      | Phenol-d5                     |
| Dimethylphthalate-d6       | Pyrene-d10                    |

1 mL @ 2,000 µg/mL in Methylene chloride

Catalog#: CLPS-SOM-ISA

## SOM 02.0 Selected Ion Monitoring

#### 2 Certified Components:

Fluoranthene-d10  
2-Methylnaphthalene-d10

1 mL @ 2,000 µg/mL in Methylene chloride

Catalog#: CLPS-SOM-ISB

## Base Neutral Matrix Spike

#### 4 Certified Components:

|                    |                            |
|--------------------|----------------------------|
| Acenaphthene       | N-Nitroso-di-n-propylamine |
| 2,4-Dinitrotoluene | Pyrene                     |

1 mL @ 1,000 µg/mL in Methanol

Catalog#: CLPS-SOM-MSB

## Acid Extractable Matrix Spikes

#### 5 Certified Components:

|                         |                   |
|-------------------------|-------------------|
| 4-Chloro-3-methylphenol | Pentachlorophenol |
| 2-Chlorophenol          | Phenol            |
| 4-Nitrophenol           |                   |

1 mL @ 2,000 µg/mL in Methanol

Catalog#: CLPS-MSA

5 mL @ 2,000 µg/mL in Methanol

Catalog#: CLPS-MSA5

**"Big-Mix" - Base Neutral & Acid  
Combination Calibration Standard**

Semivolatile Organics Mix with 76 Certified Components

**76 Certified Components:**

|                                   |                            |
|-----------------------------------|----------------------------|
| Acenaphthene                      | 2,6-Dinitrotoluene         |
| Acenaphthylene                    | 4,6-Dinitro-2-methylphenol |
| Aniline                           | Diphenylamine**            |
| Anthracene                        | Di-n-butyl phthalate       |
| Azobenzene                        | Di-n-octyl phthalate       |
| *Benz(a)anthracene                | bis-(2-Ethylhexyl)adipate  |
| Benzo(a)pyrene                    | Fluoranthene               |
| Benzo(b)fluoranthene              | Fluorene                   |
| bis(2-Ethylhexyl)phthalate        | Hexachlorobenzene          |
| Benzo(g,h,i)perylene              | Hexachlorobutadiene        |
| Benzo(k)fluoranthene              | Hexachlorocyclopentadiene  |
| Benzyl alcohol                    | Hexachloroethane           |
| 4-Bromodiphenyl ether             | Indeno(1,2,3-c,d)pyrene    |
| Butylbenzyl phthalate             | Isophorone                 |
| Carbazole                         | 1-Methylnaphthalene        |
| 4-Chloroaniline (p-Chloroaniline) | 2-Methylnaphthalene        |
| bis(2-Chloroethoxy)methane        | 2-Methylphenol***          |
| bis(2-Chloroethyl)ether           | 3-Methylphenol***          |
| bis(2-Chloro-1-methylethyl) ether | 4-Methylphenol             |
| 2-Chloronaphthalene               | Naphthalene                |
| 2-Chlorophenol                    | 2-Nitroaniline             |
| 4-Chlorophenyl-phenyl ether       | 3-Nitroaniline             |
| 4-Chloro-3-methylphenol           | 4-Nitroaniline             |
| Chrysene                          | Nitrobenzene               |
| Dibenzofuran                      | 2-Nitrophenol              |
| Dibenz(a,h)anthracene             | 4-Nitrophenol              |
| 1,2-Dichlorobenzene               | N-Nitrosodimethylamine**   |
| 1,3-Dichlorobenzene               | N-Nitrosodi-n-propylamine  |
| 1,4-Dichlorobenzene               | Pentachlorophenol          |
| 2,4-Dichlorophenol                | Phenanthrene               |
| Diethyl phthalate                 | Phenol                     |
| Dimethyl phthalate                | Pyrene                     |
| 2,4-Dimethylphenol                | Pyridine                   |
| 1,2-Dinitrobenzene                | 2,3,4,6-Tetrachlorophenol  |
| 1,3-Dinitrobenzene                | 2,3,5,6-Tetrachlorophenol  |
| 1,4-Dinitrobenzene                | 1,2,4-Trichlorobenzene     |
| 2,4-Dinitrophenol                 | 2,4,5-Trichlorophenol      |
| 2,4-Dinitrotoluene                | 2,4,6-Trichlorophenol      |

\*1,2-Diphenylhydrazine (8270-listed analyte)  
decomposes to Azobenzene (mix component)

\*\*N-Nitrosodiphenylamine (8270-listed analyte)  
decomposes to Diphenylamine (mix component)

\*\*\*3-Methylphenol and 4-Methylphenol concentration  
each are 500 µg/mL

1 mL @ 1,000 µg/mL in Methylene chloride

**Catalog#: 76-BIG-MIX**

**BIG-BN-2 - Base Neutral & Acid  
Combination Calibration Standard**

Semivolatile Calibration Standard containing all 49  
base-neutrals contained in blends: CLPS-B, CLPS-C,  
CLPS-D, and CLPS-G at 2,000 µg/mL

**49 Certified Components:**

|                             |                            |
|-----------------------------|----------------------------|
| Acenaphthene                | Dimethyl phthalate         |
| Acenaphthylene              | Di-n-butyl phthalate       |
| Anthracene                  | 2,4-Dinitrotoluene         |
| Benzo(a)anthracene          | 2,6-Dinitrotoluene         |
| Benzo(a)pyrene              | Di-n-octyl phthalate       |
| Benzo(b)fluoranthene        | Fluoranthene               |
| Benzo(g,h,i)perylene        | Fluorene                   |
| Benzo(k)fluoranthene        | Hexachlorobenzene          |
| Benzyl alcohol              | Hexachlorobutadiene        |
| bis(2-Chloroethoxy)methane  | Hexachlorocyclopentadiene  |
| bis(2-Chloroethyl)ether     | Hexachloroethane           |
| bis(2-Chloroisopropyl)ether | Indeno(1,2,3-cd)pyrene     |
| bis(2-Ethylhexyl)phthalate  | Isophorone                 |
| 4-Bromophenyl phenyl ether  | 2-Methylnaphthalene        |
| Butylbenzyl phthalate       | Naphthalene                |
| 4-Chloroaniline             | 2-Nitroaniline             |
| 2-Chloronaphthalene         | 3-Nitroaniline             |
| 4-Chlorophenyl-phenyl ether | 4-Nitroaniline             |
| Chrysene                    | Nitrobenzene               |
| Dibenz(a,h)anthracene       | N-Nitroso-di-n-propylamine |
| Dibenzofuran                | N-Nitrosodiphenylamine     |
| 1,2-Dichlorobenzene         | Phenanthrene               |
| 1,3-Dichlorobenzene         | Pyrene                     |
| 1,4-Dichlorobenzene         | 1,2,4-Trichlorobenzene     |
| Diethyl phthalate           |                            |

1 mL @ 2,000 µg/mL in Methylene chloride: Benzene

**Catalog#: BIG-BN-2**

5 mL @ 2,000 µg/mL in Methylene chloride: Benzene

**Catalog#: BIG-BN-2-5**

## HICAL-ACIDS

### 15 Certified Components:

|                            |                           |
|----------------------------|---------------------------|
| Benzoic acid               | 4-Methylphenol (p-Cresol) |
| 4-Chloro-3-methylphenol    | Phenol                    |
| 2-Chlorophenol             | 4-Nitrophenol             |
| 2,4-Dichlorophenol         | 2-Nitrophenol             |
| 2,4-Dimethylphenol         | Pentachlorophenol         |
| 4,6-Dinitro-2-methylphenol | 2,4,5-Trichlorophenol     |
| 2,4-Dinitrophenol          | 2,4,6-Trichlorophenol     |
| 2-Methylphenol (o-Cresol)  |                           |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: HICAL-ACIDS**

5 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: HICAL-ACIDS-5**

### Benzidines Mix

#### 2 Certified Components:

Benidine  
3,3'-Dichlorobenzidine

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: 605-X**

5 mL @ 2,000 µg/mL in Methanol

**Catalog#: 605-X5**

### Balance Mix - Option A

#### 6 Certified Components:

|            |                           |
|------------|---------------------------|
| Aniline    | 3-Methylphenol (m-Cresol) |
| Azobenzene | N-Nitrosodimethylamine    |
| Carbazole  | Pyridine                  |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: SV-X**

5 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: SV-X5**

### Balance Mix - OLM04.1

#### 5 Certified Components:

|               |              |
|---------------|--------------|
| Acetophenone  | Benzaldehyde |
| Atrazine      | Caprolactam  |
| 1,1'-Biphenyl |              |

1 mL @ 2,000 µg/mL in Acetone

**Catalog#: SV-041**

## SPECIFIC ANALYTE MIXES

### Phenolics

#### 11 Certified Components:

|                            |                       |
|----------------------------|-----------------------|
| 4-Chloro-3-methylphenol    | 2-Nitrophenol         |
| 2-Chlorophenol             | 4-Nitrophenol         |
| 2,4-Dichlorophenol         | Pentachlorophenol     |
| 2,4-Dimethylphenol         | Phenol                |
| 4,6-Dinitro-2-methylphenol | 2,4,6-Trichlorophenol |
| 2,4-Dinitrophenol          |                       |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-A**

### Polynuclear Aromatic Hydrocarbons

#### 16 Certified Components:

|                      |                        |
|----------------------|------------------------|
| Acenaphthene         | Dibenz(a,h)anthracene  |
| Acenaphthylene       | Chrysene               |
| Anthracene           | Fluoranthene           |
| Benzo(a)anthracene   | Fluorene               |
| Benzo(a)pyrene       | Indeno(1,2,3-cd)pyrene |
| Benzo(b)fluoranthene | Naphthalene            |
| Benzo(g,h,i)perylene | Phenanthrene           |
| Benzo(k)fluoranthene | Pyrene                 |

1 mL @ 2,000 µg/mL in Methylene chloride: Benzene

**Catalog#: CLPS-B**

### Haloethers & Phthalates

#### 13 Certified Components:

|                             |                            |
|-----------------------------|----------------------------|
| bis(2-Chloroethoxy)methane  | Di-n-butyl phthalate       |
| bis(2-Chloroethyl)ether     | Diethyl phthalate          |
| bis(2-Chloroisopropyl)ether | Dimethyl phthalate         |
| bis(2-Ethylhexyl)phthalate  | Di-n-Octyl phthalate       |
| 4-Bromophenyl phenyl ether  | N-Nitroso-di-n-propylamine |
| Butylbenzyl phthalate       | N-Nitrosodiphenylamine     |
| 4-Chlorophenyl-phenyl ether |                            |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-C**

### Chlorinated/Nitrated Hydrocarbons Mix

#### 13 Certified Components:

|                     |                           |
|---------------------|---------------------------|
| 2-Chloronaphthalene | Hexachlorobutadiene       |
| 1,2-Dichlorobenzene | Hexachlorocyclopentadiene |
| 1,3-Dichlorobenzene | Hexachloroethane          |
| 1,4-Dichlorobenzene | Isophorone                |
| 2,4-Dinitrotoluene  | Nitrobenzene              |
| 2,6-Dinitrotoluene  | 1,2,4-Trichlorobenzene    |
| Hexachlorobenzene   |                           |

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-D**

**3,3' Dichlorobenzidine Stock Standard****1 Certified Component:**

3,3'-Dichlorobenzidine

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-E****CLP 90 Mix F****4 Certified Components:**

Carbazole                      4-Methylphenol (p-Cresol)  
 2-Methylphenol (o-cresol)    2,4,5-Trichlorophenol

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-F90****CLP Mix G****7 Certified Components:**

Benzyl alcohol                2-Nitroaniline  
 4-Chloroaniline              3-Nitroaniline  
 Dibenzofuran                4-Nitroaniline  
 2-Methylnaphthalene

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-G**

## LOW CONCENTRATION STATEMENT OF WORK SEMIVOLATILE CALIBRATION STANDARDS

**Anilines, Low Level****3 Certified Components:**

2-Nitroaniline  
 3-Nitroaniline  
 4-Nitroaniline

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: ANILINE-LC-A****Semivolatile Control Sample, Low Level****3 Certified Components:**

2-Chlorophenol  
 2,4,6-Trichlorophenol  
 Phenol

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-LC-ALCS****Base Neutrals Mix A, Low Level****12 Certified Components:**

|                            | Concentration |
|----------------------------|---------------|
| Benzo(a)pyrene             | 1,000 µg/mL   |
| bis(2-Chloroethyl)ether    | 1,000 µg/mL   |
| 4-Chloroaniline            | 2,000 µg/mL   |
| Diethyl phthalate          | 1,000 µg/mL   |
| 2,4-Dinitrotoluene         | 1,000 µg/mL   |
| Hexachlorobenzene          | 1,000 µg/mL   |
| Hexachloroethane           | 1,000 µg/mL   |
| Isophorone                 | 1,000 µg/mL   |
| Naphthalene                | 1,000 µg/mL   |
| N-Nitroso-di-n-propylamine | 1,000 µg/mL   |
| N-Nitrosodiphenylamine     | 1,000 µg/mL   |
| 1,2,4-Trichlorobenzene     | 1,000 µg/mL   |

1 mL in Methylene chloride

**Catalog#: CLPS-LC-BN****Alternate Acid Surrogate for CLP SOW's****4 Certified Components:**

2-Chlorophenol-d<sub>4</sub>              Phenol-d<sub>5</sub>  
 2-Fluorophenol                2,4,6-Tribromophenol

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLP90-SA**

5 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLP90-SA5**

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### High Concentration Acid Surrogates

#### 4 Certified Components:

2-Chlorophenol-d<sub>4</sub>                      2-Fluorophenol  
Phenol-d<sub>6</sub>                                2,4,6-Tribromophenol

1 mL @ 7,500 µg/mL in Methanol

**Catalog#: CLP90-75SA**

5 mL @ 7,500 µg/mL in Methanol

**Catalog#: CLP90-75SA5**

### Alternate Acid Surrogate for CLP SOW

#### 3 Certified Components:

2-Fluorophenol  
Phenol-d<sub>5</sub>  
2,4,6-Tribromophenol

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-SA**

5 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-SA5**

### Alternate High Concentration Acid Surrogates for CLP

#### 3 Certified Components:

2-Fluorophenol  
Phenol-d<sub>5</sub>  
2,4,6-Tribromophenol

1 mL @ 10,000 µg/mL in Methanol

**Catalog#: CLPS-SAH**

5 mL @ 10,000 µg/mL in Methanol

**Catalog#: CLPS-SAH5**

### Alternate Base/Neutrals Surrogate for CLP SOW's

#### 4 Certified Components:

1,2-Dichlorobenzene-d<sub>4</sub>                      Nitrobenzene-d<sub>5</sub>  
2-Fluorobiphenyl                              Terphenyl-d<sub>14</sub>

1 mL @ 1,000 µg/mL in Methylene chloride:Acetone

**Catalog#: CLP90-SB**

5 mL @ 1,000 µg/mL in Methylene chloride:Acetone

**Catalog#: CLP90-SB5**

### High Concentration Base/Neutrals Surrogate

#### 4 Certified Components:

1,2-Dichlorobenzene-d<sub>4</sub>                      Nitrobenzene-d<sub>5</sub>  
2-Fluorobiphenyl                              Terphenyl-d<sub>14</sub>

1 mL @ 5,000 µg/mL in Methylene chloride:Acetone

**Catalog#: CLP90-SBH**

5 mL @ 5,000 µg/mL in Methylene chloride:Acetone

**Catalog#: CLP90-SBH5**

### Alternate Base/Neutrals Surrogate for CLP SOW

#### 3 Certified Components:

2-Fluorobiphenyl  
Nitrobenzene-d<sub>5</sub>  
Terphenyl-d<sub>14</sub>

1 mL @ 1,000 µg/mL in Methylene chloride:Acetone

**Catalog#: CLPS-SB**

### High Concentration Base/Neutrals Surrogate

#### 3 Certified Components:

2-Fluorobiphenyl  
Nitrobenzene-d<sub>5</sub>  
Terphenyl-d<sub>14</sub>

1 mL @ 5,000 µg/mL in Methylene chloride:Acetone

**Catalog#: CLPS-SBH**

5 mL @ 5,000 µg/mL in Methylene chloride:Acetone

**Catalog#: CLPS-SBH5**

### Organic Tinted Surrogates

#### 4 Certified Components:

|                             |        |
|-----------------------------|--------|
| 2-Fluorobiphenyl            | µg/mL  |
| p-Terphenyl-d <sub>14</sub> | 5,000  |
| Nitrobenzene-d <sub>5</sub> | 5,000  |
| Methyl Orange               | 12,500 |

1 mL in Methylene chloride:Acetone:Benzene

**Catalog#: CLPS-SBH-TI**

5 mL in Methylene chloride:Acetone:Benzene

**Catalog#: CLPS-SBH5-TI**

### Internal Standard

#### 6 Certified Components:

|                                    |                              |
|------------------------------------|------------------------------|
| Acenaphthene-d <sub>10</sub>       | Naphthalene-d <sub>8</sub>   |
| Chrysene-d <sub>12</sub>           | Perylene-d <sub>12</sub>     |
| 1,4-Dichlorobenzene-d <sub>4</sub> | Phenanthrene-d <sub>10</sub> |

1 mL @ 4,000 µg/mL in Methylene chloride

**Catalog#: CLPS-I**

### Alternate Internal Standard

#### 6 Certified Components:

2 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-I2**

1 mL @ 2,000 µg/mL in Methylene chloride

**Catalog#: CLPS-I90**

**Acid Extractable Matrix Spikes****5 Certified Components:**

|                         |                   |
|-------------------------|-------------------|
| 4-Chloro-3-methylphenol | Pentachlorophenol |
| 2-Chlorophenol          | Phenol            |
| 4-Nitrophenol           |                   |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-MSA**

5 mL @ 2,000 µg/mL in Methanol

**Catalog#: CLPS-MSA5****Base/Neutrals Matrix Spike****6 Certified Components:**

|                     |                            |
|---------------------|----------------------------|
| Acenaphthene        | N-Nitroso-di-n-propylamine |
| 1,4-Dichlorobenzene | Pyrene                     |
| 2,4-Dinitrotoluene  | 1,2,4-Trichlorobenzene     |

1 mL @ 1,000 µg/mL in Methylene chloride

**Catalog#: CLPS-MSB****Base/Neutrals Tinted Indicator Matrix Spike****7 Certified Components:**

|                     |                           |
|---------------------|---------------------------|
| Acenaphthene        | N-Nitrosodi-n-propylamine |
| Bromophenol blue    | Pyrene                    |
| 1,4-Dichlorobenzene | 1,2,4-Trichlorobenzene    |
| 2,4-Dinitrotoluene  |                           |

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: CLPS-MSB-TI****Alternate Combination Semivolatile Surrogates for CLP SOW****8 Certified Components:**

|                                    | µg/mL |                             | µg/mL |
|------------------------------------|-------|-----------------------------|-------|
| 2-Chlorophenol-d <sub>4</sub>      | 1,500 | Nitrobenzene-d <sub>5</sub> | 1,000 |
| 1,2-Dichlorobenzene-d <sub>4</sub> | 1,000 | Phenol-d <sub>5</sub>       | 1,500 |
| 2-Fluorobiphenyl                   | 1,000 | Terphenyl-d <sub>14</sub>   | 1,000 |
| 2-Fluorophenol                     | 1,500 | 2,4,6-Tribromophenol        | 1,500 |

1 mL @ 2,000 µg/mL in Methylene chloride:Acetone

**Catalog#: CLP90-SURR****Organic Tinted Indicator Surrogate****9 Certified Components:**

|                                       | µg/mL |
|---------------------------------------|-------|
| 2-Chlorophenol-3,4,5,6-d <sub>4</sub> | 1,500 |
| 1,2-Dichlorobenzene-d <sub>4</sub>    | 1,000 |
| 2-Fluorobiphenyl                      | 1,000 |
| 2-Fluorophenol                        | 1,500 |
| Methyl Orange                         | 2,500 |
| Nitrobenzene-d <sub>5</sub>           | 1,000 |
| Phenol-d <sub>6</sub>                 | 1,500 |
| p-Terphenyl-d <sub>14</sub>           | 1,000 |
| 2,4,6-Tribromophenol                  | 1,500 |

1 mL in Methylene chloride:Acetone

**Catalog#: CLP90-SURR-TI****Combination Semivolatile Surrogates for CLP SOW****6 Certified Components:**

|                             | µg/mL |                       | µg/mL |
|-----------------------------|-------|-----------------------|-------|
| 2-Fluorobiphenyl            | 1,000 | 2-Fluorophenol        | 2,000 |
| Nitrobenzene-d <sub>5</sub> | 1,000 | Phenol-d <sub>5</sub> | 2,000 |
| Terphenyl-d <sub>14</sub>   | 1,000 | 2,4,6-Tribromophenol  | 2,000 |

1 mL @ in Methylene chloride:Acetone

**Catalog#: CLPS-SURR****GC-MS Tuning Standard****1 Certified Component:**

Decafluorotriphenylphosphine

1 mL @ 2,500 µg/mL in Methanol

**Catalog#: CLPS-T****4-Component GC-MS Tuning Standard****4 Certified Components:**

|           |                              |
|-----------|------------------------------|
| Benzidine | Decafluorotriphenylphosphine |
| 4,4-DDT   | Pentachlorophenol            |

1 mL @ 2,500 µg/mL in Methanol

**Catalog#: CLPS-T4**

## METHOD 1311 - TCLP

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).

### Base/Neutral/Acid Extractable Spike Solution for Method 1311

#### 13 Certified Components:

|                     |                       |
|---------------------|-----------------------|
| o-Cresol            | Hexachloroethane      |
| m-Cresol            | Nitrobenzene          |
| p-Cresol            | Pentachlorophenol     |
| 1,4-Dichlorobenzene | Pyridine              |
| 2,4-Dinitrotoluene  | 2,4,5-Trichlorophenol |
| Hexachlorobenzene   | 2,4,6-Trichlorophenol |
| Hexachlorobutadiene |                       |

1 mL @ 2,000 µg/mL in Methylene chloride

Catalog#: TCLP-BNA



## SECTION 4

# LC & LC-MS

Single & Multi-Component Standards



# LC & LC-MS Single & 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 prefilled 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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## HPLC/LC-MS Single-Component Organic Standards

| Component @ 1,000 µg/mL     | CAS#        | Matrix            | Catalog#     | Component @ 1,000 µg/mL                 | CAS#        | Matrix            | Catalog#     |
|-----------------------------|-------------|-------------------|--------------|-----------------------------------------|-------------|-------------------|--------------|
| Abamectin                   | 71751-41-2  | HPLC Acetonitrile | LCS-6014     | Chlorbromuron                           | 13360-45-7  | HPLC Acetonitrile | LCS-769      |
| Abate                       | 3383-96-8   | HPLC Acetonitrile | LCS-102      | Chlorfluzuron                           | 71422-67-8  | HPLC Acetonitrile | LCS-4017     |
| Acarol (Bromopropylate)     | 18181-80-1  | HPLC Acetonitrile | LCS-103-ACN  | Chlormequat chloride                    | 999-81-5    | HPLC Acetonitrile | LCS-4838     |
| Acetaldehyde-2,4-DNPH       | 1019-57-4   | HPLC Acetonitrile | LCS-5756     | Chlorimuron-ethyl                       | 90982-32-4  | LCMS Acetonitrile | LCS-3927     |
| Acetamiprid                 | 135410-20-7 | HPLC Acetonitrile | LCS-4677-ACN | Chlorobenzilate                         | 510-15-6    | HPLC Acetonitrile | LCS-820-ACN  |
| Acrinathrin                 | 101007-06-1 | HPLC Acetonitrile | LCS-6248     | Chlorosulfuron                          | 64902-72-3  | HPLC Acetonitrile | LCS-4995-ACN |
| Acrolein-2,4-DNPH           | 888-54-0    | HPLC Acetonitrile | LCS-5758     | Chlorpyrifos oxon                       | 5598-15-2   | HPLC Acetonitrile | LCS-968      |
| Aldicarb                    | 116-06-3    | HPLC Acetonitrile | LCS-190      | Chlzolinate                             | 84332-86-5  | HPLC Acetonitrile | LCS-4286     |
| Allethrin                   | 584-79-2    | HPLC Acetonitrile | LCS-4240     | Cholesterol                             | 57-88-5     | HPLC Methanol     | LCS-4702     |
| Amidosulfuron               | 120923-37-7 | HPLC Acetonitrile | LCS-6228     | Chromafenozide                          | 143807-66-3 | HPLC Acetonitrile | LCS-6205     |
| Amoxicillin                 | 26787-78-0  | HPLC Acetonitrile | LCS-5936     | Cimetidine                              | 51481-61-9  | HPLC Methanol     | LCS-5897     |
| Antipyrine                  | 60-80-0     | HPLC Methanol     | LCS-5896     | Cinosulfuron                            | 94593-91-6  | HPLC Acetonitrile | LCS-6230     |
| Arabinose                   | 147-81-9    | HPLC Water        | LCS-4513     | Clethodim                               | 99129-21-2  | HPLC Acetonitrile | LCS-6083-ACN |
| Azaconazole                 | 60207-31-0  | HPLC Acetonitrile | LCS-6276     | Clindamycin                             | 21462-39-5  | HPLC Methanol     | LCS-5569     |
| Azimsulfuron                | 120162-55-2 | HPLC Acetonitrile | LCS-6229     | Clofentazine                            | 74115-24-5  | HPLC Acetonitrile | LCS-5772     |
| Baygon (Propoxur)           | 114-26-1    | HPLC Acetonitrile | LCS-3200-ACN | Clothianidin                            | 210880-92-5 | HPLC Acetonitrile | LCS-6027     |
| Baytan (Triadimenol)        | 55219-65-3  | HPLC Acetonitrile | LCS-3996     | Clothianidin                            | 210880-92-5 | Acetone           | LCS-6027-AC  |
| Baythroid                   | 68359-37-5  | HPLC Acetonitrile | LCS-376      | Cyanofenphos                            | 13067-93-1  | Acetone           | LCS-5958-AC  |
| Baythroid                   | 68359-37-5  | Acetone           | LCS-376-AC   | Cyanophos                               | 2636-26-2   | HPLC Acetonitrile | LCS-1006     |
| Benalaxyl                   | 71626-11-4  | HPLC Acetonitrile | LCS-4262     | Cyazofamid                              | 120116-88-3 | HPLC Acetonitrile | LCS-6008     |
| Bentazon                    | 25057-89-0  | HPLC Acetonitrile | LCS-395      | Cyclophosphamide                        | 6055-19-2   | HPLC Methanol     | LCS-5883     |
| Benthiocarb                 | 28249-77-6  | Acetone           | LCS-400-AC   | Cycloprothrin                           | 63935-38-6  | HPLC Acetonitrile | LCS-6292     |
| Benthiocarb                 | 28249-77-6  | HPLC Acetonitrile | LCS-400-ACN  | Cyhalofop-butyl                         | 122008-85-9 | HPLC Acetonitrile | LCS-6101     |
| Benzalkonium chloride       | 63449-41-2  | LCMS Water        | LCS-5115     | gamma-Cyhalothrin                       | 76703-62-3  | Acetone           | LCS-6376     |
| Benzo(b)fluoranthene        | 205-99-2    | Acetone           | LCS-435      | zeta-Cypermethrin                       | 52315-07-8  | Acetone           | LCS-6401     |
| Benzotriazole               | 95-14-7     | HPLC Methanol     | LCS-4121     | D-trans-Cyphenothrin (mix of isomers)   | 39515-40-7  | Acetone           | LCS-4463     |
| gamma-BHC                   | 58-89-9     | Acetone           | LCS-485-AC   | Cyproconazole (mix of isomers)          | 94361-06-5  | HPLC Acetonitrile | LCS-4863     |
| Bifenazate                  | 149877-41-8 | HPLC Acetonitrile | LCS-6082     | Cyprodinil                              | 121552-61-2 | HPLC Acetonitrile | LCS-4622     |
| Bifenthrin                  | 82657-04-3  | HPLC Acetonitrile | LCS-494-ACN  | Cyprofuram                              | 69581-33-5  | HPLC Acetonitrile | LCS-6206     |
| Bioallethrin                | 28057-48-9  | Acetone           | LCS-496      | DEF                                     | 78-48-8     | Acetone           | LCS-1130     |
| Bitertanol (mix of isomers) | 55179-31-2  | HPLC Acetonitrile | LCS-4679     | Demeton-S Sulfone                       | 2496-91-5   | HPLC Acetonitrile | LCS-5774-ACN |
| Boscalid                    | 188425-85-6 | HPLC Acetonitrile | LCS-4815     | Devrinol                                | 15299-99-7  | HPLC Acetonitrile | LCS-1150-ACN |
| Bromfevinfos                | 33399-00-7  | HPLC Methanol     | LCS-6043     | Di-allate (mix of isomers)              | 2303-16-4   | Acetone           | LCS-1155     |
| Bromoxynil                  | 1689-84-5   | HPLC Acetonitrile | LCS-575-ACN  | 2,4-Diaminoanisole sulfate salt hydrate | 123333-56-2 | HPLC Water        | LCS-6157     |
| Bromuconazole               | 116255-48-2 | Acetone           | LCS-6007     | Dichlorfenthion                         | 97-17-6     | Acetone           | LCS-1280     |
| Bupirimate                  | 41483-43-6  | HPLC Acetonitrile | LCS-4272     | Dichlorprop-P                           | 15165-67-0  | HPLC Acetonitrile | LCS-6021     |
| Butoxycarboxim              | 34681-23-7  | HPLC Acetonitrile | LCS-6176     | Diclobutrazole                          | 75736-33-3  | HPLC Acetonitrile | LCS-6056     |
| Cadusafos                   | 95465-99-9  | HPLC Acetonitrile | LCS-4826     | Diclofenac                              | 15307-79-6  | HPLC Methanol     | LCS-5886     |
| Caffeine-d9                 | 77238-85-8  | HPLC Methanol     | LCS-5493     | Dicrotophos                             | 141-66-2    | HPLC Acetonitrile | LCS-1500     |
| Carbendazim (100 µg/mL)     | 10605-21-7  | HPLC Methanol     | LCS-733      | Dieldrin                                | 60-57-1     | Acetone           | LCS-1510-AC  |
| Carboxin                    | 5234-68-4   | HPLC Acetonitrile | LCS-760-ACN  | Diflubenzuron                           | 35367-38-5  | HPLC Acetonitrile | LCS-1537-ACN |
| Chlorantraniliprole         | 500008-45-7 | HPLC Acetonitrile | LCS-6127     |                                         |             |                   |              |

| Component @ 1,000 µg/mL                   | CAS#        | Matrix            | Catalog#      |
|-------------------------------------------|-------------|-------------------|---------------|
| 3,5-Diiodo-4-hydroxybenzonitrile          | 1689-83-4   | Acetone           | LCS-1554      |
| 3,5-Diiodo-4-hydroxybenzonitrile          | 1689-83-4   | HPLC Acetonitrile | LCS-1554-ACN  |
| Dimefuron                                 | 34205-21-5  | HPLC Methanol     | LCS-4617      |
| Dimethoate                                | 60-51-5     | HPLC Acetonitrile | LCS-1560      |
| Dimethomorph                              | 110488-70-5 | HPLC Acetonitrile | LCS-3970-ACN  |
| Dimethyl-p-nitrophenylphosphate           | 950-35-6    | Acetone           | LCS-1669      |
| N-2,4-Dimethylphenyl-N'-methylformamidine | 33089-74-6  | HPLC Acetonitrile | LCS-6279      |
| N-(2,4-Dimethylphenyl)formamide           | 60397-77-5  | HPLC Acetonitrile | LCS-6280      |
| Dimethylvinphos                           | 2274-67-1   | HPLC Methanol     | LCS-6042      |
| 1,7-Dimethylxanthine                      | 611-59-6    | HPLC Methanol     | LCS-5067      |
| Diniconazole                              | 83657-24-3  | HPLC Acetonitrile | LCS-6057      |
| Dioxydemeton-S-methyl                     | 17040-19-6  | HPLC Acetonitrile | LCS-3969      |
| Diuron                                    | 330-54-1    | HPLC Acetonitrile | LCS-1760      |
| DMST                                      | 66840-71-9  | HPLC Acetonitrile | LCS-6018      |
| Dodine                                    | 2439-10-3   | HPLC Acetonitrile | LCS-1807-ACN  |
| Doramectin                                | 117704-25-3 | HPLC Acetonitrile | LCS-6224      |
| Dylox                                     | 52-68-6     | Acetone           | LCS-1816      |
| Enamectin                                 | 119791-41-2 | HPLC Acetonitrile | LCS-5507-ACN  |
| Enamectin-benzoate                        | 155569-91-8 | HPLC Acetonitrile | LCS-6293      |
| Empenthrin                                | 54406-48-3  | HPLC Acetonitrile | LCS-6293      |
| Endosulfan                                | 115-29-7    | Acetone           | LCS-1824-AC   |
| Epoxiconazole                             | 133855-98-8 | HPLC Acetonitrile | LCS-4923-ACN  |
| Eprinomectin                              | 123997-26-2 | HPLC Acetonitrile | LCS-6226      |
| 17-alpha-Estradiol                        | 57-91-0     | HPLC Methanol     | LCS-5068      |
| 17-beta-Estradiol                         | 50-28-2     | HPLC Methanol     | LCS-5070      |
| Ethiofencarb-sulfoxide                    | 53380-22-6  | HPLC Acetonitrile | LCS-6184      |
| Ethiofencarb sulfone                      | 53380-23-7  | HPLC Acetonitrile | LCS-6183      |
| Ethoxysulfuron                            | 126801-58-9 | HPLC Acetonitrile | LCS-6231      |
| 2-Ethylhexyl diphenyl phosphate           | 1241-94-7   | HPLC Methanol     | LCS-6041      |
| Etofenprox                                | 80844-07-1  | HPLC Acetonitrile | LCS-6104      |
| Etoxazole                                 | 153233-91-1 | HPLC Acetonitrile | LCS-5670      |
| Famoxadone                                | 131807-57-3 | HPLC Acetonitrile | LCS-5462      |
| Fenamidon                                 | 161326-34-7 | HPLC Acetonitrile | LCS-4966      |
| Fenarimol                                 | 60168-88-9  | HPLC Acetonitrile | LCS-1997      |
| Fenazaquin                                | 120928-09-8 | HPLC Acetonitrile | LCS-6019      |
| Fenbutatin-oxide                          | 13356-08-6  | Acetone           | LCS-1999-AC   |
| Fenbutatin-oxide                          | 13356-08-6  | HPLC Acetonitrile | LCS-1999-ACN  |
| Fenbutatin-oxide                          | 13356-08-6  | HPLC Methanol     | LCS-1999-MEOH |
| Fenitrothion                              | 122-14-5    | Acetone           | LCS-2001-AC   |
| Fenpyroximate                             | 111812-58-9 | LCMS Acetonitrile | LCS-6387      |
| (E)-Fenpyroximate                         | 134098-61-6 | HPLC Acetonitrile | LCS-6179      |
| Fensulfothion-oxon                        | 6552-21-2   | HPLC Acetonitrile | LCS-6209      |
| Fensulfothion-oxon-sulfone                | 6132-17-8   | HPLC Acetonitrile | LCS-6210      |

| Component @ 1,000 µg/mL | CAS#        | Matrix            | Catalog#       |
|-------------------------|-------------|-------------------|----------------|
| Fipronil                | 120068-37-3 | HPLC Methanol     | LCS-4004       |
| Fipronil                | 120068-37-3 | HPLC Acetonitrile | LCS-4004-ACN   |
| Fluazifop-butyl         | 69806-50-4  | HPLC Methanol     | LCS-4905       |
| Flubenzimin             | 37893-02-0  | Acetone           | LCS-6385       |
| Fludioxonil             | 131341-86-1 | HPLC Acetonitrile | LCS-2061       |
| Flufenacet              | 142459-58-3 | HPLC Acetonitrile | LCS-4906       |
| Flufenoxuron            | 101463-69-8 | Acetone           | LCS-6009       |
| Flufenoxuron            | 101463-69-8 | HPLC Acetonitrile | LCS-6009-ACN   |
| Flumetsulam             | 98967-40-9  | LCMS Acetonitrile | LCS-5064       |
| Flumiclorac-pentyl      | 87546-18-7  | LCMS Acetonitrile | LCS-6416       |
| Fluometuron             | 2164-17-2   | LCMS Acetonitrile | LCS-2026       |
| Fluquinconazole         | 136426-54-5 | Acetone           | LCS-6103       |
| Flusilazole             | 85509-19-9  | HPLC Acetonitrile | LCS-4832       |
| tau-Fluvalinate         | 102851-06-9 | HPLC Acetonitrile | LCS-4161-ACN   |
| Folicur                 | 107534-96-3 | HPLC Acetonitrile | LCS-2056       |
| Folicur                 | 107534-96-3 | Acetone           | LCS-2056-AC    |
| Forchlorfenuron         | 68157-60-8  | HPLC Acetonitrile | LCS-6022       |
| Formetanate HCl         | 23422-53-9  | HPLC Acetonitrile | LCS-2066-ACN   |
| Fosthiazate             | 98886-44-3  | Acetone           | LCS-6080       |
| Fructose                | 57-48-7     | HPLC Water        | LCS-4189-HPLCW |
| Fuberidazole            | 3878-19-1   | HPLC Acetonitrile | LCS-6318       |
| Furalaxyl               | 57646-30-7  | HPLC Acetonitrile | LCS-6319       |
| Furathiocarb            | 65907-30-4  | Acetone           | LCS-5464-AC    |
| Furmecyclox             | 60568-05-0  | HPLC Acetonitrile | LCS-6180       |
| Galactose               | 59-23-4     | HPLC Water        | LCS-4512       |
| d-Glucose               | 921-60-8    | HPLC Water        | LCS-5539       |
| Glucose                 | 50-99-7     | HPLC Acetonitrile | LCS-5489       |
| Halosulfuron-methyl     | 100784-20-1 | HPLC Acetonitrile | LCS-6232       |
| Haloxypop-methyl        | 69806-40-2  | HPLC Acetonitrile | LCS-6186       |
| Heptachlor              | 76-44-8     | Acetone           | LCS-2100-AC    |
| Hexaconazole            | 79983-71-4  | HPLC Acetonitrile | LCS-5465       |
| Hexaflumuron            | 86479-06-3  | HPLC Acetonitrile | LCS-6256       |
| Hexythiazox             | 78587-05-0  | Acetone           | LCS-6028       |
| Hydramethylnon          | 67485-29-4  | HPLC Acetonitrile | LCS-6196       |
| Hydoxycholic acid       | 83-49-8     | HPLC Acetonitrile | LCS-6177       |
| Imazalil                | 35554-44-0  | HPLC Acetonitrile | LCS-2346-ACN   |
| Imazosulfuron           | 122548-33-8 | HPLC Acetonitrile | LCS-6233       |
| Imibenconazole          | 86598-92-7  | HPLC Acetonitrile | LCS-6107       |
| Imibenconazole          | 86598-92-7  | Acetone           | LCS-6107-AC    |
| Iponazole               | 125225-28-7 | HPLC Acetonitrile | LCS-6278       |
| Iprovalicarb            | 140923-17-7 | Acetone           | LCS-6029       |
| Iprovalicarb            | 140923-17-7 | HPLC Acetonitrile | LCS-6029-ACN   |
| Isocarbamid             | 30979-48-7  | HPLC Acetonitrile | LC-6215        |
| Isocarbophos            | 24353-61-5  | HPLC Acetonitrile | LCS-6275       |

| Component @ 1,000 µg/mL                    | CAS#        | Matrix            | Catalog#     |
|--------------------------------------------|-------------|-------------------|--------------|
| Isofenphos-methyl                          | 99675-03-3  | HPLC Methanol     | LCS-5998     |
| Isoxaben                                   | 82558-50-7  | HPLC Acetonitrile | LCS-5275     |
| Isoxaflutole                               | 141112-29-0 | HPLC Acetonitrile | LCS-6310     |
| Kelthane 1.5%o,p'-95%p,p'                  | 115-32-2    | Acetone           | LCS-2335-AC  |
| 3-Keto-carbofuran                          | 16709-30-1  | Acetone           | LCS-6129     |
| Kresoxim-methyl                            | 143390-89-0 | HPLC Acetonitrile | LCS-4833     |
| Linuron                                    | 330-55-2    | HPLC Acetonitrile | LCS-2350     |
| Lontrel (clopyralid)                       | 1702-17-6   | LCMS Acetonitrile | LCS-2354     |
| Lufenuron                                  | 103055-07-8 | HPLC Acetonitrile | LCS-6181     |
| Maltodextrin                               | 9050-36-6   | HPLC Water        | LCS-5705     |
| Mandipropamid                              | 374726-62-2 | HPLC Acetonitrile | LCS-6031     |
| Mannose                                    | 3458-28-4   | HPLC Water        | LCS-4514     |
| Mebendazole                                | 31431-39-7  | HPLC Acetonitrile | LCS-4603-ACN |
| Mecarbam                                   | 2595-54-2   | HPLC Acetonitrile | LCS-4847     |
| D,L-Mecoprop                               | 93-65-2     | HPLC Methanol     | LCS-6372     |
| Mepanipirim                                | 110235-47-7 | HPLC Acetonitrile | LCS-6032     |
| Mephosfolan                                | 950-10-7    | HPLC Acetonitrile | LCS-6288     |
| Mepiquat chloride                          | 24307-26-4  | HPLC Acetonitrile | LCS-6323     |
| Mesotrione                                 | 104206-82-8 | HPLC Acetonitrile | LCS-5044     |
| Metaflumizone                              | 139968-49-3 | HPLC Acetonitrile | LCS-6015     |
| Metalaxyl                                  | 57837-19-1  | HPLC Acetonitrile | LCS-6334     |
| Metasystox I (TM)                          | 919-86-8    | Acetone           | LCS-4205     |
| Metconazole                                | 125116-23-6 | Acetone           | LCS-6010     |
| Methiocarb                                 | 2032-65-7   | HPLC Acetonitrile | LCS-2385     |
| Methoxyfenozide                            | 161050-58-4 | HPLC Acetonitrile | LCS-6033     |
| Metribuzin                                 | 21087-64-9  | HPLC Acetonitrile | LCS-2620     |
| Monocrotophos                              | 6923-22-4   | HPLC Acetonitrile | LCS-2645     |
| Moxidectin                                 | 113507-06-5 | HPLC Acetonitrile | LCS-6198     |
| Nitenpyram                                 | 150824-47-8 | HPLC Acetonitrile | LCS-6187     |
| 4-Nitrophenol                              | 100-02-7    | Methanol          | LCS-2730     |
| Norflurazon                                | 27314-13-2  | HPLC Acetonitrile | LCS-2800-ACN |
| Novaluron                                  | 116714-46-6 | HPLC Acetonitrile | LCS-6122     |
| Omite                                      | 2312-35-8   | Acetone           | LCS-2895     |
| Omite                                      | 2312-35-8   | HPLC Acetonitrile | LCS-2895-ACN |
| Oxadixyl                                   | 77732-09-3  | Acetone           | LCS-2903-AC  |
| Oxamyl Oxime                               | 30558-43-1  | HPLC Acetonitrile | LCS-6123     |
| Paclobutrazol                              | 76738-62-0  | HPLC Acetonitrile | LCS-4345-ACN |
| Pencycuron                                 | 66063-05-6  | HPLC Acetonitrile | LCS-5171     |
| Pencycuron                                 | 66063-05-6  | Acetone           | LCS-5171-AC  |
| Pentachloronitrobenzene                    | 82-68-8     | Acetone           | LCS-2945-AC  |
| Perfluoro-n-octane Sulfonate Sodium (PFOS) | 1763-23-1   | HPLC Methanol     | LCS-4951     |
| Phorate sulfoxide                          | 2588-03-6   | Acetone           | LCS-5777     |
| Phoxim                                     | 14816-18-3  | HPLC Acetonitrile | LCS-4689     |

| Component @ 1,000 µg/mL      | CAS#        | Matrix            | Catalog#       |
|------------------------------|-------------|-------------------|----------------|
| Picoxystrobin                | 117428-22-5 | HPLC Acetonitrile | LCS-5467       |
| Piperonyl butoxide           | 51-03-6     | HPLC Acetonitrile | LCS-3117-ACN   |
| Piperophos                   | 24151-93-7  | Acetone           | LCS-6099       |
| Pirimicarb-desmethy          | 30614-22-3  | HPLC Acetonitrile | LCS-6023       |
| Pirimiphos-ethyl             | 23505-41-1  | HPLC Acetonitrile | LCS-3120       |
| Prallethrin (mix of isomers) | 23031-36-9  | HPLC Acetonitrile | LCS-5783       |
| Pretilachlor                 | 51218-49-6  | HPLC Acetonitrile | LCS-6092       |
| Procymidone                  | 32809-16-8  | HPLC Acetonitrile | LCS-3871-ACN   |
| Profenofos                   | 41198-08-7  | HPLC Acetonitrile | LCS-3134-ACN   |
| Propamocarb                  | 24579-73-5  | HPLC Acetonitrile | LCS-5468       |
| Propaquizafop                | 111479-05-1 | HPLC Acetonitrile | LCS-6034       |
| Propos                       | 13194-48-4  | HPLC Acetonitrile | LCS-3185       |
| Propos                       | 13194-48-4  | Acetone           | LCS-3185-AC    |
| Propiconazole (tilt)         | 60207-90-1  | HPLC Acetonitrile | LCS-3186       |
| Propineb                     | 12071-83-9  | Acetone           | LCS-4691       |
| Prothioconazole              | 178928-70-6 | HPLC Methanol     | LCS-4904       |
| Prothioconazole              | 178928-70-6 | HPLC Acetonitrile | LCS-4904-ACN   |
| Prothioconazole-desthio      | 120983-64-4 | HPLC Acetonitrile | LCS-6189       |
| Pymetrozin                   | 123312-89-0 | HPLC Acetonitrile | LCS-4967       |
| Pyraflufen                   | 129630-17-7 | LCMS Acetonitrile | LCS-6417       |
| Pyraflufen-ethyl             | 129630-19-9 | HPLC Acetonitrile | LCS-6024-ACN   |
| Pyrasulfotole                | 365400-11-9 | HPLC Acetonitrile | LCS-5872       |
| Pyridaben                    | 96489-71-3  | HPLC Acetonitrile | LCS-5779       |
| Pyridaphenthion              | 119-12-0    | HPLC Acetonitrile | LCS-4829       |
| Pyrifenox                    | 88283-41-4  | Acetone           | LCS-5291-AC    |
| Pyrimethanil                 | 53112-28-0  | HPLC Acetonitrile | LCS-5225       |
| Pyriproxifen                 | 95737-68-1  | Acetone           | LCS-4969       |
| Pyriproxifen                 | 95737-68-1  | HPLC Acetonitrile | LCS-4969-ACN   |
| Pyroxsulam                   | 422556-08-9 | HPLC Acetonitrile | LCS-5875       |
| Quinoxifen                   | 124495-18-7 | Acetone           | LCS-6059       |
| Raffinose                    | 512-69-6    | HPLC Water        | LCS-4844       |
| Reserpine                    | 50-55-5     | Methanol: Acetone | LCS-3249       |
| Resorcinol                   | 108-46-3    | Acetone           | LCS-3250-DMF   |
| Roxithromycin                | 80214-83-1  | HPLC Methanol     | LCS-5876       |
| Safrotin                     | 31218-83-4  | Acetone           | LCS-3260       |
| Salbutamol                   | 18559-94-9  | Methanol          | LCS-4748       |
| Sanmarton                    | 51630-58-1  | Acetone           | LCS-3261-AC    |
| Selamectin                   | 165108-07-6 | HPLC Acetonitrile | LCS-6227       |
| Sethoxydim                   | 74051-80-2  | HPLC Acetonitrile | LCS-3266-ACN   |
| Spinetoram                   | 187166-40-1 | HPLC Acetonitrile | LCS-6012       |
| Spinosad A&D                 | 168316-95-8 | HPLC Acetonitrile | LCS-6025       |
| Spirodiclofen                | 148477-71-8 | HPLC Acetonitrile | LCS-5295       |
| Spiromesifen                 | 283594-90-1 | HPLC Acetonitrile | LCS-6035       |
| Sucrose                      | 57-50-1     | HPLC Water        | LCS-3308-HPLCW |

| Component @ 1,000 µg/mL            | CAS#        | Matrix            | Catalog#     | Component @ 1,000 µg/mL          | CAS#        | Matrix            | Catalog#     |
|------------------------------------|-------------|-------------------|--------------|----------------------------------|-------------|-------------------|--------------|
| Sulfadimidine                      | 57-68-1     | Acetone           | LCS-4587     | Tolclofos-methyl                 | 57018-04-9  | HPLC Acetonitrile | LCS-4835-ACN |
| Sulfentrazone                      | 122836-35-5 | Acetone           | LCS-6013     | Toltrazuril                      | 69004-03-1  | HPLC Acetonitrile | LCS-5874     |
| Sulfentrazone                      | 122836-35-5 | LCMS Acetonitrile | LCS-6013-ACN | Tolyltriazole                    | 29385-43-1  | HPLC Acetonitrile | LCS-5596     |
| Systhane                           | 88671-89-0  | Acetone           | LCS-3306     | Tralkoxydim                      | 87820-88-0  | HPLC Acetonitrile | LCS-5470     |
| Systhane                           | 88671-89-0  | HPLC Acetonitrile | LCS-3306-ACN | Tralkoxydim                      | 87820-88-0  | Acetone           | LCS-5470-AC  |
| Tebufenozide                       | 112410-23-8 | Acetone           | LCS-6036     | Transfluthrin                    | 118712-89-3 | Acetone           | LCS-6375     |
| Tebufenpyrad                       | 119168-77-3 | HPLC Acetonitrile | LCS-5226     | Triasulfuron                     | 82097-50-5  | HPLC Acetonitrile | LCS-5003     |
| Tebutam                            | 35256-85-0  | HPLC Acetonitrile | LCS-6219     | Tribenuron-methyl                | 101200-48-0 | LCMS Acetonitrile | LCS-4998     |
| Teflubenzuron                      | 83121-18-0  | HPLC Acetonitrile | LCS-5458     | Triclosan                        | 3380-34-5   | HPLC Methanol     | LCS-4382     |
| Tepraloxymid                       | 149979-41-9 | HPLC Acetonitrile | LCS-6178     | Triflumizole                     | 68694-11-1  | HPLC Acetonitrile | LCS-4964     |
| Terbufos-sulfoxide                 | 10548-10-4  | LCMS Acetonitrile | LCS-6307     | Triforine                        | 26644-46-2  | HPLC Acetonitrile | LCS-6273     |
| 1,2,4,5-Tetrachloro-3-nitrobenzene | 117-18-0    | HPLC Acetonitrile | LCS-3415-ACN | Triphenyl phosphate              | 115-86-6    | HPLC Acetonitrile | LCS-3765     |
| Tetrachlorvinphos (Z)              | 22248-79-9  | HPLC Acetonitrile | LCS-6037     | Triphenyl phosphorothionate      | 597-82-0    | HPLC Methanol     | LCS-6040     |
| Tetraconazole                      | 112281-77-3 | Acetone           | LCS-6089     | Tris(dichloroisopropyl)phosphate | 13674-87-8  | HPLC Acetonitrile | LCS-4381-ACN |
| Thiabendazole                      | 148-79-8    | HPLC Acetonitrile | LCS-3490     | Tritosulfuron                    | 142469-14-5 | HPLC Acetonitrile | LCS-6234     |
| Thiacloprid                        | 111988-49-9 | Acetone           | LCS-6026     | Velpar                           | 51235-04-2  | Acetone           | LCS-3790     |
| Thiamethoxam                       | 153719-23-4 | HPLC Acetonitrile | LCS-5173     | Xylitol                          | 87-99-0     | HPLC Water        | LCS-6150     |
| Thiodicarb                         | 59669-26-0  | HPLC Acetonitrile | LCS-3493-ACN | Xylose                           | 58-86-6     | HPLC Water        | LCS-4515     |
| Thiram                             | 137-26-8    | Acetone           | LCS-3499-AC  | Zinophos                         | 297-97-2    | Acetone           | LCS-3850     |
| Tokuthion/Prothiophos              | 34643-46-4  | HPLC Acetonitrile | LCS-3225-ACN | Zoxamide                         | 156052-68-5 | HPLC Acetonitrile | LCS-6090     |

## Daily Checks

### LC-MS Daily Check Solution 1

#### 2 Certified Components:

Caffeine  
Reserpine

1 mL @ 10 µg/mL in LC-MS Acetonitrile

Catalog#: LC-DC-1

### LC-MS Daily Check Solution 2

#### 3 Certified Components:

4-Nitrophenol  
Caffeine  
Reserpine

1 mL @ 10 µg/mL in LC-MS Acetonitrile

Catalog#: LC-DC-2

## Liquid Chromatography Pesticide Residue

### LC-MS Pesticide Residual Calibration Standard Mix-1

#### 13 Certified Components

|              |               |
|--------------|---------------|
| Abate        | Isocarbophos  |
| Acephate     | Methamidophos |
| Carbaryl     | Mevinphos     |
| Dicrotophos  | Monocrotophos |
| Dimethoate   | Omethoate     |
| Dimethomorph | Vamidothion   |
| Dylox        |               |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

Catalog#: LCPR-1-A

### LC-MS Pesticide Residual Calibration Standard Mix-2

#### 16 Certified Components:

|                    |                    |
|--------------------|--------------------|
| Alanycarb          | Furathiocarb       |
| Aldicarb           | Methabenzthiazuron |
| Aldicarb sulfone   | Methiocarb         |
| Aldicarb sulfoxide | Methomyl           |
| Benfuracarb        | Oxamyl             |
| Butocarboxim       | Tebuthiuron        |
| Butoxycarboxim     | Thidiazuron        |
| Ethiofencarb       | Thiophanate-methyl |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

Catalog#: LCPR-2-A

### LC-MS Pesticide Residual Calibration Standard Mix-3

#### 38 Certified Components:

|                   |                     |
|-------------------|---------------------|
| Baygon (Propoxur) | Hexaflumuron        |
| Bendiocarb        | 3-Hydroxycarbofuran |
| Benthiocarb       | Indoxacarb          |
| Bifenazate        | Iprovalicarb        |
| Carbofuran        | Isoprocarb          |
| Chlorfluazuron    | Isoproturon         |
| Chlorotoluron     | Linuron             |
| Chloroxuron       | Lufenuron           |
| Cycluron          | Metobromuron        |
| Diethofencarb     | Monolinuron         |
| Diflubenzuron     | Neburon             |
| Dioxacarb         | Novaluron           |
| Diuron            | Pirimicarb          |
| Fenobucarb        | Promecarb           |
| Fenoxycarb        | Propham             |
| Fenuron           | Pyraclostrobin      |
| Flufenoxuron      | Siduron             |
| Fluometuron       | Teflubenzuron       |
| Forchlorfenuron   | Triflumuron         |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

Catalog#: LCPR-3-A



## LC-MS Pesticide Residual Calibration Standard Mix-4

### 63 Certified Components:

|                     |                    |
|---------------------|--------------------|
| Abamectin           | Imidacloprid       |
| Acetamiprid         | Ivermectin         |
| Ametryn             | Kresoxim-methyl    |
| Amitraz             | Mandipropamid      |
| Azoxystrobin        | Mepanipyrim        |
| Benalaxyl           | Mepronil           |
| Benzoximate         | Metaflumizone      |
| Boscalid            | Metalaxyl          |
| Butafenacil         | Methoxyfenozide    |
| Carbetamide         | Moxidectin         |
| Carfentrazone-ethyl | Sythane            |
| Chlorantraniliprole | Nitenpyram         |
| Clofentezine        | Oxadixyl           |
| Cymoxanil           | Picoxystrobin      |
| Cyprodinil          | Piperonyl butoxide |
| Cyromazine          | Prochloraz         |
| Dimoxystrobin       | Prometon           |
| Dinotefuran         | Pymetrozin         |
| Doramectin          | Pyracarbolid       |
| Eprinomectin        | Pyrimethanil       |
| Famoxadone          | Pyriproxifen       |
| Fenazaquin          | Quinoxifen         |
| Fenhexamid          | Rotenone           |
| Fenpyroximate       | Secbumeton         |
| Flonicamid          | Spiroxamine        |
| Fluazinam           | Tebufenozide       |
| Fludioxonil         | Tebufenpyrad       |
| Fluoxastrobin       | Terbumeton         |
| Flutolanil          | Triadimefon        |
| Furalaxyl           | Trifloxystrobin    |
| Halofenozide        | Zoxamide           |
| Imazalil            |                    |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-4-A**

## LC-MS Pesticide Residual Calibration Standard Mix-5

### 30 Certified Components:

|                      |                 |
|----------------------|-----------------|
| Acibenzolar-S-methyl | Mefenacet       |
| Beam                 | Mesotrione      |
| Bupirimate           | Methoprotetryne |
| Buprofezin           | Metribuzin      |
| Carboxin             | Prometryne      |
| Clethodim            | Omite           |
| Clothianidin         | Prothioconazole |
| Cyazofamid           | Prothioconazole |
| Ethiprole            | Simetryn        |
| Ethofumesate         | Sulfentrazone   |
| Fenamidone           | Terbutryne      |
| Fipronil             | Thiabendazole   |
| Flubendimide         | Thiacloprid     |
| Flufenacet           | Thiamethoxam    |
| Hexythiazox          | Thiofanox       |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-5-A**

## LC-MS Pesticide Residual Calibration Standard Mix-6

### 28 Certified Components:

|                             |                      |
|-----------------------------|----------------------|
| Bitertanol (Mix of isomers) | Flutriafol           |
| Bromuconazole               | Fuberidazole         |
| Cyproconazole               | Hexaconazole         |
| Diclobutrazol               | Ipconazole           |
| Difenoconazole              | Metconazole          |
| Diniconazole                | Nuarimol             |
| Epoxiconazole               | Paclobutrazol        |
| Etaconazole                 | Penconazole          |
| Ethirimol                   | Propiconazole (Tilt) |
| Etoazole                    | Folicur              |
| Fenarimol                   | Tetraconazole        |
| Fenbuconazole               | Triadimenol          |
| Fluquinconazole             | Triflumizole         |
| Flusilazole                 | Triticonazole        |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-6-A**

## LC-MS Pesticide Residual Calibration Standard Mix-7

### 7 Certified Components:

|                    |               |
|--------------------|---------------|
| Emamectin-benzoate | Spirotetramat |
| Fenpropimorph      | Spinetoram    |
| Spirodiclofen      | Spiromesifen  |
| Spinosad A&D       |               |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-7-A**

### LC-MS Pesticide Residual Calibration Standard Mix-8

#### 1 Certified Components:

Hydramethylnon

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

Catalog#: LCPR-8-A

### LC-MS Pesticide Residual Calibration Standard Mix-9

#### 7 Certified Components:

Aminocarb

Monceren

Desmedipham

Phenmedipham

Formetanate hydrochloride

Propamocarb

Mexacarbate

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

Catalog#: LCPR-9-A

### LC-MS Pesticide Residual Calibration Standard Mix-10

#### 1 Certified Components:

Carbendazim

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

Catalog#: LCPR-10-A

### LC-MS Pesticide Residual Calibration Standard Kit

Contains one ampule each of

LCPR-1-A

LCPR-2-A

LCPR-3-A

LCPR-4-A

LCPR-5-A

LCPR-6-A

LCPR-7-A

LCPR-8-A

LCPR-9-A

LCPR-10-A

Catalog#: LCPR-11-KIT

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## SECTION 5

# Pesticides PCBs Herbicides

& Liquid Chromatography Pesticide Residue

# Pesticides, PCBs & 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 are the hundreds of commercial pesticides and herbicides in use in the world today. Pesticides from algacides 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 the extensive monitoring of these pesticides. It has been reported that over 98% of insecticides and 95% of herbicides effect 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 pesticide 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 pesticides standards designed to work within the EPA, AOAC and FDA analytical testing methods using all the leading analytical techniques: LC, LC-MS, GC, & 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.





## Pesticides/PCBs/Herbicides

## METHOD 505

EPA method 505 is an analytical method for the monitoring of organochlorine pesticides and PCBs in drinking water and raw source water by GC-ECD.

## Organohalide Pesticides Mix

## 16 Certified Components:

|                | $\mu\text{g/mL}$ |                           | $\mu\text{g/mL}$ |
|----------------|------------------|---------------------------|------------------|
| Alachlor       | 50               | Heptachlor                | 5                |
| Aldrin         | 5                | Heptachlor epoxide        | 5                |
| Atrazine       | 250              | Hexachlorobenzene         | 5                |
| g-BHC(Lindane) | 5                | Hexachlorocyclopentadiene | 5                |
| a-Chlordane    | 5                | Methoxychlor              | 25               |
| g-Chlordane    | 5                | cis-Nonachlor             | 5                |
| Dieldrin       | 5                | trans-Nonachlor           | 5                |
| Endrin         | 5                | Simazine                  | 250              |

1 mL in Acetone

Catalog#: 505-A2

## Toxaphene Standard

## 1 Certified Component:

Toxaphene

1 mL @ 200  $\mu\text{g/mL}$  in Hexane

Catalog#: TOX-X

1 mL @ 1,000  $\mu\text{g/mL}$  in Hexane

Catalog#: S-3535

## Chlordane Standard

## 1 Certified Component:

Technical Chlordane

1 mL @ 200  $\mu\text{g/mL}$  in Hexane

Catalog#: CDANE-X

1 mL @ 1,000  $\mu\text{g/mL}$  in Hexane

Catalog#: S-780

## Decachlorobiphenyl Standard

## 1 Certified Component:

Decachlorobiphenyl

1 mL @ 5,000  $\mu\text{g/mL}$  in Toluene

Catalog#: DCBP-XH

## Aroclor Mix 1

Mix one contains the following Aroclors:

## 4 Certified Components:

Aroclor 1016

Aroclor 1232

Aroclor 1248

Aroclor 1260

1 mL @ 200  $\mu\text{g/mL}$  in Hexane

Catalog#: PCB-M1

## Aroclor Mix 2

Mix two contains the following Aroclors:

## 3 Certified Components:

Aroclor 1221

Aroclor 1242

Aroclor 1254

1 mL @ 200  $\mu\text{g/mL}$  in Hexane

Catalog#: PCB-M2

## Individual Aroclors

Two concentrations available:

200  $\mu\text{g/mL}$  and 1,000  $\mu\text{g/mL}$  at 1 mL each in Hexane.

| Concentration          | Certified Components | Catalog#  |
|------------------------|----------------------|-----------|
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1016  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1016H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1221  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1221H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1232  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1232H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1242  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1242H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1248  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1248H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1254  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1254H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1260  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1260H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1262  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1262H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1268  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1268H |

### Method 505 Calibration Kits

505-K1 contains one ampule each of 505-A2, TOX-X, CDANE-X, PCB-M1, and PCB-M2

Catalog#: 505-K1

### PCB Kit High Concentration

1 mL @ 1,000 µg/mL of each of the following in a kit:

|           |           |
|-----------|-----------|
| PCB-1016H | PCB-1221H |
| PCB-1232H | PCB-1242H |
| PCB-1248H | PCB-1254H |
| PCB-1260H |           |

Catalog#: PCB-KH

### PCB Kit 200

1 mL @ 200 µg/mL of each of the following in a kit:

|          |          |
|----------|----------|
| PCB-1016 | PCB-1221 |
| PCB-1232 | PCB-1242 |
| PCB-1248 | PCB-1254 |
| PCB-1260 |          |

Catalog#: PCB-200K

## METHOD 507

EPA 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.

### Analyte Mix A

#### 23 Certified Components:

|              |                      |
|--------------|----------------------|
| Alachlor     | Diphenamid           |
| Ametryn      | Disulfoton           |
| Atrazine     | Disulfoton sulfone   |
| Atraton      | Disulfoton sulfoxide |
| Bromacil     | EPTC                 |
| Butachlor    | Ethoprop             |
| Butylate     | Fenamiphos           |
| Carboxin     | Fenarimol            |
| Chlorpropham | Fluridone            |
| Cycloate     | Hexazinone           |
| Diazinon     | Merphos              |
| Dichlorvos   |                      |

1 mL @ 1,000 µg/mL in Acetone

Catalog#: 507-A

### Analyte Mix B

#### 23 Certified Components:

|                 |             |
|-----------------|-------------|
| Methyl paraoxon | Propazine   |
| Metolachlor     | Simazine    |
| Metribuzin      | Simetryn    |
| Mevinphos       | Stirofos    |
| MGK 264         | Terbacil    |
| Molinate        | Tebuthiuron |
| Napropamide     | Terbufos    |
| Norflurazon     | Terbutryn   |
| Pebulate        | Triademefon |
| Prometon        | Tricycloate |
| Prometryn       | Vernolate   |
| Pronamide       |             |

1 mL @ 1,000 µg/mL in Acetone

Catalog#: 507-B

### Internal Standard

#### 1 Certified Component:

Triphenyl phosphate

1 mL @ 500 µg/mL in Methyl tert-butyl ether

Catalog#: 507-I

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for more information.

**Surrogate Standard****1 Certified Component:**

2-Nitro-m-xylene (1,3-dimethyl-2-nitrobenzene)

1 mL @ 250 µg/mL in Methyl tert-butyl ether

**Catalog#: 507-S****Performance Check Standard****4 Certified Components:**

|          | µg/mL |           | µg/mL |
|----------|-------|-----------|-------|
| Atrazine | 15    | Prometon  | 30    |
| Bromacil | 500   | Vernolate | 5     |

1 mL in Methyl tert-butyl ether

**Catalog#: 507-PC****METHOD 508**

EPA method 508 is an analytical method for the monitoring of organochlorine pesticides and PCBs in drinking water and ground water by GC-ECD

**Reformulated Chlorinated Pesticides Mix Analyte Mix A****18 Certified Components:**

|                 |                    |
|-----------------|--------------------|
| Aldrin          | Endosulfan I       |
| γ-BHC (Lindane) | Endosulfan II      |
| α-BHC           | Endosulfan sulfate |
| β-BHC           | Endrin             |
| δ-BHC           | Endrin aldehyde    |
| p, p'-DDE       | Endrin ketone      |
| p, p'-DDD       | Heptachlor         |
| p, p'-DDT       | Heptachlor epoxide |
| Dieldrin        | Methoxychlor       |

1 mL @ 1,000 µg/mL in Methyl tert-butyl ether

**Catalog#: 508-A****Toxaphene Standard****1 Certified Component:**

Toxaphene

1 mL @ 200 µg/mL in Hexane

**Catalog#: TOX-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-3535****Chlordane Standard****1 Certified Component:**

Technical Chlordane

1 mL @ 200 µg/mL in Hexane

**Catalog#: CDANE-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-780****Surrogate Standard****1 Certified Component:**

Decachlorobiphenyl

1 mL @ 5,000 µg/mL in Methyl tert-butyl ether

**Catalog#: DCBP-XH****PCNB Internal Standard****1 Certified Component:**

Pentachloronitrobenzene

1 mL @ 100 µg/mL in Methyl tert-butyl ether

**Catalog#: 508-I**

## Individual Aroclors

Two concentrations available: 200 µg/mL and 1,000 µg/mL at 1 mL each in Hexane.

| Concentration | Certified Components | Catalog#  |
|---------------|----------------------|-----------|
| 200 µg/mL     | 1                    | PCB-1016  |
| 1,000 µg/mL   | 1                    | PCB-1016H |
| 200 µg/mL     | 1                    | PCB-1221  |
| 1,000 µg/mL   | 1                    | PCB-1221H |
| 200 µg/mL     | 1                    | PCB-1232  |
| 1,000 µg/mL   | 1                    | PCB-1232H |
| 200 µg/mL     | 1                    | PCB-1242  |
| 1,000 µg/mL   | 1                    | PCB-1242H |
| 200 µg/mL     | 1                    | PCB-1248  |
| 1,000 µg/mL   | 1                    | PCB-1248H |
| 200 µg/mL     | 1                    | PCB-1254  |
| 1,000 µg/mL   | 1                    | PCB-1254H |
| 200 µg/mL     | 1                    | PCB-1260  |
| 1,000 µg/mL   | 1                    | PCB-1260H |
| 200 µg/mL     | 1                    | PCB-1262  |
| 1,000 µg/mL   | 1                    | PCB-1262H |
| 200 µg/mL     | 1                    | PCB-1268  |
| 1,000 µg/mL   | 1                    | PCB-1268H |

## GC Degradation Check Solution

### 2 Certified Components:

Endrin  
p,p'-DDT

1 mL @ 10 µg/mL in methyl tert-butyl ether

**Catalog#: 508-DC**

## Method 508 Analyte Mix A

### 20 Certified Components:

|                 |                               |
|-----------------|-------------------------------|
| Alachlor        | Dieldrin                      |
| Aldrin          | Endosulfan I                  |
| Butachlor       | Endosulfan II                 |
| γ-BHC (Lindane) | Endosulfan sulfate            |
| α-BHC           | Endrin                        |
| β-BHC           | Endrin Aldehyde               |
| δ-BHC           | Endrin Ketone                 |
| p,p'-DDE        | Heptachlor                    |
| p,p'-DDD        | Heptachlor epoxide (Isomer B) |
| p,p'-DDT        | Methoxychlor                  |

1 mL @ 500 µg/mL in Ethyl acetate

**Catalog#: 5081-A**

## Analyte Mix B

### 15 Certified Components:

|                 |                           |
|-----------------|---------------------------|
| α-Chlordane     | Hexachlorobenzene         |
| γ-Chlordane     | Hexachlorocyclopentadiene |
| Chlorobenzilate | Metolachlor               |
| Chloroneb       | Metribuzin                |
| Chlorthalonil   | Permethrin (cis & trans)  |
| Cyanazine       | Propachlor                |
| DCPA (Dacthal)  | Trifluralin               |
| Etridiazole     |                           |

1 mL @ 500 µg/mL in Ethyl acetate

**Catalog#: 5081-B**

## NPD Analytes

### 2 Certified Components:

Atrazine  
Simazine

1 mL @ 200 µg/mL in Acetone

**Catalog#: 8141-D**

## Surrogate Standard

### 1 Certified Component:

4,4'-Dibromobiphenyl

1 mL @ 10 µg/mL in Ethyl acetate

**Catalog#: 5081-S**

## Helpful Hint:

Yes, we have Heptachlor Epoxide Isomers A and B. Isomer B is used in these standards.

**Method 508 Internal Standard****1 Certified Components:**

Pentachloronitrobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-2945****Performance Check Solution****4 Certified Components:**

|               |          |
|---------------|----------|
| δ-BHC         | 40 ng/mL |
| Chlorthalonil | 50 ng/mL |
| Chlorpyrifos  | 2 ng/mL  |
| Dacthal       | 50 ng/mL |

1 mL in Methyl tert-butyl ether:Ethyl acetate

**Catalog#: 5081-PC****GC Degradation Check Solution****2 Certified Components:**Endrin  
p,p'-DDT

1 mL @ 1 µg/mL in Ethyl acetate

**Catalog#: 5081-DC****METHOD 515**

EPA method 515 is an analytical method for the monitoring of organochlorine pesticides and PCBs in drinking water and ground water by GC-ECD

**Chlorinated Herbicides as Free Acids****17 Certified Components:**

|                                                                     | Concentration µg/mL |
|---------------------------------------------------------------------|---------------------|
| Actifluorfen                                                        | 100                 |
| Bentazon                                                            | 200                 |
| Chloramben                                                          | 100                 |
| 2,4-D                                                               | 100                 |
| 2,4-DB                                                              | 800                 |
| Dalapon                                                             | 1,300               |
| DCPA (Dacthal)monoacid metabolite (methyl tetrachloroterephthalate) | 50                  |
| DCPA (Dacthal) diacid metabolite (tetrachloroterephthalic acid)     | 50                  |
| Dicamba                                                             | 100                 |
| 3,5-Dichlorobenzoic acid                                            | 100                 |
| Dichloroprop                                                        | 300                 |
| Dinoseb                                                             | 200                 |
| 4-Nitrophenol                                                       | 100                 |
| Pentachlorophenol                                                   | 100                 |
| Picloram                                                            | 100                 |
| 2,4,5-T                                                             | 100                 |
| 2,4,5-TP (Silvex)                                                   | 100                 |

1 mL in Methyl tert-butyl ether

**Catalog#: 5151-AR****Technical note on blend: 5151**

Although GC cannot distinguish the DCPA mono and diacid metabolites after derivatization, we supply the two metabolites for analysts who use alternative separation techniques, such as HPLC.

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## Method 515.4 Calibration Mix

### 16 Certified Components:

|                          | $\mu\text{g/mL}$ |
|--------------------------|------------------|
| Acifluorfen              | 50               |
| Bentazon                 | 100              |
| Chloramben               | 50               |
| 2,4-D                    | 100              |
| Dalapon                  | 100              |
| 2,4-DB                   | 100              |
| DCPA diacid              | 50               |
| Dicamba                  | 50               |
| 3,5-Dichlorobenzoic acid | 50               |
| Dichlorprop              | 100              |
| Dinoseb                  | 100              |
| Pentachlorophenol        | 10               |
| Picloram                 | 50               |
| 2,4,5-T                  | 25               |
| 2,4,5-TP (Silvex)        | 25               |
| Quinclorac               | 50               |

1 mL in Acetone

**Catalog#: 5154-A**

### Internal Standards

#### 1 Certified Component:

4,4'-Dibromooctafluorobiphenyl (DBOB)

1 mL @ 1,000  $\mu\text{g/mL}$  in Methyl tert-butyl ether

**Catalog#: S-1250**

### Surrogate Standard

#### 1 Certified Component:

2,4-Dichlorophenyl acetic acid (DCAA)

1 mL @ 100  $\mu\text{g/mL}$  in Methyl tert-butyl ether

**Catalog#: 5151-SA**

### Derivatized Surrogate Standard

#### 1 Certified Component:

2,4-Dichlorophenyl acetic acid-methyl ester

1 mL @ 100  $\mu\text{g/mL}$  in Methyl tert-butyl ether

**Catalog#: 5151-SME**

### Internal Standard

#### 1 Certified Component:

4, 4'-Dibromooctafluorobiphenyl

1 mL @ 5,000  $\mu\text{g/mL}$  in Methanol

**Catalog#: 5152-I**

## METHOD 531

EPA 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.

### Analyte Mix A

#### 10 Certified Components:

|                    |                     |
|--------------------|---------------------|
| Aldicarb           | Carbofuran          |
| Aldicarb sulfone   | 3-Hydroxycarbofuran |
| Aldicarb sulfoxide | Methiocarb          |
| Baygon (Propoxur)  | Methomyl            |
| Carbaryl           | Oxamyl              |

1 mL @ 100  $\mu\text{g/mL}$  in HPLC Acetonitrile

**Catalog#: 5311-A10**

### Method 531.2 Calibration Mix

#### 11 Certified Components:

|                     |            |
|---------------------|------------|
| Aldicarb            | Methiocarb |
| Aldicarb sulfone    | Methomyl   |
| Aldicarb sulfoxide  | 1-Naphthol |
| Carbaryl            | Oxamyl     |
| Carbofuran          | Propoxur   |
| 3-Hydroxycarbofuran |            |

1 mL @ 100  $\mu\text{g/mL}$  in HPLC Acetonitrile

**Catalog#: 5312-A**

### Internal Standard/Surrogate

#### 1 Certified Component:

4-Bromo-3,5-dimethylphenyl-N-methylcarbamate (BDMC)

1 mL @ 100  $\mu\text{g/mL}$  in HPLC Acetonitrile

**Catalog#: 531-I**

### Performance Check Solution

#### 4 Certified Components:

|                     | $\mu\text{g/mL}$ |
|---------------------|------------------|
| Aldicarb sulfoxide  | 100              |
| 3-Hydroxycarbofuran | 2                |
| Methiocarb          | 20               |
| BDMC                | 10               |

1 mL in HPLC Acetonitrile

**Catalog#: 531-PCS**

### Helpful Hint:

Our custom program allows for flexibility, affordability, and a fast turn-around time.

Visit our web site to submit your request online:  
[www.spexcertiprep.com/customorganics](http://www.spexcertiprep.com/customorganics).

**METHOD 547**

Glyphosate by HPLC with a fluorescence detector.

**Glyphosate Stock Standard****1 Certified Component:**

N-phosphonomethyl glycine

1 mL @ 2,000 µg/mL in HPLC Water

Catalog#: 547-A

**METHOD 548**

EPA method 548 is an analytical method for the monitoring of Endothall in drinking water by GC-ECD.

**Endothall Standard****1 Certified Component:**

Endothall

1 mL @ 2,000 µg/mL in Water

Catalog#: 548-A

**Endothall-PFPH Standard****1 Certified Component:**

Endothall-PFPH

1 mL @ 2,000 µg/mL in Methyl tert-butyl ether

Catalog#: 548-APFPH

**Internal Standard****1 Certified Component:**

Endosulfan-1

1 mL @ 2,000 µg/mL in Methyl tert-butyl ether

Catalog#: 548-IS

**Endothall Standard****1 Certified Component:**

Endothall

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 5481-A

**Derivatized Endothall Standard****1 Certified Component:**

Dimethyl endothall

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 5481-MEO

**Internal Standard****1 Certified Component:**

Acenaphthene-d<sub>10</sub>

1 mL @ 2,000 µg/mL in Methanol

Catalog#: 5481-IS

**Tuning Standard****1 Certified Component:**

Decafluorotriphenylphosphine

1 mL @ 2,500 µg/mL in Methanol

Catalog#: CLPS-T

**Helpful Hint:**

Different derivatives available upon request.

## METHOD 549

EPA method 549 is an analytical method for the monitoring of Diquat and Paraquat in drinking water by HPLC-UV

### Analyte Mix

#### 2 Certified Components:

Diquat  
Paraquat

1 mL @ 1,000 µg/mL in HPLC Water

**Catalog#: 5491-A**

## METHOD 608

EPA method 608 is an analytical method for the monitoring of organochlorine pesticides and PCBs in municipal and industrial waste water by GC-ECD.

### Method 608 Analyte Mix

#### 16 Certified Components:

|                 | µg/mL |                    | µg/mL |
|-----------------|-------|--------------------|-------|
| Aldrin          | 100   | Dieldrin           | 200   |
| α-BHC           | 100   | Endosulfan I       | 200   |
| β-BHC           | 100   | Endosulfan II      | 200   |
| γ-BHC (Lindane) | 100   | Endosulfan sulfate | 600   |
| δ-BHC           | 100   | Endrin             | 200   |
| 4,4'-DDD        | 600   | Endrin aldehyde    | 600   |
| 4,4'-DDE        | 200   | Heptachlor         | 100   |
| 4,4'-DDT        | 600   | Heptachlor epoxide | 100   |

1 mL in Methanol

**Catalog#: 608-A**

### Toxaphene Standard

#### 1 Certified Component:

Toxaphene

1 mL @ 200 µg/mL in Hexane

**Catalog#: TOX-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-3535**

### Chlordane Standard

#### 1 Certified Component:

Technical Chlordane

1 mL @ 200 µg/mL in Hexane

**Catalog#: CDANE-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-780**

### GC Degradation Check Solution

#### 2 Certified Component:

Endrin  
pp'-DDT

1 mL @ 10 µg/mL in MTBE

**Catalog#: 508-DC**

# Need larger quantities?

Volume discounts are available!  
Call us at **1-800-LAB-SPEX**  
for more information.

**Individual Aroclors**

Two concentrations available: 200 µg/mL and 1,000 µg/mL at 1 mL each in hexane.

| Concentration | Certified Components | Catalog#  |
|---------------|----------------------|-----------|
| 200 µg/mL     | 1                    | PCB-1016  |
| 1,000 µg/mL   | 1                    | PCB-1016H |
| 200 µg/mL     | 1                    | PCB-1221  |
| 1,000 µg/mL   | 1                    | PCB-1221H |
| 200 µg/mL     | 1                    | PCB-1232  |
| 1,000 µg/mL   | 1                    | PCB-1232H |
| 200 µg/mL     | 1                    | PCB-1242  |
| 1,000 µg/mL   | 1                    | PCB-1242H |
| 200 µg/mL     | 1                    | PCB-1248  |
| 1,000 µg/mL   | 1                    | PCB-1248H |
| 200 µg/mL     | 1                    | PCB-1254  |
| 1,000 µg/mL   | 1                    | PCB-1254H |
| 200 µg/mL     | 1                    | PCB-1260  |
| 1,000 µg/mL   | 1                    | PCB-1260H |
| 200 µg/mL     | 1                    | PCB-1262  |
| 1,000 µg/mL   | 1                    | PCB-1262H |
| 200 µg/mL     | 1                    | PCB-1268  |
| 1,000 µg/mL   | 1                    | PCB-1268H |

**PCB Kit H**

1 mL @ 1,000 µg/mL of each of the following in a kit:

|           |           |
|-----------|-----------|
| PCB-1016H | PCB-1221H |
| PCB-1232H | PCB-1242H |
| PCB-1248H | PCB-1254H |
| PCB-1260H |           |

Catalog#: PCB-KH

**PCB Kit 200**

1 mL @ 200 µg/mL of each of the following in a kit:

|          |          |
|----------|----------|
| PCB-1016 | PCB-1221 |
| PCB-1232 | PCB-1242 |
| PCB-1248 | PCB-1254 |
| PCB-1260 |          |

Catalog#: PCB-200K

**METHOD 614****ORGANOPHOSPHORUS  
PESTICIDES BY GC-NPD**

EPA method 614 is an analytical method for the monitoring of organophosphorus pesticides in municipal and industrial waste water by GC-NPD.

**Method 614 Analyte Compounds**

|                  | Certified Components | Catalog# |
|------------------|----------------------|----------|
| Azinphos methyl  | 1                    | S-2085   |
| Demeton (O & S)  | 1                    | S-1140   |
| Diazinon         | 1                    | S-1175   |
| Disulfoton       | 1                    | S-1755   |
| Ethion           | 1                    | S-1905   |
| Malathion        | 1                    | S-2355   |
| Parathion        | 1                    | S-2920   |
| Parathion methyl | 1                    | S-2445   |

**Method 614 Kit**

Contains single component standards of each of the eight analytes listed above at 1,000 µg/mL.

Catalog#: 614-SK

**Method 614.1 Analyte Compounds**

|            | Certified Components | Catalog# |
|------------|----------------------|----------|
| Dioxathion | 1                    | S-1720   |
| EPN        | 1                    | S-1865   |
| Ethion     | 1                    | S-1905   |
| Terbufos   | 1                    | S-3325   |

**Method 614.1 Kit**

Contains single-component standards of each of the four analytes listed above at 1,000 µg/mL.

Catalog#: 6141-KIT

## METHOD 615

EPA method 615 is an analytical method for the monitoring of chlorinated herbicides in municipal and industrial waste water by GC-ECD.

### Chlorinated Herbicides - Free Acids

#### 10 Certified Components:

|                   | $\mu\text{g/mL}$ |              | $\mu\text{g/mL}$ |
|-------------------|------------------|--------------|------------------|
| 2,4-D             | 100              | Dicamba      | 10               |
| 2,4-DB            | 100              | Dichloroprop | 100              |
| 2,4,5-T           | 10               | Dinoseb      | 50               |
| Silvex (2,4,5-TP) | 10               | MCPA         | 10,000           |
| Dalapon           | 250              | MCPD         | 10,000           |

1 mL in Methyl tert-butyl ether

Catalog#: 5151-A

## METHOD 619

### TRIAZINE HERBICIDES BY GC-NPD

EPA method 619 is an analytical method for the monitoring of Triazine Pesticides in municipal and industrial waste water by GC-NPD.

### Method 619 Analyte Compounds

|                       | Certified Components | Catalog#      |
|-----------------------|----------------------|---------------|
| <b>Ametryn</b>        | 1                    | <b>S-215</b>  |
| <b>Atraton</b>        | 1                    | <b>S-360</b>  |
| <b>Atrazine</b>       | 1                    | <b>S-365</b>  |
| <b>Prometon</b>       | 1                    | <b>S-3130</b> |
| <b>Propazine</b>      | 1                    | <b>S-3170</b> |
| <b>Simetryn</b>       | 1                    | <b>S-3285</b> |
| <b>Simazine</b>       | 1                    | <b>S-3280</b> |
| <b>Terbuthylazine</b> | 1                    | <b>S-3330</b> |
| <b>Terbutryn</b>      | 1                    | <b>S-3335</b> |



**METHOD 622****ORGANOPHOSPHOROUS  
PESTICIDES BY GC-NPD**

EPA method 622 is an analytical method for the monitoring of organophosphorus pesticides in municipal and industrial waste water by GC-NPD.

**Method 622 Analyte Mix Compounds**

|                                          | Certified Components | Catalog# |
|------------------------------------------|----------------------|----------|
| Azinphos methyl                          | 1                    | S-2085   |
| Bolstar (Sulprofos)                      | 1                    | S-3305   |
| Coumaphos                                | 1                    | S-980    |
| Chlorpyrifos                             | 1                    | S-965    |
| Demeton (O+S)                            | 1                    | S-1140   |
| Disulfoton                               | 1                    | S-1755   |
| Diazinon                                 | 1                    | S-1175   |
| Dichlorvos                               | 1                    | S-1475   |
| Dimethoate                               | 1                    | S-1560   |
| EPN                                      | 1                    | S-1865   |
| Ethoprop (Prophos)                       | 1                    | S-3185   |
| Fensulfothion                            | 1                    | S-2005   |
| Fenthion                                 | 1                    | S-2010   |
| Malathion                                | 1                    | S-2355   |
| Merphos<br>(Tributylphosphorotrithioite) | 1                    | S-3565   |
| Mevinphos                                | 1                    | S-2625   |
| Monocrotophos                            | 1                    | S-2645   |
| Naled (Dibrom)                           | 1                    | S-2650   |
| Parathion ethyl<br>(Parathion)           | 1                    | S-2920   |
| Parathion methyl<br>(Methyl parathion)   | 1                    | S-2445   |
| Phorate                                  | 1                    | S-3080   |
| Ronnel (Fenclophos)                      | 1                    | S-2000   |
| TEPP                                     | 1                    | S-3315   |
| Tokuthion (Prothiofos)                   | 1                    | S-3225   |
| Trichloronate                            | 1                    | S-3570   |
| Stiophos<br>(Tetrachorvinphos)           | 1                    | S-3425   |
| Sulfotep                                 | 1                    | S-3455   |

**METHODS 8081**

EPA method 8081 is an analytical method for the monitoring of organochlorine pesticides and PCBs in environmental samples by GC-ECD

**Method 8081 Pesticides Mix****18 Certified Components:**

|                 |                               |
|-----------------|-------------------------------|
| Aldrin          | Endosulfan I                  |
| α-BHC           | Endosulfan II                 |
| β-BHC           | Endosulfan sulfate            |
| γ-BHC (Lindane) | Endrin                        |
| δ-BHC           | Endrin aldehyde               |
| 4,4'-DDD        | Endrin ketone                 |
| 4,4'-DDE        | Heptachlor                    |
| 4,4'-DDT        | Heptachlor epoxide (Isomer B) |
| Dieldrin        | Methoxychlor                  |

1 mL @ 2,000 µg/mL in Benzene

**Catalog#: 625-PH**

**Toxaphene Standard****1 Certified Component:**

Toxaphene

1 mL @ 200 µg/mL in Hexane

**Catalog#: TOX-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-3535**

**Chlordane Standard****1 Certified Component:**

Technical Chlordane

1 mL @ 200 µg/mL in Hexane

**Catalog#: CDANE-X**

1 mL @ 1,000 µg/mL in Hexane

**Catalog#: S-780**

**Internal Standard****1 Certified Components:**

Pentachloronitrobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-2945**

**Alternate Internal Standard****1 Certified Components:**

1-Bromo-2-Nitrobenzene

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-590**

## Surrogate Standard

### 2 Certified Components:

2,4,5,6-Tetrachloro-m-xylene  
Decachlorobiphenyl

1 mL @ 200 µg/mL in Acetone

Catalog#: CLPP-S90

## Alternate Surrogate Standard

### 1 Certified Components:

4-Chloro-3-nitrobenzotrifluoride

1 mL @ 1,000 µg/mL in Methanol

Catalog#: S-947

## Method 8081 Individual Analyte Singles

|                                    | Certified Components | Catalog# |
|------------------------------------|----------------------|----------|
| Alachlor                           | 1                    | S-185    |
| Captafol                           | 1                    | S-715    |
| Carbophenothion                    | 1                    | S-755    |
| cis-Chlordane                      | 1                    | S-770    |
| trans-Chlordane                    | 1                    | S-775    |
| Chlorobenzilate                    | 1                    | S-820    |
| Chloroneb                          | 1                    | S-790    |
| Chlorothalonil                     | 1                    | S-915    |
| Diallate                           | 1                    | S-1155   |
| 1,2-Dibromo-3-chloropropane (DBCP) | 1                    | S-1255   |
| Dichlone                           | 1                    | S-1275   |
| Dichloran                          | 1                    | S-1276   |
| Hexachlorobenzene                  | 1                    | S-2140   |
| Hexachlorocyclopentadiene          | 1                    | S-2150   |
| Isodrin                            | 1                    | S-2285   |
| Kelthane 1.5%o,p'-95%p,p'          | 1                    | S-2335   |
| Methyl dacthal                     | 1                    | S-1065   |
| Mirex                              | 1                    | S-2635   |
| Nitrofen                           | 1                    | S-2720   |
| trans-Nonachlor                    | 1                    | S-2770   |
| Octachloronaphthalene              | 1                    | S-4200   |
| Pentachloronitrobenzene            | 1                    | S-2945   |
| Permethrin (cis, trans)            | 1                    | S-3000   |
| Perthane                           | 1                    | S-3002   |
| Propachlor                         | 1                    | S-3140   |
| Strobane (TM)                      | 1                    | S-4360   |
| Terrazole                          | 1                    | S-3360   |
| Trifluralin                        | 1                    | S-3715   |

## METHOD 8082

EPA method 8082 is an analytical method for the monitoring of PCBs in environmental samples by GC-ECD or GC-ELCD.

## Method 8082 Calibration Mix

### 19 Certified Components:

2-Chlorobiphenyl  
2,3-Dichlorobiphenyl  
2,2',5-Trichlorobiphenyl  
2,4',5-Trichlorobiphenyl  
2,2',3,5'-Tetrachlorobiphenyl  
2,2',5,5'-Tetrachlorobiphenyl  
2,3',4,4'-Tetrachlorobiphenyl  
2,2',3,4,5'-Pentachlorobiphenyl  
2,2',4,5,5'-Pentachlorobiphenyl  
2,3,3',4',6-Pentachlorobiphenyl  
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl  
2,2',3,4,4',5'-Hexachlorobiphenyl  
2,2',3,4,5,5'-Hexachlorobiphenyl  
2,2',3,5,5',6-Hexachlorobiphenyl  
2,2',4,4',5,5'-Hexachlorobiphenyl  
2,2',3,3',4,4',5-Heptachlorobiphenyl  
2,2',3,4,4',5,5'-Heptachlorobiphenyl  
2,2',3,4,4',5',6-Heptachlorobiphenyl  
2,2',3,4',5,5',6-Heptachlorobiphenyl

1 mL @ 100 µg/mL in Isooctane

Catalog#: 8082-C

## Initial Combination Calibration Standard

### 2 Certified Components:

Both Aroclors present at 1,000 µg/mL

PCB 1016

PCB 1260

1 mL @ 1,000 µg/mL in Hexane

Catalog#: 8082-IC

# Need larger quantities?

Volume discounts are available!  
Call us at **1-800-LAB-SPEX**  
for more information.

**Individual Aroclors**

Two concentrations available: 200 µg/mL and 1,000 µg/mL at 1 mL each in Hexane.

| Concentration | Certified Components | Catalog#  |
|---------------|----------------------|-----------|
| 200 µg/mL     | 1                    | PCB-1016  |
| 1,000 µg/mL   | 1                    | PCB-1016H |
| 200 µg/mL     | 1                    | PCB-1221  |
| 1,000 µg/mL   | 1                    | PCB-1221H |
| 200 µg/mL     | 1                    | PCB-1232  |
| 1,000 µg/mL   | 1                    | PCB-1232H |
| 200 µg/mL     | 1                    | PCB-1242  |
| 1,000 µg/mL   | 1                    | PCB-1242H |
| 200 µg/mL     | 1                    | PCB-1248  |
| 1,000 µg/mL   | 1                    | PCB-1248H |
| 200 µg/mL     | 1                    | PCB-1254  |
| 1,000 µg/mL   | 1                    | PCB-1254H |
| 200 µg/mL     | 1                    | PCB-1260  |
| 1,000 µg/mL   | 1                    | PCB-1260H |
| 200 µg/mL     | 1                    | PCB-1262  |
| 1,000 µg/mL   | 1                    | PCB-1262H |
| 200 µg/mL     | 1                    | PCB-1268  |
| 1,000 µg/mL   | 1                    | PCB-1268H |

**PCB Kits for Method 8082**

PCB-KH contains one of each of the following:

|           |           |
|-----------|-----------|
| PCB-1016H | PCB-1248H |
| PCB-1221H | PCB-1254H |
| PCB-1232H | PCB-1260H |
| PCB-1242H |           |

7 ampules

Catalog#: PCB-KH

PCB-200K contains one of each of the following:

|          |          |
|----------|----------|
| PCB-1016 | PCB-1248 |
| PCB-1221 | PCB-1254 |
| PCB-1232 | PCB-1260 |
| PCB-1242 |          |

7 ampules

Catalog#: PCB-200K

**Surrogate for Aroclor Analysis****1 Certified Component:**

Decachlorobiphenyl

1 mL @ 1,000 µg/mL in Acetone

Catalog#: S-1100

**Internal Standard for Individual PCB-Congener Analysis****1 Certified Component:**

2,4,5,6-Tetrachloro-m-xylene

1 mL @ 1,000 µg/mL in Acetone

Catalog#: S-3420

**Alternate Internal/Surrogate Standard****1 Certified Component:**

2,2',4,4',5,5'-Hexabromobiphenyl

1 mL @ 100 µg/mL in Hexane

Catalog#: 8082-I

1 mL @ 1,000 µg/mL in Isooctane

Catalog#: S-4374

**Helpful Hint:**

Custom synthesis available.

Call 1-800-LAB-SPEX ext. 444 for details.

## METHODS 8141

EPA method 8141 is an analytical method for the monitoring of organophosphorus pesticides in environmental samples by GC-NPD or GC-FPD.

### 8140 Analyte Mix

#### 20 Certified Components:

|               |                               |
|---------------|-------------------------------|
| Bolstar       | Fenthion                      |
| Chloropyrifos | Guthion (Azinphos-methyl)     |
| Coumophos     | Merphos                       |
| Demeton, O    | Methyl parathion              |
| Demeton, S    | Mevinphos                     |
| Diazinon      | Phorate                       |
| Diclorovos    | Ronnel                        |
| Disolfoton    | Stirophos (Tetrachlorvinphos) |
| Ethoprop      | Tokuthion                     |
| Fensulfothion | Trichlorinate                 |

1 mL @ 100 µg/mL in Hexane:Acetone

**Catalog#: 8140-A**

1 mL @ 200 µg/mL in Hexane:Acetone

**Catalog#: 8140-AH**

### 8141 Analyte Mix

#### 25 Certified Components:

|                     |               |
|---------------------|---------------|
| Aspon               | Fenitrothion  |
| Azinphos ethyl      | Fonophos      |
| Carbophenothion     | Leptophos     |
| Chlorfenvinphos     | Malathion     |
| Chlorpyrifos methyl | Monocrotophos |
| Crotoxyphos         | Phosmet       |
| Dichlofenthion      | Phosphamidon  |
| Dicrotophos         | Sulfotep      |
| Dimethoate          | TEPP          |
| Dioxathion          | Terbuphos     |
| EPN                 | Thionazin     |
| Ethion              | Trichlorfon   |
| Ethyl parathion     |               |

1 mL @ 200 µg/mL in Hexane:Acetone

**Catalog#: 8141-AB**

## Method 8141 Carbamate Singles

| Component<br>@ 1,000 ug/mL: | Matrix       | Catalog# |
|-----------------------------|--------------|----------|
| Bendiocarb                  | Methanol     | S-379    |
| Butylate                    | Methanol     | S-660    |
| EPTC                        | Methanol     | S-1870   |
| Methiocarb                  | Acetonitrile | S-2385   |
| Molinate                    | Methanol     | S-2640   |
| Pebulate                    | Methanol     | S-2925   |
| o-Phenylenediamine          | Methanol     | S-3071   |
| Propham                     | Methanol     | S-3180   |
| Prosulfocarb                | Methanol     | S-3223   |
| Triallate                   | Methanol     | S-3550   |

### Naled Single

#### 1 Certified Components:

Naled (Dibrom)

1 mL @ 1,000 µg/mL in Methylene Chloride

**Catalog#: S-2650**

### Famphur Single

#### 1 Certified Components:

Famphur

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-1995**

### NPD/FPD Surrogate

#### 2 Certified Components:

Tributylphosphate  
Triphenylphosphate

1 mL @ 1,000 µg/mL in Acetone

**Catalog#: 8141-S**

**NPD/FPD Surrogate Singles****1 Certified Components:**

Tributyl Phosphate

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-3560****1 Certified Components:**

Triphenyl Phosphate

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-3765****NPD Surrogate****1 Certified Component:**

4-Chloro-3-nitrobenzotrifluoride

1 mL @ 1,000 µg/mL in Acetone

**Catalog#: S-947****Internal Standard****1 Certified Component:**

1-Bromo-2-nitrobenzene

1 mL @ 1,000 µg/mL in Acetone

**Catalog#: S-590****METHODS 8151**

EPA methods 8150A, 8150B and 8151 are general analytical methods for the monitoring of herbicides in environmental samples by GC-ECD.

**Chlorinated Herbicides as Free Acids  
Alternative Formulation****10 Certified Components:**

|                   | µg/mL |              | µg/mL  |
|-------------------|-------|--------------|--------|
| 2,4-D             | 100   | Dicamba      | 10     |
| 2,4-DB            | 100   | Dichloroprop | 100    |
| 2,4,5-T           | 10    | Dinoseb      | 50     |
| Silvex (2,4,5-TP) | 10    | MCPA         | 10,000 |
| Dalapon           | 250   | MCPP         | 10,000 |

1 mL in Methyl tert-butyl ether

**Catalog#: 5151-A****Method 8151A Analytes as Free Acids****17 Certified Components:****@ 100 µg/mL (except where noted)**

|                                      |                          |
|--------------------------------------|--------------------------|
| Acifluorfen                          | 3,5-Dichlorobenzoic acid |
| Bentazon                             | Dichloroprop             |
| Chloramben                           | Dinoseb                  |
| 2,4-D                                | 4-Nitrophenol            |
| 2,4-DB                               | Pentachlorophenol        |
| Dacthal                              | Picloram                 |
| Dalapon                              | 2,4,5-TP Silvex          |
| Dicamba                              |                          |
| 4-Chloro-o-tolyoxyacetic acid (MCPA) | @ 10,000 µg/mL           |
| Mecoprop (MCPP)                      | @ 10,000 µg/mL           |

1 mL @ 100 µg/mL Methyl tert-butyl ether

**Catalog#: 8151-A**



## Method 8151 Singles

### 1 Certified Component:

DCPA Diacid

1 mL @ 1,000 µg/mL in Acetone

**Catalog#: S-1067**

### 1 Certified Component:

5-Hydroxydicamba

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-4005**

## Surrogate Standard

### 1 Certified Component:

2,4-Dichlorophenyl acetic acid

1 mL @ 1,000 µg/mL in Methyl tert-butyl ether

**Catalog#: S-1420**

## Internal Standard

### 1 Certified Component:

4,4'-Dibromooctafluorobiphenyl

1 mL @ 1,000 µg/mL in Methyl tert-butyl ether

**Catalog#: S-1250**

## CLP SERIES PESTICIDE STANDARDS

The US EPA retains analytical services through the Contract Lab Program (CLP). The CLP follows detailed SOPs derived from EPA methods and SW-846. The CLP Pesticide Analysis method is an analytical method for the analysis of aqueous or solid samples for pesticides by GC-ECD.

## Individual Standard Mix C

### 22 Certified Components:

|                               | µg/mL |
|-------------------------------|-------|
| Aldrin                        | 100   |
| alpha-BHC                     | 100   |
| beta-BHC                      | 100   |
| delta-BHC                     | 100   |
| gamma-BHC                     | 100   |
| alpha-Chlordane               | 100   |
| gamma-Chlordane               | 100   |
| p,p'-DDD                      | 200   |
| p,p'-DDE                      | 200   |
| p,p'-DDT                      | 200   |
| Decachlorobiphenyl            | 200   |
| Dieldrin                      | 200   |
| Endosulfan I                  | 100   |
| Endosulfan II                 | 200   |
| Endosulfan sulfate            | 200   |
| Endrin                        | 200   |
| Endrin aldehyde               | 200   |
| Endrin ketone                 | 200   |
| Heptachlor                    | 100   |
| Heptachlor epoxide (Isomer B) | 100   |
| Methoxychlor                  | 1000  |
| 2,4,5,6-Tetrachloro-m-xylene  | 100   |

1 mL in Hexane:Toluene

**Catalog#: CLPP-C**

## Individual Standard Mix A for 3/90 & 7/91 SOW

### 9 Certified Components:

|                 | µg/mL |              | µg/mL |
|-----------------|-------|--------------|-------|
| α-BHC           | 5     | Endosulfan I | 5     |
| γ-BHC (Lindane) | 5     | Endrin       | 10    |
| p,p'-DDD        | 10    | Heptachlor   | 5     |
| p,p'-DDT        | 10    | Methoxychlor | 50    |
| Dieldrin        | 10    |              |       |

1 mL in 50:50 Hexane:Toluene

**Catalog#: CLPP-A90**

**Individual Standard Mix B  
for 3/90 & 7/91 SOW****11 Certified Components:**

|                     | $\mu\text{g/mL}$ |                    | $\mu\text{g/mL}$ |
|---------------------|------------------|--------------------|------------------|
| $\beta$ -BHC        | 5                | p,p'-DDE           | 10               |
| $\delta$ -BHC       | 5                | Endosulfan sulfate | 10               |
| Aldrin              | 5                | Endrin aldehyde    | 10               |
| Heptachlor epoxide  | 5                | Endrin ketone      | 10               |
| $\alpha$ -Chlordane | 5                | Endosulfan II      | 10               |
| $\gamma$ -Chlordane | 5                |                    |                  |

1 mL in 50:50 Hexane:Toluene

**Catalog#: CLPP-B90****Initial Combination Calibration Standard****1 Certified Component:**PCB 1016  
PCB 12601 mL @ 1,000  $\mu\text{g/mL}$  in Hexane**Catalog#: 8082-IC****Toxaphene Standard****1 Certified Component:**

Toxaphene

1 mL @ 200  $\mu\text{g/mL}$  in Hexane**Catalog#: TOX-X**1 mL @ 1,000  $\mu\text{g/mL}$  in Hexane**Catalog#: S-3535****Chlordane Standard****1 Certified Component:**

Technical Chlordane

1 mL @ 200  $\mu\text{g/mL}$  in Hexane**Catalog#: CDANE-X**1 mL @ 1,000  $\mu\text{g/mL}$  in Hexane**Catalog#: S-780****Individual Aroclors**Two concentrations available: 200  $\mu\text{g/mL}$  and 1,000  $\mu\text{g/mL}$  at 1 mL each in Hexane.

| Concentration          | Certified Components | Catalog#  |
|------------------------|----------------------|-----------|
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1016  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1016H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1221  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1221H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1232  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1232H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1242  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1242H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1248  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1248H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1254  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1254H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1260  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1260H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1262  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1262H |
| 200 $\mu\text{g/mL}$   | 1                    | PCB-1268  |
| 1,000 $\mu\text{g/mL}$ | 1                    | PCB-1268H |

**Alternate SOW Surrogate Spike****1 Certified Component:**

Dibutylchloroendate

1 mL @ 200  $\mu\text{g/mL}$  in Acetone**Catalog#: DBC-X****Performance Evaluation Mixture****6 Certified Components:**

|                         | $\mu\text{g/mL}$ |              | $\mu\text{g/mL}$ |
|-------------------------|------------------|--------------|------------------|
| $\alpha$ -BHC           | 1                | p,p'-DDT     | 10               |
| $\beta$ -BHC            | 1                | Endrin       | 5                |
| $\gamma$ -BHC (Lindane) | 1                | Methoxychlor | 25               |

1 mL in 50:50 Hexane:Toluene

**Catalog#: CLPP-PEM**

### Ready-Prep Surrogate Spike

#### 2 Certified Components:

|                              | µg/mL |
|------------------------------|-------|
| 2,4,5,6-Tetrachloro-m-xylene | 0.2   |
| Decachlorobiphenyl           | 0.2   |

25 mL in Acetone

Catalog#: CLPP-SS90-25

### Surrogate Spike

#### 2 Certified Components:

|                              | µg/mL |
|------------------------------|-------|
| 2,4,5,6-Tetrachloro-m-xylene | 200   |
| Decachlorobiphenyl           | 200   |

1 mL in Acetone

Catalog#: CLPP-S90

### Surrogate Spike Alternate

#### 2 Certified Components:

|                              | µg/mL |
|------------------------------|-------|
| 2,4,5,6-Tetrachloro-m-xylene | 100   |
| Decachlorobiphenyl           | 200   |

1 mL in Acetone

Catalog#: CLPP-S91

### Matrix Spike Alternate

#### 6 Certified Components:

|          | µg/mL |                 | µg/mL |
|----------|-------|-----------------|-------|
| Aldrin   | 50    | Endrin          | 100   |
| Dieldrin | 100   | γ-BHC (Lindane) | 50    |
| p,p'-DDT | 100   | Heptachlor      | 50    |

1 mL in Methanol

Catalog#: CLPP-MS91

### Matrix Spike High Concentration

#### 6 Certified Components:

|          | µg/mL |            | µg/mL |
|----------|-------|------------|-------|
| Aldrin   | 500   | Endrin     | 1000  |
| Dieldrin | 1000  | γ-BHC      | 500   |
| p,p'-DDT | 1000  | Heptachlor | 500   |

1 mL in Methanol

Catalog#: CLPP-MS91H

### Florisol Cartridge Check Solution

#### 1 Certified Component:

2,4,5-Trichlorophenol

1 mL @ 200 µg/mL in Acetone

Catalog#: FLO-CAL

### Gel Permeation Clean-up Calibration

#### 6 Certified Components:

|                             | GPC-CAL-91<br>mg/mL | GPC-CAL-93<br>mg/mL |
|-----------------------------|---------------------|---------------------|
| Corn oil                    | 250                 | 250                 |
| bis-2-Ethyl-hexyl-phthalate | 10                  | 5.0                 |
| Methoxychlor                | 2.0                 | 1.0                 |
| Perylene                    | 0.2                 | 0.2                 |
| Sulfur                      | 0.8                 | 0.8                 |

5 mL in Methylene chloride

Catalog#: GPC-CAL-91

5 mL in Methylene chloride

Catalog#: GPC-CAL-93

## Helpful Hint:

Reformulated Gasoline Standards are available.

The requirements are "moving targets," however, our custom program can make getting your standards very easy!

Visit [www.spexcertiprep.com/customorganics](http://www.spexcertiprep.com/customorganics) to request your standards today.

## TCLP SEMIVOLATILE STANDARDS

### TCLP Herbicide Spike A

#### 2 Certified Components:

2,4-D  
2,4,5-TP

1 mL @ 2,000 µg/mL in Methanol

Catalog#: TCLP-H

### Herbicide Spike A - Methyl Ester Derivatives

#### 2 Certified Components:

2,4-D-MeO  
2,4,5-TP-MeO

1 mL @ 2,000 µg/mL in Methanol

Catalog#: TCLP-H-MEO

### TCLP Pesticide Spike

#### 7 Certified Components:

|                 |                    |
|-----------------|--------------------|
| γ-BHC (Lindane) | Heptachlor         |
| α-Chlordane     | Heptachlor Epoxide |
| γ-Chlordane     | Methoxychlor       |
| Endrin          |                    |

1 mL @ 2,000 µg/mL in Methylene chloride

Catalog#: TCLP-P

### Pesticide Spike Without Chlordane Isomers

#### 5 Certified Components:

|                 |                    |
|-----------------|--------------------|
| γ-BHC (Lindane) | Heptachlor Epoxide |
| Endrin          | Methoxychlor       |
| Heptachlor      |                    |

1 mL @ 2,000 µg/mL in Methanol

Catalog#: TCLP-PNC

### Toxaphene Standard

#### 1 Certified Component:

Toxaphene

1 mL @ 200 µg/mL in Hexane

Catalog#: TOX-X

1 mL @ 1,000 µg/mL in Hexane

Catalog#: S-3535

### Chlordane Standard

#### 1 Certified Component:

Technical Chlordane

1 mL @ 200 µg/mL in Hexane

Catalog#: CDANE-X

1 mL @ 1,000 µg/mL in Hexane

Catalog#: S-780

### Helpful Hint:

We are continually adding compounds to our inventory. If you don't see what you need, please call us at **1-800-LAB-SPEX ext. 444.**

We will make every effort to meet your requirements.

## PCB Congeners

Matrix: Hexane

| Component @ 100 µg/mL         | CAS#       | Description        | Catalog#  | Component @ 100 µg/mL           | CAS#       | Description        | Catalog#  |
|-------------------------------|------------|--------------------|-----------|---------------------------------|------------|--------------------|-----------|
| 2-Chlorobiphenyl              | 2051-60-7  | PCB CONGENER BZ-1  | PCB-BZ-1  | 2,2',3,6-Tetrachlorobiphenyl    | 70362-45-7 | PCB CONGENER BZ-45 | PCB-BZ-45 |
| 3-Chlorobiphenyl              | 2051-61-8  | PCB CONGENER BZ-2  | PCB-BZ-2  | 2,2',3,6'-Tetrachlorobiphenyl   | 41464-47-5 | PCB CONGENER BZ-46 | PCB-BZ-46 |
| 4-Chlorobiphenyl              | 2051-62-9  | PCB CONGENER BZ-3  | PCB-BZ-3  | 2,2',4,4'-Tetrachlorobiphenyl   | 2437-79-8  | PCB CONGENER BZ-47 | PCB-BZ-47 |
| 2,2'-Dichlorobiphenyl         | 13029-08-8 | PCB CONGENER BZ-4  | PCB-BZ-4  | 2,2',4,5-Tetrachlorobiphenyl    | 70362-47-9 | PCB CONGENER BZ-48 | PCB-BZ-48 |
| 2,3-Dichlorobiphenyl          | 16605-91-7 | PCB CONGENER BZ-5  | PCB-BZ-5  | 2,2',4,5'-Tetrachlorobiphenyl   | 41464-40-8 | PCB CONGENER BZ-49 | PCB-BZ-49 |
| 2,3'-Dichlorobiphenyl         | 25569-80-6 | PCB CONGENER BZ-6  | PCB-BZ-6  | 2,2',4,6-Tetrachlorobiphenyl    | 62796-65-0 | PCB CONGENER BZ-50 | PCB-BZ-50 |
| 2,4-Dichlorobiphenyl          | 33284-50-3 | PCB CONGENER BZ-7  | PCB-BZ-7  | 2,2',4,6'-Tetrachlorobiphenyl   | 68194-04-7 | PCB CONGENER BZ-51 | PCB-BZ-51 |
| 2,4'-Dichlorobiphenyl         | 34883-43-7 | PCB CONGENER BZ-8  | PCB-BZ-8  | 2,2',5,5'-Tetrachlorobiphenyl   | 35693-99-3 | PCB CONGENER BZ-52 | PCB-BZ-52 |
| 2,5-Dichlorobiphenyl          | 34883-39-1 | PCB CONGENER BZ-9  | PCB-BZ-9  | 2,2',5,6'-Tetrachlorobiphenyl   | 41464-41-9 | PCB CONGENER BZ-53 | PCB-BZ-53 |
| 2,6-Dichlorobiphenyl          | 33146-45-1 | PCB CONGENER BZ-10 | PCB-BZ-10 | 2,2',6,6'-Tetrachlorobiphenyl   | 15968-05-5 | PCB CONGENER BZ-54 | PCB-BZ-54 |
| 3,3'-Dichlorobiphenyl         | 2050-67-1  | PCB CONGENER BZ-11 | PCB-BZ-11 | 2,3,3',4-Tetrachlorobiphenyl    | 74338-24-2 | PCB CONGENER BZ-55 | PCB-BZ-55 |
| 3,4-Dichlorobiphenyl          | 2974-92-7  | PCB CONGENER BZ-12 | PCB-BZ-12 | 2,3,3',4'-Tetrachlorobiphenyl   | 41464-43-1 | PCB CONGENER BZ-56 | PCB-BZ-56 |
| 3,4'-Dichlorobiphenyl         | 2974-90-5  | PCB CONGENER BZ-13 | PCB-BZ-13 | 2,3,3',5-Tetrachlorobiphenyl    | 70424-67-8 | PCB CONGENER BZ-57 | PCB-BZ-57 |
| 3,5-Dichlorobiphenyl          | 34883-41-5 | PCB CONGENER BZ-14 | PCB-BZ-14 | 2,3,3',5'-Tetrachlorobiphenyl   | 41464-49-7 | PCB CONGENER BZ-58 | PCB-BZ-58 |
| 4,4'-Dichlorobiphenyl         | 2050-68-2  | PCB CONGENER BZ-15 | PCB-BZ-15 | 2,3,3',6-Tetrachlorobiphenyl    | 74472-33-6 | PCB CONGENER BZ-59 | PCB-BZ-59 |
| 2,2',3-Trichlorobiphenyl      | 38444-78-9 | PCB CONGENER BZ-16 | PCB-BZ-16 | 2,3,4,4'-Tetrachlorobiphenyl    | 33025-41-1 | PCB CONGENER BZ-60 | PCB-BZ-60 |
| 2,2',4-Trichlorobiphenyl      | 37680-66-3 | PCB CONGENER BZ-17 | PCB-BZ-17 | 2,3,4,5-Tetrachlorobiphenyl     | 33284-53-6 | PCB CONGENER BZ-61 | PCB-BZ-61 |
| 2,2',5-Trichlorobiphenyl      | 37680-65-2 | PCB CONGENER BZ-18 | PCB-BZ-18 | 2,3,4,6-Tetrachlorobiphenyl     | 54230-22-7 | PCB CONGENER BZ-62 | PCB-BZ-62 |
| 2,2',6-Trichlorobiphenyl      | 38444-73-4 | PCB CONGENER BZ-19 | PCB-BZ-19 | 2,3,4',5-Tetrachlorobiphenyl    | 74472-34-7 | PCB CONGENER BZ-63 | PCB-BZ-63 |
| 2,3,3'-Trichlorobiphenyl      | 38444-84-7 | PCB CONGENER BZ-20 | PCB-BZ-20 | 2,3,4',6-Tetrachlorobiphenyl    | 52663-58-8 | PCB CONGENER BZ-64 | PCB-BZ-64 |
| 2,3,4-Trichlorobiphenyl       | 55702-46-0 | PCB CONGENER BZ-21 | PCB-BZ-21 | 2,3,5,6-Tetrachlorobiphenyl     | 33284-54-7 | PCB CONGENER BZ-65 | PCB-BZ-65 |
| 2,3,4'-Trichlorobiphenyl      | 38444-85-8 | PCB CONGENER BZ-22 | PCB-BZ-22 | 2,3',4,4'-Tetrachlorobiphenyl   | 32598-10-0 | PCB CONGENER BZ-66 | PCB-BZ-66 |
| 2,3,5-Trichlorobiphenyl       | 55720-44-0 | PCB CONGENER BZ-23 | PCB-BZ-23 | 2,3',4,5-Tetrachlorobiphenyl    | 73575-53-8 | PCB CONGENER BZ-67 | PCB-BZ-67 |
| 2,3,6-Trichlorobiphenyl       | 55702-45-9 | PCB CONGENER BZ-24 | PCB-BZ-24 | 2,3',4,5'-Tetrachlorobiphenyl   | 73575-52-7 | PCB CONGENER BZ-68 | PCB-BZ-68 |
| 2,3',4-Trichlorobiphenyl      | 55712-37-3 | PCB CONGENER BZ-25 | PCB-BZ-25 | 2,3',4,6-Tetrachlorobiphenyl    | 60233-24-1 | PCB CONGENER BZ-69 | PCB-BZ-69 |
| 2,3',5-Trichlorobiphenyl      | 38444-81-4 | PCB CONGENER BZ-26 | PCB-BZ-26 | 2,3',4',5-Tetrachlorobiphenyl   | 32598-11-1 | PCB CONGENER BZ-70 | PCB-BZ-70 |
| 2,3',6-Trichlorobiphenyl      | 38444-76-7 | PCB CONGENER BZ-27 | PCB-BZ-27 | 2,3',4',6-Tetrachlorobiphenyl   | 41464-46-4 | PCB CONGENER BZ-71 | PCB-BZ-71 |
| 2,4,4'-Trichlorobiphenyl      | 7012-37-5  | PCB CONGENER BZ-28 | PCB-BZ-28 | 2,3',5,5'-Tetrachlorobiphenyl   | 41464-42-0 | PCB CONGENER BZ-72 | PCB-BZ-72 |
| 2,4,5-Trichlorobiphenyl       | 15862-07-4 | PCB CONGENER BZ-29 | PCB-BZ-29 | 2,3',5',6-Tetrachlorobiphenyl   | 74338-23-1 | PCB CONGENER BZ-73 | PCB-BZ-73 |
| 2,4,6-Trichlorobiphenyl       | 35693-92-6 | PCB CONGENER BZ-30 | PCB-BZ-30 | 2,4,4',5-Tetrachlorobiphenyl    | 32690-93-0 | PCB CONGENER BZ-74 | PCB-BZ-74 |
| 2,4',5-Trichlorobiphenyl      | 16606-02-3 | PCB CONGENER BZ-31 | PCB-BZ-31 | 2,4,4',6-Tetrachlorobiphenyl    | 32598-12-2 | PCB CONGENER BZ-75 | PCB-BZ-75 |
| 2,4',6-Trichlorobiphenyl      | 38444-77-8 | PCB CONGENER BZ-32 | PCB-BZ-32 | 2,3',4',5'-Tetrachlorobiphenyl  | 70362-48-0 | PCB CONGENER BZ-76 | PCB-BZ-76 |
| 2,3',4'-Trichlorobiphenyl     | 38444-86-9 | PCB CONGENER BZ-33 | PCB-BZ-33 | 3,3',4,4'-Tetrachlorobiphenyl   | 32598-13-3 | PCB CONGENER BZ-77 | PCB-BZ-77 |
| 2,3',5'-Trichlorobiphenyl     | 37680-68-5 | PCB CONGENER BZ-34 | PCB-BZ-34 | 3,3',4,5-Tetrachlorobiphenyl    | 70362-49-1 | PCB CONGENER BZ-78 | PCB-BZ-78 |
| 3,3',4-Trichlorobiphenyl      | 37680-69-6 | PCB CONGENER BZ-35 | PCB-BZ-35 | 3,3',4,5'-Tetrachlorobiphenyl   | 41464-48-6 | PCB CONGENER BZ-79 | PCB-BZ-79 |
| 3,3',5-Trichlorobiphenyl      | 38444-87-0 | PCB CONGENER BZ-36 | PCB-BZ-36 | 3,3',5,5'-Tetrachlorobiphenyl   | 33284-52-5 | PCB CONGENER BZ-80 | PCB-BZ-80 |
| 3,4,4'-Trichlorobiphenyl      | 38444-90-5 | PCB CONGENER BZ-37 | PCB-BZ-37 | 3,4,4',5-Tetrachlorobiphenyl    | 70362-50-4 | PCB CONGENER BZ-81 | PCB-BZ-81 |
| 3,4,5-Trichlorobiphenyl       | 53555-66-1 | PCB CONGENER BZ-38 | PCB-BZ-38 | 2,2',3,3',4-Pentachlorobiphenyl | 52663-62-4 | PCB CONGENER BZ-82 | PCB-BZ-82 |
| 3,4',5-Trichlorobiphenyl      | 38444-88-1 | PCB CONGENER BZ-39 | PCB-BZ-39 | 2,2',3,3',5-Pentachlorobiphenyl | 60145-20-2 | PCB CONGENER BZ-83 | PCB-BZ-83 |
| 2,2',3,3'-Tetrachlorobiphenyl | 38444-93-8 | PCB CONGENER BZ-40 | PCB-BZ-40 | 2,2',3,3',6-Pentachlorobiphenyl | 52663-60-2 | PCB CONGENER BZ-84 | PCB-BZ-84 |
| 2,2',3,4-Tetrachlorobiphenyl  | 52663-59-9 | PCB CONGENER BZ-41 | PCB-BZ-41 | 2,2',3,4,4'-Pentachlorobiphenyl | 65510-45-4 | PCB CONGENER BZ-85 | PCB-BZ-85 |
| 2,2',3,4'-Tetrachlorobiphenyl | 36559-22-5 | PCB CONGENER BZ-42 | PCB-BZ-42 | 2,2',3,4,5-Pentachlorobiphenyl  | 55312-69-1 | PCB CONGENER BZ-86 | PCB-BZ-86 |
| 2,2',3,5-Tetrachlorobiphenyl  | 70362-46-8 | PCB CONGENER BZ-43 | PCB-BZ-43 | 2,2',3,4,5'-Pentachlorobiphenyl | 38380-02-8 | PCB CONGENER BZ-87 | PCB-BZ-87 |
| 2,2',3,5'-Tetrachlorobiphenyl | 41464-39-5 | PCB CONGENER BZ-44 | PCB-BZ-44 | 2,2',3,4,6-Pentachlorobiphenyl  | 55215-17-3 | PCB CONGENER BZ-88 | PCB-BZ-88 |



| Component @ 100 µg/mL             | CAS#       | Description         | Catalog#   | Component @ 100 µg/mL                 | CAS#       | Description         | Catalog#   |
|-----------------------------------|------------|---------------------|------------|---------------------------------------|------------|---------------------|------------|
| 2,2',3,4,6'-Pentachlorobiphenyl   | 73575-57-2 | PCB CONGENER BZ-89  | PCB-BZ-89  | 2,2',3,3',5,6'-Hexachlorobiphenyl     | 52744-13-5 | PCB CONGENER BZ-135 | PCB-BZ-135 |
| 2,2',3,4',5-Pentachlorobiphenyl   | 68194-07-0 | PCB CONGENER BZ-90  | PCB-BZ-90  | 2,2',3,3',6,6'-Hexachlorobiphenyl     | 38411-22-2 | PCB CONGENER BZ-136 | PCB-BZ-136 |
| 2,2',3,4',6-Pentachlorobiphenyl   | 68194-05-8 | PCB CONGENER BZ-91  | PCB-BZ-91  | 2,2',3,4,4',5-Hexachlorobiphenyl      | 35694-06-5 | PCB CONGENER BZ-137 | PCB-BZ-137 |
| 2,2',3,5,5'-Pentachlorobiphenyl   | 52663-61-3 | PCB CONGENER BZ-92  | PCB-BZ-92  | 2,2',3,4,4',5'-Hexachlorobiphenyl     | 35065-28-2 | PCB CONGENER BZ-138 | PCB-BZ-138 |
| 2,2',3,5,6-Pentachlorobiphenyl    | 73575-56-1 | PCB CONGENER BZ-93  | PCB-BZ-93  | 2,2',3,4,4',6-Hexachlorobiphenyl      | 56030-56-9 | PCB CONGENER BZ-139 | PCB-BZ-139 |
| 2,2',3,5,6'-Pentachlorobiphenyl   | 73575-55-0 | PCB CONGENER BZ-94  | PCB-BZ-94  | 2,2',3,4,4',6'-Hexachlorobiphenyl     | 59291-64-4 | PCB CONGENER BZ-140 | PCB-BZ-140 |
| 2,2',3,5',6-Pentachlorobiphenyl   | 38379-99-6 | PCB CONGENER BZ-95  | PCB-BZ-95  | 2,2',3,4,5,5'-Hexachlorobiphenyl      | 52712-04-6 | PCB CONGENER BZ-141 | PCB-BZ-141 |
| 2,2',3,6,6'-Pentachlorobiphenyl   | 73575-54-9 | PCB CONGENER BZ-96  | PCB-BZ-96  | 2,2',3,4,5,6-Hexachlorobiphenyl       | 41411-61-4 | PCB CONGENER BZ-142 | PCB-BZ-142 |
| 2,2',3,4',5'-Pentachlorobiphenyl  | 41464-51-1 | PCB CONGENER BZ-97  | PCB-BZ-97  | 2,2',3,4,5,6'-Hexachlorobiphenyl      | 68194-15-0 | PCB CONGENER BZ-143 | PCB-BZ-143 |
| 2,2',3,4',6'-Pentachlorobiphenyl  | 60233-25-2 | PCB CONGENER BZ-98  | PCB-BZ-98  | 2,2',3,4,5',6-Hexachlorobiphenyl      | 68194-14-9 | PCB CONGENER BZ-144 | PCB-BZ-144 |
| 2,2',4,4',5-Pentachlorobiphenyl   | 38380-01-7 | PCB CONGENER BZ-99  | PCB-BZ-99  | 2,2',3,4,6,6'-Hexachlorobiphenyl      | 74472-40-5 | PCB CONGENER BZ-145 | PCB-BZ-145 |
| 2,2',4,4',6-Pentachlorobiphenyl   | 39485-83-1 | PCB CONGENER BZ-100 | PCB-BZ-100 | 2,2',3,4',5,5'-Hexachlorobiphenyl     | 51908-16-8 | PCB CONGENER BZ-146 | PCB-BZ-146 |
| 2,2',4,5,5'-Pentachlorobiphenyl   | 37680-73-2 | PCB CONGENER BZ-101 | PCB-BZ-101 | 2,2',3,4',5,6-Hexachlorobiphenyl      | 68194-13-8 | PCB CONGENER BZ-147 | PCB-BZ-147 |
| 2,2',4,5,6-Pentachlorobiphenyl    | 68194-06-9 | PCB CONGENER BZ-102 | PCB-BZ-102 | 2,2',3,4',5,6'-Hexachlorobiphenyl     | 74472-41-6 | PCB CONGENER BZ-148 | PCB-BZ-148 |
| 2,2',4,5',6-Pentachlorobiphenyl   | 60145-21-3 | PCB CONGENER BZ-103 | PCB-BZ-103 | 2,2',3,4',5',6-Hexachlorobiphenyl     | 38380-04-0 | PCB CONGENER BZ-149 | PCB-BZ-149 |
| 2,2',4,6,6'-Pentachlorobiphenyl   | 56558-16-8 | PCB CONGENER BZ-104 | PCB-BZ-104 | 2,2',3,4',6,6'-Hexachlorobiphenyl     | 68194-08-1 | PCB CONGENER BZ-150 | PCB-BZ-150 |
| 2,3,3',4,4'-Pentachlorobiphenyl   | 32598-14-4 | PCB CONGENER BZ-105 | PCB-BZ-105 | 2,2',3,5,5',6-Hexachlorobiphenyl      | 52663-63-5 | PCB CONGENER BZ-151 | PCB-BZ-151 |
| 2,3,3',4,5-Pentachlorobiphenyl    | 70424-69-0 | PCB CONGENER BZ-106 | PCB-BZ-106 | 2,2',3,5,6,6'-Hexachlorobiphenyl      | 68194-09-2 | PCB CONGENER BZ-152 | PCB-BZ-152 |
| 2,3,3',4',5-Pentachlorobiphenyl   | 70424-68-9 | PCB CONGENER BZ-107 | PCB-BZ-107 | 2,2',4,4',5,5'-Hexachlorobiphenyl     | 35065-27-1 | PCB CONGENER BZ-153 | PCB-BZ-153 |
| 2,3,3',4,5'-Pentachlorobiphenyl   | 70362-41-3 | PCB CONGENER BZ-108 | PCB-BZ-108 | 2,2',4,4',5,6'-Hexachlorobiphenyl     | 60145-22-4 | PCB CONGENER BZ-154 | PCB-BZ-154 |
| 2,3,3',4,6-Pentachlorobiphenyl    | 74472-35-8 | PCB CONGENER BZ-109 | PCB-BZ-109 | 2,2',4,4',6,6'-Hexachlorobiphenyl     | 33979-03-2 | PCB CONGENER BZ-155 | PCB-BZ-155 |
| 2,3,3',4',6-Pentachlorobiphenyl   | 38380-03-9 | PCB CONGENER BZ-110 | PCB-BZ-110 | 2,3,3',4,4',5-Hexachlorobiphenyl      | 38380-08-4 | PCB CONGENER BZ-156 | PCB-BZ-156 |
| 2,3,3',5,5'-Pentachlorobiphenyl   | 39635-32-0 | PCB CONGENER BZ-111 | PCB-BZ-111 | 2,3,3',4,4',5'-Hexachlorobiphenyl     | 69782-90-7 | PCB CONGENER BZ-157 | PCB-BZ-157 |
| 2,3,3',5,6-Pentachlorobiphenyl    | 74472-36-9 | PCB CONGENER BZ-112 | PCB-BZ-112 | 2,3,3',4,4',6-Hexachlorobiphenyl      | 74472-42-7 | PCB CONGENER BZ-158 | PCB-BZ-158 |
| 2,3,3',5',6-Pentachlorobiphenyl   | 68194-10-5 | PCB CONGENER BZ-113 | PCB-BZ-113 | 2,3,3',4,5,5'-Hexachlorobiphenyl      | 39635-35-3 | PCB CONGENER BZ-159 | PCB-BZ-159 |
| 2,3,4,4',5-Pentachlorobiphenyl    | 74472-37-0 | PCB CONGENER BZ-114 | PCB-BZ-114 | 2,3,3',4,5,6-Hexachlorobiphenyl       | 41411-62-5 | PCB CONGENER BZ-160 | PCB-BZ-160 |
| 2,3,4,4',6-Pentachlorobiphenyl    | 74472-38-1 | PCB CONGENER BZ-115 | PCB-BZ-115 | 2,3,3',4,5',6-Hexachlorobiphenyl      | 74472-43-8 | PCB CONGENER BZ-161 | PCB-BZ-161 |
| 2,3,4,5,6-Pentachlorobiphenyl     | 18259-05-7 | PCB CONGENER BZ-116 | PCB-BZ-116 | 2,3,3',4',5,5'-Hexachlorobiphenyl     | 39635-34-2 | PCB CONGENER BZ-162 | PCB-BZ-162 |
| 2,3,4',5,6-Pentachlorobiphenyl    | 68194-11-6 | PCB CONGENER BZ-117 | PCB-BZ-117 | 2,3,3',4',5,6-Hexachlorobiphenyl      | 74472-44-9 | PCB CONGENER BZ-163 | PCB-BZ-163 |
| 2,3',4,4',5-Pentachlorobiphenyl   | 31508-00-6 | PCB CONGENER BZ-118 | PCB-BZ-118 | 2,3,3',4',5',6-Hexachlorobiphenyl     | 74472-45-0 | PCB CONGENER BZ-164 | PCB-BZ-164 |
| 2,3',4,4',6-Pentachlorobiphenyl   | 56558-17-9 | PCB CONGENER BZ-119 | PCB-BZ-119 | 2,3,3',5,5',6-Hexachlorobiphenyl      | 74472-46-1 | PCB CONGENER BZ-165 | PCB-BZ-165 |
| 2,3',4,5,5'-Pentachlorobiphenyl   | 68194-12-7 | PCB CONGENER BZ-120 | PCB-BZ-120 | 2,3,4,4',5,6-Hexachlorobiphenyl       | 41411-63-6 | PCB CONGENER BZ-166 | PCB-BZ-166 |
| 2,3',4,5',6-Pentachlorobiphenyl   | 56558-18-0 | PCB CONGENER BZ-121 | PCB-BZ-121 | 2,3',4,4',5,5'-Hexachlorobiphenyl     | 52663-72-6 | PCB CONGENER BZ-167 | PCB-BZ-167 |
| 2,3,3',4',5'-Pentachlorobiphenyl  | 76842-07-4 | PCB CONGENER BZ-122 | PCB-BZ-122 | 2,3',4,4',5',6-Hexachlorobiphenyl     | 59291-65-5 | PCB CONGENER BZ-168 | PCB-BZ-168 |
| 2,3',4,4',5'-Pentachlorobiphenyl  | 65510-44-3 | PCB CONGENER BZ-123 | PCB-BZ-123 | 3,3',4,4',5,5'-Hexachlorobiphenyl     | 32774-16-6 | PCB CONGENER BZ-169 | PCB-BZ-169 |
| 2,3',4',5,5'-Pentachlorobiphenyl  | 70424-70-3 | PCB CONGENER BZ-124 | PCB-BZ-124 | 2,2',3,3',4,4',5-Heptachlorobiphenyl  | 35065-30-6 | PCB CONGENER BZ-170 | PCB-BZ-170 |
| 2,3',4',5',6-Pentachlorobiphenyl  | 74472-39-2 | PCB CONGENER BZ-125 | PCB-BZ-125 | 2,2',3,3',4,4',6-Heptachlorobiphenyl  | 52663-71-5 | PCB CONGENER BZ-171 | PCB-BZ-171 |
| 3,3',4,4',5-Pentachlorobiphenyl   | 57465-28-8 | PCB CONGENER BZ-126 | PCB-BZ-126 | 2,2',3,3',4,5,5'-Heptachlorobiphenyl  | 52663-74-8 | PCB CONGENER BZ-172 | PCB-BZ-172 |
| 3,3',4,5,5'-Pentachlorobiphenyl   | 39635-33-1 | PCB CONGENER BZ-127 | PCB-BZ-127 | 2,2',3,3',4,5,6-Heptachlorobiphenyl   | 68194-16-1 | PCB CONGENER BZ-173 | PCB-BZ-173 |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 38380-07-3 | PCB CONGENER BZ-128 | PCB-BZ-128 | 2,2',3,3',4,5,6'-Heptachlorobiphenyl  | 38411-25-5 | PCB CONGENER BZ-174 | PCB-BZ-174 |
| 2,2',3,3',4,5-Hexachlorobiphenyl  | 55215-18-4 | PCB CONGENER BZ-129 | PCB-BZ-129 | 2,2',3,3',4,5',6-Heptachlorobiphenyl  | 40186-70-7 | PCB CONGENER BZ-175 | PCB-BZ-175 |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 52663-66-8 | PCB CONGENER BZ-130 | PCB-BZ-130 | 2,2',3,3',4,6,6'-Heptachlorobiphenyl  | 52663-65-7 | PCB CONGENER BZ-176 | PCB-BZ-176 |
| 2,2',3,3',4,6-Hexachlorobiphenyl  | 61798-70-7 | PCB CONGENER BZ-131 | PCB-BZ-131 | 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 52663-70-4 | PCB CONGENER BZ-177 | PCB-BZ-177 |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 38380-05-1 | PCB CONGENER BZ-132 | PCB-BZ-132 | 2,2',3,3',5,5',6-Heptachlorobiphenyl  | 52663-67-9 | PCB CONGENER BZ-178 | PCB-BZ-178 |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 35694-04-3 | PCB CONGENER BZ-133 | PCB-BZ-133 | 2,2',3,3',5,6,6'-Heptachlorobiphenyl  | 52663-64-6 | PCB CONGENER BZ-179 | PCB-BZ-179 |
| 2,2',3,3',5,6-Hexachlorobiphenyl  | 52704-70-8 | PCB CONGENER BZ-134 | PCB-BZ-134 | 2,2',3,4,4',5,5'-Heptachlorobiphenyl  | 35065-29-3 | PCB CONGENER BZ-180 | PCB-BZ-180 |

| Component @ 100 µg/mL                  | CAS#       | Description         | Catalog#   | Component @ 100 µg/mL                       | CAS#       | Description         | Catalog#   |
|----------------------------------------|------------|---------------------|------------|---------------------------------------------|------------|---------------------|------------|
| 2,2',3,4,4',5,6-Heptachlorobiphenyl    | 74472-47-2 | PCB CONGENER BZ-181 | PCB-BZ-181 | 2,2',3,3',4,4',5,6'-Octachlorobiphenyl      | 42740-50-1 | PCB CONGENER BZ-196 | PCB-BZ-196 |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl   | 60145-23-5 | PCB CONGENER BZ-182 | PCB-BZ-182 | 2,2',3,3',4,4',6,6'-Octachlorobiphenyl      | 33091-17-7 | PCB CONGENER BZ-197 | PCB-BZ-197 |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl   | 52663-69-1 | PCB CONGENER BZ-183 | PCB-BZ-183 | 2,2',3,3',4,5,5',6-Octachlorobiphenyl       | 68194-17-2 | PCB CONGENER BZ-198 | PCB-BZ-198 |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl   | 74472-48-3 | PCB CONGENER BZ-184 | PCB-BZ-184 | 2,2',3,3',4,5,5',6'-Octachlorobiphenyl      | 52663-75-9 | PCB CONGENER BZ-199 | PCB-BZ-199 |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl    | 52712-05-7 | PCB CONGENER BZ-185 | PCB-BZ-185 | 2,2',3,3',4,5,6,6'-Octachlorobiphenyl       | 52663-73-7 | PCB CONGENER BZ-200 | PCB-BZ-200 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl    | 74472-49-4 | PCB CONGENER BZ-186 | PCB-BZ-186 | 2,2',3,3',4,5',6,6'-Octachlorobiphenyl      | 40186-71-8 | PCB CONGENER BZ-201 | PCB-BZ-201 |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl   | 52663-68-0 | PCB CONGENER BZ-187 | PCB-BZ-187 | 2,2',3,3',5,5',6,6'-Octachlorobiphenyl      | 2136-99-4  | PCB CONGENER BZ-202 | PCB-BZ-202 |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl   | 74487-85-7 | PCB CONGENER BZ-188 | PCB-BZ-188 | 2,2',3,4,4',5,5',6-Octachlorobiphenyl       | 52663-76-0 | PCB CONGENER BZ-203 | PCB-BZ-203 |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl   | 39635-31-9 | PCB CONGENER BZ-189 | PCB-BZ-189 | 2,2',3,4,4',5,6,6'-Octachlorobiphenyl       | 74472-52-9 | PCB CONGENER BZ-204 | PCB-BZ-204 |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl    | 41411-64-7 | PCB CONGENER BZ-190 | PCB-BZ-190 | 2,3,3',4,4',5,5',6-Octachlorobiphenyl       | 74472-53-0 | PCB CONGENER BZ-205 | PCB-BZ-205 |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl   | 74472-50-7 | PCB CONGENER BZ-191 | PCB-BZ-191 | 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl    | 40186-72-9 | PCB CONGENER BZ-206 | PCB-BZ-206 |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl    | 74472-51-8 | PCB CONGENER BZ-192 | PCB-BZ-192 | 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl    | 52663-79-3 | PCB CONGENER BZ-207 | PCB-BZ-207 |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl   | 69782-91-8 | PCB CONGENER BZ-193 | PCB-BZ-193 | 2,2',3,3',4,4',5,5',6,6'-Nonachlorobiphenyl | 52663-77-1 | PCB CONGENER BZ-208 | PCB-BZ-208 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 35694-08-7 | PCB CONGENER BZ-194 | PCB-BZ-194 | Decachlorobiphenyl                          | 2051-24-3  | PCB CONGENER BZ-209 | PCB-BZ-209 |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl  | 52663-78-2 | PCB CONGENER BZ-195 | PCB-BZ-195 |                                             |            |                     |            |

## Take a Closer Look...

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## LIQUID CHROMATOGRAPHY PESTICIDE RESIDUE

Pesticide residue analysis is a critical step in protecting agricultural products and foodstuff from both the onslaught of damaging pests as well as protecting the environment and the population from potentially dangerous chemical residues.

Many new pesticides are now being tested using highly sensitive LC-MS techniques to determine even minute amounts of pesticide residue in environmental samples and food products. SPEX CertiPrep is the leader in offering LC-MS pesticides standards designed to work within the EPA, AOAC, FDA and international analytical testing methods.

### LC-MS Pesticide Residual Calibration Standard Mix-1

#### 13 Certified Components

|              |               |
|--------------|---------------|
| Abate        | Isocarbophos  |
| Acephate     | Methamidophos |
| Carbaryl     | Mevinphos     |
| Dicrotophos  | Monocrotophos |
| Dimethoate   | Omethoate     |
| Dimethomorph | Vamidothion   |
| Dylox        |               |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-1-A**

### LC-MS Pesticide Residual Calibration Standard Mix-2

#### 16 Certified Components:

|                    |                    |
|--------------------|--------------------|
| Alanycarb          | Furathiocarb       |
| Aldicarb           | Methabenzthiazuron |
| Aldicarb sulfone   | Methiocarb         |
| Aldicarb sulfoxide | Methomyl           |
| Benfuracarb        | Oxamyl             |
| Butocarboxim       | Tebuthiuron        |
| Butoxycarboxim     | Thidiazuron        |
| Ethiofencarb       | Thiophanate-methyl |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-2-A**

### LC-MS Pesticide Residual Calibration Standard Mix-3

#### 38 Certified Components:

|                   |                     |
|-------------------|---------------------|
| Baygon (Propoxur) | Hexaflumuron        |
| Bendiocarb        | 3-Hydroxycarbofuran |
| Benthiocarb       | Indoxacarb          |
| Bifenazate        | Iprovalicarb        |
| Carbofuran        | Isoprocarb          |
| Chlorfluazuron    | Isoproturon         |
| Chlorotoluron     | Linuron             |
| Chloroxuron       | Lufenuron           |
| Cycluron          | Metobromuron        |
| Diethofencarb     | Monolinuron         |
| Diflubenzuron     | Neburon             |
| Dioxacarb         | Novaluron           |
| Diuron            | Pirimicarb          |
| Fenobucarb        | Promecarb           |
| Fenoxycarb        | Propham             |
| Fenuron           | Pyraclostrobin      |
| Flufenoxuron      | Siduron             |
| Fluometuron       | Teflubenzuron       |
| Forchlorfenuron   | Triflumuron         |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-3-A**

## LC-MS Pesticide Residual Calibration Standard Mix-4

### 63 Certified Components:

|                     |                    |
|---------------------|--------------------|
| Abamectin           | Imidacloprid       |
| Acetamiprid         | Ivermectin         |
| Ametryn             | Kresoxim-methyl    |
| Amitraz             | Mandipropamid      |
| Azoxystrobin        | Mepanipyrim        |
| Benalaxyl           | Mepronil           |
| Benzoximate         | Metaflumizone      |
| Boscalid            | Metalaxyl          |
| Butafenacil         | Methoxyfenozide    |
| Carbetamide         | Moxidectin         |
| Carfentrazone-ethyl | Nitenpyram         |
| Chlorantraniliprole | Oxadixyl           |
| Clofentezine        | Picoxystrobin      |
| Cymoxanil           | Piperonyl butoxide |
| Cyprodinil          | Prochloraz         |
| Cyromazine          | Prometon           |
| Dimoxystrobin       | Pymetrozin         |
| Dinotefuran         | Pyracarbolid       |
| Doramectin          | Pyrimethanil       |
| Eprinomectin        | Pyriproxifen       |
| Famoxadone          | Quinoxifen         |
| Fenazaquin          | Rotenone           |
| Fenhexamid          | Secbumeton         |
| Fenpyroximate       | Spiroxamine        |
| Flonicamid          | Systhane           |
| Fluazinam           | Tebufenozide       |
| Fludioxonil         | Tebufenpyrad       |
| Fluoxastrobin       | Terbumeton         |
| Flutolanil          | Triadimefon        |
| Furalaxyl           | Trifloxystrobin    |
| Halofenozide        | Zoxamide           |
| Imazalil            |                    |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-4-A**

## LC-MS Pesticide Residual Calibration Standard Mix-5

### 30 Certified Components:

|                      |                 |
|----------------------|-----------------|
| Acibenzolar-S-methyl | Mefenacet       |
| Beam                 | Mesotrione      |
| Bupirimate           | Methoprotetryne |
| Buprofezin           | Metribuzin      |
| Carboxin             | Prometryne      |
| Clethodim            | Omite           |
| Clothianidin         | Prothioconazole |
| Cyazofamid           | Pyridaben       |
| Ethiprole            | Simetryn        |
| Ethofumesate         | Sulfentrazone   |
| Fenamidone           | Terbutryne      |
| Fipronil             | Thiabendazole   |
| Flubendimide         | Thiacloprid     |
| Flufenacet           | Thiamethoxam    |
| Hexythiazox          | Thiofanox       |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-5-A**

## LC-MS Pesticide Residual Calibration Standard Mix-6

### 28 Certified Components:

|                             |                      |
|-----------------------------|----------------------|
| Bitertanol (mix of isomers) | Flutriafol           |
| Bromuconazole               | Folicur              |
| Cyproconazole               | Fuberidazole         |
| Diclobutrazol               | Hexaconazole         |
| Difenoconazole              | Ipconazole           |
| Diniconazole                | Metconazole          |
| Epoxiconazole               | Nuarimol             |
| Etaconazole                 | Paclobutrazol        |
| Ethirimol                   | Penconazole          |
| Etoxazole                   | Propiconazole (Tilt) |
| Fenarimol                   | Tetraconazole        |
| Fenbuconazole               | Triadimenol          |
| Fluquinconazole             | Triflumizole         |
| Flusilazole                 | Triticonazole        |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-6-A**

## LC-MS Pesticide Residual Calibration Standard Mix-7

### 7 Certified Components:

|                    |               |
|--------------------|---------------|
| Emamectin-benzoate | Spirotetramat |
| Fenpropimorph      | Spinetoram    |
| Spirodiclofen      | Spiromesifen  |
| Spinosad A&D       |               |

1 mL @ 100 µg/mL in LC-MS Grade Acetonitrile

**Catalog#: LCPR-7-A**

**LC-MS Pesticide Residual Calibration  
Standard Mix-8****1 Certified Components:**

Hydramethylnon

1 mL @ 100 µg/mL in LCMS Grade Acetonitrile

**Catalog#: LCPR-8-A****LC-MS Pesticide Residual Calibration  
Standard Mix-9****7 Certified Components:**

Aminocarb

Monceren

Desmedipham

Phenmedipham

Formetanate hydrochloride

Propamocarb

Mexacarbate

1 mL @ 100 µg/mL in LCMS Grade Acetonitrile

**Catalog#: LCPR-9-A****LC-MS Pesticide Residual Calibration  
Standard Mix-10****1 Certified Components:**

Carbendazim

1 mL @ 100 µg/mL in LCMS Grade Acetonitrile

**Catalog#: LCPR-10-A****LC-MS Pesticide Residual Calibration  
Standard Kit**

Contains one ampule each of

LCPR-1-A

LCPR-2-A

LCPR-3-A

LCPR-4-A

LCPR-5-A

LCPR-6-A

LCPR-7-A

LCPR-8-A

LCPR-9-A

LCPR-10-A

**Catalog#: LCPR-11-KIT**



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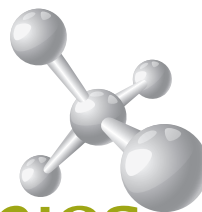
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# Consumer Safety

Wine Standards  
Pharmaceutical Residual Solvent Standards  
Phthalates in Polyetheylene QC Standards  
Phthalates  
Polyvinyl Chloride (PVC) QC Standards  
QuEChERS

## Wine Standards

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, determines 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-trichloroanisole (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 has identified and measured several compounds that can cause this. For this industry, SPEX CertiPrep offers Wine Certified Reference Materials (CRMs) that are designed for GC, GC-MS, HPLC, and LC-MS analyses. These standards are manufactured from the highest purity starting materials and the highest grade of solvents available to guarantee superior grade standards. Each standard is supplied with a detailed comprehensive Certificate of Analysis. Refer below for some of the available wine standards offered by SPEX CertiPrep.

### Wine Standards

| Component µg/mL:                      | Concentration µg/mL | Matrix   | Volume (mL) | Catalog#   |
|---------------------------------------|---------------------|----------|-------------|------------|
| Acetic Acid                           | 1,000               | Methanol | 1           | S-133      |
| Acetic Acid                           | 10,000              | DI Water | 1           | S-133-W10K |
| 2,3-Butanedione                       | 1,000               | Methanol | 1           | S-609      |
| 2-Chlorophenol-3,4,5,6-d <sub>4</sub> | 1,000               | Methanol | 1           | S-905      |
| Dextrose                              | 1,000               | Methanol | 1           | S-5005     |
| Ethanol                               | 1,000               | Methanol | 1           | S-1885     |
| Ethanol                               | 2,000               | DI Water | 1           | S-1885-W2K |
| 4-Ethyl-2-methoxyphenol               | 1,000               | Methanol | 1           | S-4183     |
| 2-Ethylphenol                         | 1,000               | Methanol | 1           | S-1983     |
| 4-Ethylphenol                         | 1,000               | Methanol | 1           | S-1985     |
| 2-Fluorophenol                        | 1,000               | Methanol | 1           | S-2050     |
| Malic acid                            | 1,000               | Methanol | 1           | S-4168     |
| 2,3,4,5,6-Pentachloroanisole          | 1,000               | Methanol | 1           | S-2930     |
| Pentachlorophenol                     | 1,000               | Methanol | 1           | S-2950     |
| Phenol-d <sub>6</sub>                 | 1,000               | Methanol | 1           | S-3035     |
| 2,3,4,6-Tetrachlorophenol             | 1,000               | Methanol | 1           | S-3405     |
| 2,4,6-Tribromoanisole                 | 1,000               | Methanol | 1           | S-4309     |
| 2,4,6-Tribromophenol                  | 1,000               | Methanol | 1           | S-3555     |

| Component µg/mL:                                                                                                                                                                                                                                                       | Concentration µg/mL | Matrix   | Volume (mL) | Catalog#   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|-------------|------------|
| 2,4,6-Tribromophenol-d <sub>5</sub>                                                                                                                                                                                                                                    | 1,000               | Methanol | 1           | S-4335     |
| 2,4,6-Tribromophenol-d <sub>5</sub>                                                                                                                                                                                                                                    | 100                 | Methanol | 1           | S-4335-100 |
| 2,4,6-Trichloroanisole                                                                                                                                                                                                                                                 | 1,000               | Methanol | 1           | S-3586     |
| 2,4,6-Trichloroanisole-d <sub>5</sub>                                                                                                                                                                                                                                  | 20                  | Methanol | 1           | S-4336-20  |
| 2,4,6-Trichloroanisole-d <sub>5</sub>                                                                                                                                                                                                                                  | 46                  | Ethanol  | 1           | S-4336-46  |
| 2,4,6-Trichloroanisole-d <sub>5</sub>                                                                                                                                                                                                                                  | 100                 | Methanol | 1           | S-4336-100 |
| 2,4,6-Trichlorophenol                                                                                                                                                                                                                                                  | 1,000               | Methanol | 1           | S-3645     |
| 2,4,6-Trichloroanisole-d <sub>5</sub><br>Pentachloroanisole-d <sub>3</sub><br>2,4,6-Tribromoanisole-d <sub>5</sub>                                                                                                                                                     | 100                 | Methanol | 1           | WINE-1     |
| 2,3,4,5,6-Pentachloroanisole<br>2,3,4,6-Tetrachloroanisole<br>2,4,6-Trichloroanisole                                                                                                                                                                                   | 100                 | Methanol | 1           | WINE-2     |
| Carbon disulfide<br>Ethyl sulfide<br>Ethanethiol<br>Ethyl Disulfide<br>Ethyl Methyl Sulfide<br>2-Ethylthiophene<br>Methanethiol<br>Methyl Disulfide<br>Methyl Sulfide<br>2-Methyl-2-propanethiol<br>2-Methylthiophene<br>1-Pentanethiol<br>2-Propanethiol<br>Thiophene | 10,000              | Methanol | 1           | WINE-3     |

## Did You Know?

SPEX CertiPrep's chemists have decades of experience and are available to answer your questions. Submit your questions to [askachemist@spex.com](mailto:askachemist@spex.com) and receive a free gift if we post your question on our website.



## 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.

For this industry, SPEX CertiPrep has created Pharmaceutical Residual Solvent Certified Reference Materials (CRMs) designed exclusively for GC, GC-MS, HPLC, and HPLC-MS analyses. These standards are made from the highest purity starting materials and the highest grade of solvents available to guarantee superior grade standards. The standards then go through a rigorous QC process where a senior chemist approves the standards. This guarantees the standards are accurate and stable at the stated concentrations for all the components.

In addition, all standards are supplied with a detailed comprehensive Certificate of Analysis. The information below outlines some of the available Pharmaceutical Residual Solvent Standards offered by SPEX CertiPrep. For a custom standard quote, please contact your local sales representative for further information.

### Analyte Mix

#### 33 Certified Components:

|                       |                          |
|-----------------------|--------------------------|
| Acetone               | Isobutyl acetate         |
| Acetonitrile          | Isopropyl acetate        |
| Anisole               | Methyl acetate           |
| 1-Butanol             | 3-Methyl-1-butanol       |
| 2-Butanol             | 2-Methyl-1-butanol       |
| 2-Butanone            | 4-Methyl-2-pentanone     |
| Butyl acetate         | 1-Methyl-2-pyrrolidinone |
| 1,2-Dimethoxyethane   | Methyl sulfoxide         |
| N,N-Dimethylacetamide | Nitromethane             |
| Dimethylformamide     | 1-Pentanol               |
| 1,4-Dioxane           | 1-Propanol               |
| Ethanol               | 2-Propanol               |
| Ether                 | Propyl acetate           |
| 2-Ethoxyethanol       | Pyridine                 |
| Ethyl acetate         | Tetrahydrofuran          |
| Ethyl formate         | Tetramethylene sulfone   |
| 2-Hexanone            |                          |

1 mL @ 1,000 µg/mL in Methanol

Catalog#: USP-SOL-A

### Analyte Mix

#### 24 Certified Components:

|                          |                               |
|--------------------------|-------------------------------|
| Benzene                  | Isopropylbenzene              |
| Carbon tetrachloride     | Methyl-tert-butyl ether       |
| Chlorobenzene            | Methylcyclohexane             |
| Chloroform               | Methylene chloride            |
| Cyclohexane              | n-Pentane                     |
| 1,2-Dichloroethane       | 1,2,3,4-Tetrahydronaphthalene |
| 1,1-Dichloroethene       | Toluene                       |
| cis-1,2-Dichloroethene   | 1,1,1-Trichloroethane         |
| trans-1,2-Dichloroethene | Trichloroethene               |
| Ethylbenzene             | m-Xylene                      |
| n-Heptane                | o-Xylene                      |
| n-Hexane                 | p-Xylene                      |

1 mL @ 1,000 µg/mL in Methanol

Catalog#: USP-SOL-B

## Need larger quantities?

Volume discounts are available!  
Call us at **1-800-LAB-SPEX**  
for more information.



**USP <467> Residual Solvent Mixes****5 Organic Volatile Impurities;  
Class 1 Solvents**

|                       | $\mu\text{g/mL}$ |
|-----------------------|------------------|
| 1,1,1-Trichloroethane | 50,000           |
| 1,1-Dichloroethene    | 40,000           |
| 1,2-Dichloroethane    | 25,000           |
| Carbon tetrachloride  | 20,000           |
| Benzene               | 10,000           |

**Volume:** 1 mL**Matrix:** Dimethyl Sulfoxide**Catalog#:** USP-RS-C1**15 Organic Volatile Impurities;  
Class 2 Solvents**

|                          | $\mu\text{g/mL}$ |
|--------------------------|------------------|
| Acetonitrile             | 2,050            |
| Chlorobenzene            | 1,800            |
| Cyclohexane              | 19,400           |
| cis-1,2-Dichloroethene   | 4,700            |
| trans-1,2-Dichloroethene | 4,700            |
| 1,4-Dioxane              | 1,900            |
| Ethylbenzene             | 1,840            |
| Methanol                 | 15,000           |
| Methylcyclohexane        | 5,900            |
| Methylene chloride       | 3,000            |
| Tetrahydrofuran          | 3,450            |
| Toluene                  | 4,450            |
| m-Xylene                 | 6,510            |
| p-Xylene                 | 1,520            |
| o-Xylene                 | 980              |

**Volume:** 1 mL**Matrix:** Dimethyl Sulfoxide**Catalog#:** USP-RS-C2A**8 Organic Volatile Impurities;  
Class 2 Solvents**

|                               | $\mu\text{g/mL}$ |
|-------------------------------|------------------|
| Chloroform                    | 60               |
| 1,2-Dimethoxyethane           | 100              |
| n-Hexane                      | 290              |
| 2-Hexanone                    | 50               |
| Nitromethane                  | 50               |
| Pyridine                      | 200              |
| 1,2,3,4-Tetrahydronaphthalene | 100              |
| Trichloroethene               | 80               |

**Volume:** 1 mL**Matrix:** Dimethyl Sulfoxide**Catalog#:** USP-RS-C2B**8 Organic Volatile Impurities;  
Class 2 Solvents**

|                          | $\mu\text{g/mL}$ |
|--------------------------|------------------|
| N,N-Dimethylacetamide    | 54,500           |
| N,N-Dimethylformamide    | 4,400            |
| 2-Ethoxyethanol          | 800              |
| Ethylene glycol          | 3,100            |
| Formamide                | 1,100            |
| 2-Methoxyethanol         | 250              |
| 1-Methyl-2-pyrrolidinone | 2,650            |
| Tetramethylene sulfone   | 800              |

**Volume:** 1 mL**Matrix:** Dimethyl Sulfoxide**Catalog#:** USP-RS-C2C**24 Organic Volatile Impurities;  
Class 3 Solvents**

|                         | $\mu\text{g/mL}$ |
|-------------------------|------------------|
| Acetone                 | 1,000            |
| Anisole                 | 1,000            |
| 1-Butanol               | 1,000            |
| 2-Butanol               | 1,000            |
| 2-Butanone              | 1,000            |
| Butyl acetate           | 1,000            |
| tert-Butyl methyl ether | 1,000            |
| Ethanol                 | 1,000            |
| Ether                   | 1,000            |
| Ethyl acetate           | 1,000            |
| Ethyl formate           | 1,000            |
| n-Heptane               | 1,000            |
| Isobutyl acetate        | 1,000            |
| Isopropyl acetate       | 1,000            |
| Isopropylbenzene        | 1,000            |
| Methyl acetate          | 1,000            |
| 3-Methyl-1-butanol      | 1,000            |
| 4-Methyl-2-pentanone    | 1,000            |
| 2-Methyl-1-propanol     | 1,000            |
| n-Pentane               | 1,000            |
| 1-Pentanol              | 1,000            |
| 1-Propanol              | 1,000            |
| 2-Propanol              | 1,000            |
| Propyl acetate          | 1,000            |

**Volume:** 1 mL**Matrix:** Dimethyl Sulfoxide**Catalog#:** USP-RS-C3A**2 Organic Volatile Impurities;  
Class 3 Solvents**

|             | $\mu\text{g/mL}$ |
|-------------|------------------|
| Acetic Acid | 1,000            |
| Formic acid | 1,000            |

**Volume:** 1 mL**Matrix:** Dimethyl Sulfoxide**Catalog#:** USP-RS-C3B

**USP <467> Residual Solvent Singles**

Volume: 1 mL

Matrix: Dimethyl Sulfoxide

| Compound                      | Concentration (µg/mL) | CAS#     | Catalog#       |
|-------------------------------|-----------------------|----------|----------------|
| Acetonitrile                  | 2,050                 | 75-05-8  | USP-S145-DMSO  |
| Benzene                       | 10,000                | 71-43-2  | USP-S405-DMSO  |
| Carbon Tetrachloride          | 20,000                | 56-23-5  | USP-S750-DMSO  |
| Chlorobenzene                 | 1,800                 | 108-90-7 | USP-S810-DMSO  |
| Chloroform                    | 300                   | 67-66-3  | USP-S865-DMSO  |
| Cyclohexane                   | 19,400                | 110-82-7 | USP-S1015-DMSO |
| 1,1-Dichloroethene            | 40,000                | 75-35-4  | USP-S1390-DMSO |
| 1,2-Dichloroethane            | 25,000                | 107-06-2 | USP-S1380-DMSO |
| cis-1,2-Dichloroethene        | 4,670                 | 156-59-2 | USP-S1394-DMSO |
| trans-1,2-Dichloroethene      | 4,670                 | 156-60-5 | USP-S1400-DMSO |
| 1,2-Dimethoxyethane           | 500                   | 110-71-4 | USP-S1572-DMSO |
| N,N-Dimethylacetamide         | 5,450                 | 127-19-5 | USP-S1597-DMSO |
| 1,4-Dioxane                   | 1,900                 | 123-91-1 | USP-S1715-DMSO |
| 2-Ethoxyethanol               | 800                   | 110-80-5 | USP-S1910-DMSO |
| Ethylbenzene                  | 1,840                 | 100-41-4 | USP-S1940-DMSO |
| Ethylene Glycol               | 3,100                 | 107-21-1 | USP-S1952-DMSO |
| Formamide                     | 1,100                 | 75-12-7  | USP-S2062-DMSO |
| Methanol                      | 15,000                | 67-56-1  | USP-S2380-DMSO |
| Methylene Chloride            | 3,000                 | 75-09-2  | USP-S2480-DMSO |
| 1-Methyl-2-pyrrolidinone      | 2,650                 | 872-50-4 | USP-S2590-DMSO |
| Nitromethane                  | 250                   | 75-52-5  | USP-S2722-DMSO |
| Pyridine                      | 1,000                 | 110-86-1 | USP-S3240-DMSO |
| Tetrahydrofuran               | 3,600                 | 109-99-9 | USP-S3460-DMSO |
| 1,2,3,4-Tetrahydronaphthalene | 500                   | 119-64-2 | USP-S3464-DMSO |
| Toluene                       | 4,450                 | 108-88-3 | USP-S3505-DMSO |
| 1,1,1-Trichloroethane         | 50,000                | 71-55-6  | USP-S3605-DMSO |
| Trichloroethene               | 400                   | 79-01-6  | USP-S3615-DMSO |
| m-Xylene                      | 6,510                 | 108-38-3 | USP-S3830-DMSO |
| o-Xylene                      | 970                   | 95-47-6  | USP-S3835-DMSO |
| p-Xylene                      | 1,520                 | 106-42-3 | USP-S3840-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 (DBP, BBP, DEHP, DNOP, DIDP and DINP) in childcare articles and children's toys. Laboratories are now tasked with the analysis of children's toys for these potentially hazardous phthalates.

**SPEX CertiPrep is proud to offer the first certified reference material for phthalates in polyethylene produced under the guidelines of ISO9001, 17025 and Guide 34.** SPEX CertiPrep standards are designed for use with the most common US and EU methods for the testing of children's products for phthalates including: CPSC-CH-C1001-09.3, ASTM D7823 - 13, EU Directive 2005/84/EC.

### Polyethylene QC Standard Blank

**Matrix:** Polyethylene

**Volume:** 5g

**Catalog#:** CRM-PEBLK

### Phthalates in Medium Density Polyethylene Standard

#### 8 Certified Components:

|                                 |             |
|---------------------------------|-------------|
| Butylbenzyl phthalate           | 3,000 µg/g  |
| Di-n-butyl phthalate            | 3,000 µg/g  |
| bis(2-Ethylhexyl)phthalate      | 3,000 µg/g  |
| Diethyl phthalate               | 3,000 µg/g  |
| Diisodecyl phthalate            | 30,000 µg/g |
| Diisononyl phthalate (Branched) | 30,000 µg/g |
| Dimethyl phthalate              | 3,000 µg/g  |
| Di-n-octyl phthalate            | 3,000 µg/g  |

**Matrix:** Polyethylene

**Volume:** 5g

**Catalog#:** CRM-PE001

### 8 Regulated Phthalates and BPA in Medium Density Polyethylene

#### 9 Certified Components:

|                                 |             |
|---------------------------------|-------------|
| Bisphenol A                     | 3,000 µg/g  |
| Butylbenzyl phthalate           | 3,000 µg/g  |
| Di-n-butyl phthalate            | 3,000 µg/g  |
| bis(2-Ethylhexyl)phthalate      | 3,000 µg/g  |
| Diethyl phthalate               | 3,000 µg/g  |
| Diisodecyl phthalate            | 30,000 µg/g |
| Diisononyl phthalate (Branched) | 30,000 µg/g |
| Dimethyl phthalate              | 3,000 µg/g  |
| Di-n-octyl phthalate            | 3,000 µg/g  |

**Matrix:** Polyethylene

**Volume:** 5g

**Catalog#:** CRM-PE002



## Phthalates in Polyvinyl

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 and the CPSC have designated methods for testing children's toys and childcare articles for compliance with the restriction of use for six designated phthalates: DBP, BBP, DEHP, DNOP, DIDP, and DINP.

**SPEX CertiPrep is proud to offer the first certified reference material for phthalates in polyvinyl chloride produced under the guidelines of ISO9001, 17025 and Guide 34.** SPEX CertiPrep standards are designed for use with the most common US and EU methods for the testing of children's products for phthalates including: CPSC-CH-C1001-09.3, ASTM D7823 - 13, EU Directive 2005/84/EC.

### Phthalates in Poly(vinyl chloride)

#### 8 Certified Components:

|                                 |             |
|---------------------------------|-------------|
| Butylbenzyl phthalate           | 3,000 µg/g  |
| Di-n-butyl phthalate            | 3,000 µg/g  |
| bis(2-Ethylhexyl)phthalate      | 3,000 µg/g  |
| Diethyl phthalate               | 3,000 µg/g  |
| Diisodecyl phthalate            | 30,000 µg/g |
| Diisononyl phthalate (Branched) | 30,000 µg/g |
| Dimethyl phthalate              | 3,000 µg/g  |
| Di-n-octyl phthalate            | 3,000 µg/g  |

**Matrix:** Poly(vinyl chloride)

**Volume:** 1.5g

**Catalog#:** CRM-PVC001

### Poly(vinyl chloride) Phthalate Blank

**Matrix:** Poly(vinyl chloride)

**Volume:** 1.5g

**Catalog#:** CRM-PVCBLK

### Calibration Standard Phthalates

#### 6 Certified Components:

|                                 |
|---------------------------------|
| Butylbenzyl phthalate           |
| Di-n-butyl phthalate            |
| bis(2-Ethylhexyl)phthalate      |
| Diisodecyl phthalate            |
| Diisononyl phthalate (Branched) |
| Di-n-octyl phthalate            |

1 mL @ 1,000 ug/mL in Isooctane

**Catalog#:** 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 exposed to high temperatures or high pressures.

### Acetaldehyde in Water

**Matrix:** H<sub>2</sub>O

**Volume:** 1.8 mL

**Catalog:** S-125-W1.8

## Did You Know?

SPEX CertiPrep offers custom PE, PVC as well as other matrices and QC Samples. Visit the Knowledge Base Section of our website for webinars and white papers on Phthalates.

## 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 these 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 possibly a similar type or form of plasticizer.

SPEX CertiPrep's full line of plasticizer compound standards can assist the analytical laboratory with all their plasticizer analyses by all the current analytical methods including GC-MS and LC-MS.

### Individual Phthalates

Volume: 1 mL

Concentration: 1,000 µg/mL

| Compound                                            | Matrix            | Catalog#   |
|-----------------------------------------------------|-------------------|------------|
| Bis(2-ethoxyethyl)phthalate                         | Methanol          | S-4550     |
| Bis(2-ethylhexyl)hexahydro phthalate                | Methanol          | S-4927     |
| Bis(2-ethylhexyl)isophthalate                       | Methanol          | S-4928     |
| bis(2-Ethylhexyl)phthalate                          | Methanol          | S-1970     |
| Bis-(2-ethylhexyl)terephthalate                     | Methanol          | S-5459     |
| Bis(2-methoxyethyl )phthalate                       | Methanol          | S-4156     |
| Bis(2-n-butoxyethyl)phthalate                       | Methanol          | S-4152     |
| Bis(4-methyl-2-pentyl)phthalate                     | Methanol          | S-4154     |
| Butylbenzyl phthalate                               | MeCl <sub>2</sub> | S-680-MECL |
| 1,2-Cyclohexane dicarboxylic acid di-isononyl ester | Methanol          | S-5104     |
| Diallyl phthalate                                   | Methanol          | S-4931     |
| Diamyl phthalate                                    | Methanol          | S-4157     |
| Dibenzyl phthalate                                  | MeCl <sub>2</sub> | S-1186     |
| Dicapryl phthalate                                  | Methanol          | S-4932     |
| Dicyclohexyl phthalate                              | Methanol          | S-4151     |
| Diethyl phthalate                                   | Methanol          | S-1515     |
| Diisobutyl phthalate                                | Methanol          | S-4150     |
| Diisodecyl phthalate                                | Methanol          | S-4464     |
| Diisoheptyl phthalate                               | MeCl <sub>2</sub> | S-1553     |
| Diisononyl phthalate (Unbranched)                   | Methanol          | S-5701     |

| Compound                     | Matrix   | Catalog# |
|------------------------------|----------|----------|
| Diisononyl phthalate         | Acetone  | S-1559   |
| Di-iso-octyl Phthalate       | Methanol | S-5738   |
| Dimethoxyethyl phthalate     | Methanol | S-1575   |
| Dimethyl isophthalate        | Methanol | S-1594   |
| Dimethyl phthalate           | Methanol | S-1590   |
| Dimethyl terephthalate       | Methanol | S-1595   |
| Di-n-butyl phthalate         | Methanol | S-1770   |
| Di-n-decyl phthalate         | Methanol | S-4933   |
| Di-n-hexyl phthalate         | Methanol | S-4155   |
| Di-n-hexyl phthalate         | Hexane   | S-4155-H |
| Di-n-octyl phthalate         | Methanol | S-1775   |
| Dinonyl phthalate            | Methanol | S-4153   |
| Dioctyl isophthalate         | Methanol | S-4937   |
| Diphenyl isophthalate        | Methanol | S-4449   |
| Diphenyl phthalate           | Methanol | S-4448   |
| Dipropyl phthalate           | Methanol | S-4491   |
| Ditridecyl phthalate         | Methanol | S-4929   |
| Diundecyl phthalate          | Methanol | S-4930   |
| Hexyl 2-ethylhexyl phthalate | Methanol | S-4158   |
| Isopentyl pentyl phthalate   | Methanol | S-6109   |



## QuEChERS Kits

The QuEChERS Method (Quick, Easy, Cheap, Effective, Rugged and Safe) simplifies multi-residue pesticide analysis in food samples. SPEX CertiPrep meets all your QuEChERS needs with general purpose kits suitable for removal of polar organic acids, some low to moderate levels of sugars, and lipids. Ready-to-use tubes are pre-packaged with extraction salts and sorbents for fast and easy sample preparation.

Extraction kits contain fifty 15 mL salt tubes and fifty 50 mL stand-alone centrifuge tubes. dSPE kits contain pre-weighed sorbents/salts inside 15 mL or 2 mL centrifuge tubes.

General purpose kits are available for US (AOAC Method 2007.01) and European Methods (EN Method 15662). Custom kits are also available.

### QuEChERS Citrate Buffered Extraction Tubes (15 mL - 50 Pack)

#### Components:

4 g  $\text{MgSO}_4$   
1 g NaCl, 0.5 g sodium citrate dibasic sesquihydrate  
1 g sodium citrate tribasic dihydrate  
(Kit includes 50 empty 50 mL tubes)

1 mL @ 2,000  $\mu\text{g/mL}$  in Methanol

Catalog#: EN-CIT-50ML

### QuEChERS PSA Dispersive SPE Clean-Up Tubes (15 mL - 50 Pack)

#### Components:

150 mg PSA  
900 mg  $\text{MgSO}_4$

Catalog#: EN-PSA-15ML

### QuEChERS PSA Dispersive SPE Clean-Up Tubes (2 mL-100 Pack)

#### Components:

25 mg PSA  
150 mg  $\text{MgSO}_4$

Catalog#: EN-PSA-2ML

### Acetate Buffered Extraction Tubes (50 Pack)

#### Components:

6 g  $\text{MgSO}_4$   
1.5 g sodium acetate  
(Kit includes 50 empty 50 mL tubes)

50 Pack 15 mL Centrifuge Tubes

Catalog#: AOAC-ACE-50ML

### QuEChERS PSA Dispersive SPE Clean-Up Tubes (2 mL - 100 Pack)

#### Components:

50 mg PSA  
150 mg  $\text{MgSO}_4$

Catalog#: AOAC-PSA-2ML

### QuEChERS PSA Dispersive SPE Clean-Up Tubes (15 mL - 50 Pack)

#### Components:

400 mg PSA  
1200 mg  $\text{MgSO}_4$

Catalog#: AOAC-PSA-15ML



## QuEChERS Standards

SPEX CertiPrep provides a complete solution to all your QuEChERS needs with a comprehensive set of Internal Standards for the QuEChERS analytical techniques (GC, GC-MS and LC-MS).

### Single Component Reference Standards

Volume: 5 mL

| Compound                          | Solvent      | Concentration (µg/mL) | Catalog#       |
|-----------------------------------|--------------|-----------------------|----------------|
| PCB 18                            | Acetonitrile | 50                    | QuECR-PCB-18   |
| PCB 28                            | Acetonitrile | 50                    | QuECR-PCB-28   |
| PCB 52                            | Acetonitrile | 50                    | QuECR-PCB-52   |
| PCB 138                           | Acetonitrile | 50                    | QuECR-PCB-138  |
| PCB 153                           | Acetonitrile | 50                    | QuECR-PCB-153  |
| Triphenylmethane                  | Acetonitrile | 10                    | QuECR-5190     |
| Triphenylphosphate                | Acetonitrile | 20                    | QuECR-3765     |
| Triphenylphosphate                | Acetonitrile | 2                     | QuECR-AOAC-TTP |
| Tris-(dichloroisopropyl)phosphate | Acetonitrile | 50                    | QuECR-4381     |



### GC-ECD Internal Standard Mix

#### Components:

PCB 18  
PCB 28  
PCB 52  
tris-(1,3-Dicholorisopropyl)phosphate

**Volume:** 5 mL @ 50 µg/mL in Acetonitrile

**Catalog#:** QuECR-ECD-IS

### LC-MS Internal Standard Mix

#### Components:

Nicarbazin

**Volume:** 5 mL @ 10 µg/mL in Acetonitrile

**Catalog#:** QuECR-LC-MS-IS

### GC-NPD & LC-MS Internal Standard Mix

| Compound                               | Concentration |
|----------------------------------------|---------------|
| Triphenylphosphate                     | 20 µg/mL      |
| Tris-(1,3-Dicholorisopropyl) phosphate | 50 µg/mL      |

**Volume:** 5 mL

**Solvent:** Acetonitrile

**Catalog#:** QuECR-NPD-MS-IS

### GC-MS QC Standards

| Compound   | Concentration | Catalog#      |
|------------|---------------|---------------|
| PCB 138    | 50 µg/mL      | QuECR-MS-QC-1 |
| PCB 153    | 50 µg/mL      |               |
| Anthracene | 100 µg/mL     | QuECR-MS-QC-2 |

**Volume:** 5 mL

**Solvent:** Acetonitrile

### GC-MS Internal Standard Mix

| Compound                               | Concentration |
|----------------------------------------|---------------|
| PCB 18                                 | 50 µg/mL      |
| PCB 28                                 | 50 µg/mL      |
| PCB 52                                 | 50 µg/mL      |
| Triphenylmethane                       | 10 µg/mL      |
| Triphenylphosphate                     | 20 µg/mL      |
| Tris-(1,3-Dicholorisopropyl) phosphate | 50 µg/mL      |

**Volume:** 5 mL

**Solvent:** Acetonitrile

**Catalog#:** QuECR-MS-IS

### AOAC

AOAC International is a globally recognized standards developing organization. AOAC methods encompass a wide range of industries and interests from agricultural products, food and beverages, environmental analysis and pharmaceuticals.

SPEX CertiPrep carries standards that are designed for the most commonly used AOAC analytical methods employing GC, GC-MS, HPLC or LC-MS.

### AOAC Internal Standard Mix

#### Components:

α-BHC-d<sub>6</sub> (α-HCH-d<sub>6</sub>)  
parathion-d<sub>10</sub>

**Volume:** 5 mL @ 40 µg/mL each in Acetonitrile

**Catalog#:** QuECR-AOAC-IS

### AOAC QC Spike Mix

#### Components:

|                        |                        |
|------------------------|------------------------|
| Atrazine               | Imidacloprid           |
| Azoxystrobin           | Kresoxim methyl        |
| Bifenthrin             | Linuron                |
| Carbaryl (Sevin)       | Methamidophos          |
| Chlorothalonil         | Methomyl               |
| Chlorpyrifos (Dursban) | cis-Permethrin         |
| Chlorpyrifos methyl    | trans-Permethrin       |
| Lambda-cyhalothrin     | Procymidone            |
| Cyprodinil             | Pymetrozine            |
| 2,4'-DDD               | Tebuconazole (Folicur) |
| Dichlorvos (DDVP)      | Thiabendazole          |
| Endosulfan sulfate     | Tolyfluanid            |
| Ethion                 | Trifluralin            |
| Imazalil               |                        |

**Volume:** 5 mL @ 40 µg/mL each in Acetonitrile

**Catalog#:** QuECR-AOAC-QC

**ShaQer™**

The ShaQer™ is the new, low cost solution for QuEChERS sample prep! It agitates up to 6 samples simultaneously compared to just 2 by hand. The vigorous clamp movement results in improved extraction from samples.

| Description                                              | Catalog#    |
|----------------------------------------------------------|-------------|
| <b>ShaQer Base Unit with Clamp for 50 mL/15 mL Vials</b> | CP1500-1590 |
| <b>ShaQer Base Unit with Clamp for 50 mL/2mL Vials</b>   | CP1500-1595 |
| <b>ShaQer Ceramic Grinding Media 5/32 in x 5/16 inch</b> | CP2185      |
| <b>ShaQer Ceramic Grinding Media-3/8 in x 7/8 inch</b>   | CP2183      |
| <b>ShaQer Ceramic Grinding Media-5/16 in x 5/8 inch</b>  | CP2184      |
| <b>ShaQer Clamp for 50 mL/2 mL Vials</b>                 | CP1595      |
| <b>ShaQer Clamp for 50mL/15 mL Vials</b>                 | CP1590      |



Safety interlock prevents unit from operating when lid is open. Window allows analyst to view samples during operation.

Vertical shaking motion ensures thorough mixing and analyte extraction.

Clamp holds six 50 mL vials or six 15 mL vials. Alternate clamp for six 50 mL vials or six 2 mL vials.

Spill tray for easy cleanup.

Digital timer display with adjustable operating time.

Compact, powerful motor agitates samples at 1500 rpm.



# SPEX<sup>QuE</sup> Sensible Solutions for Pesticide Extraction

## QuEChERS

Kits, Standards and Sample Prep



Save 10% on your first order.

For more information visit:

[www.spexcertiprep.com/products/quechers](http://www.spexcertiprep.com/products/quechers)



SPEX<sup>CertiPrep</sup>



# Petroleum Petrochemical & BioDiesel Standards



# Petroleum, Petrochemical & BioDiesel Standards

Petroleum is a naturally occurring complex mixture of various molecular weight hydrocarbons and 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 other petroleum sources other than fossil fuels including renewable sources such as agricultural products (corn, soy, and sugar cane).

Testing using petroleum standards are needed 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 through waste disposal or leaking storage facilities.

SPEX CertiPrep's catalog of Petroleum and Petrochemical standards supplies our customers with standards for the entire lifecycle of the petroleum products from standards to characterize various fuel types to standards that monitor potential contamination from LUST and LUFT sources.

## Did You Know?

SPEX CertiPrep offers a variety of customer loyalty programs. Our SPoints Program allows customers to earn valuable credits every time you order. For more information visit [www.spexcertiprep.com/spoints](http://www.spexcertiprep.com/spoints)

SPEX CertiPrep also offers a Loyal Customer Program to reward our customers with an **automatic** discount ranging from 5% to 20% off all our qualified products.

There is ***no need to apply for either of these programs as you are automatically enrolled when you purchase SPEX CertiPrep products!***

## Petrochemical & 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 that could impact the environment and human health. At the end of 2013, there were over half a million registered underground storage tanks in the US. Many tanks installed prior to the mid-80s were composed of steel which can corrode over time and may leak the tank contents 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 U.S. 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 (Leaking Underground Storage Tanks) and LUFT (Leaking Underground Fuel Tanks).

### BTEX Standard

#### 6 Certified Components:

|              |          |
|--------------|----------|
| Benzene      | o-Xylene |
| Ethylbenzene | m-Xylene |
| Toluene      | p-Xylene |

1 mL @ 200 µg/mL in Methanol

**Catalog#: BTEX**

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: BTEX-H**

### Alternate BTEX Standard Formulations

#### 6 Certified Components:

|              | µg/mL |          | µg/mL |
|--------------|-------|----------|-------|
| Benzene      | 200   | o-Xylene | 200   |
| Ethylbenzene | 200   | p-Xylene | 100   |
| Toluene      | 200   | m-Xylene | 100   |

1 mL in Methanol

Concentration is 10x greater than BTEX-100.

**Catalog#: BTEX-100H**

### State of PA BTEX Standard

#### 9 Certified Components:

|                         | Concentration |
|-------------------------|---------------|
| Benzene                 | 1,000 µg/mL   |
| Ethylbenzene            | 1,000 µg/mL   |
| Isopropylbenzene        | 1,000 µg/mL   |
| Methyl-tert-butyl ether | 2,000 µg/mL   |
| Naphthalene             | 1,000 µg/mL   |
| Toluene                 | 1,000 µg/mL   |
| m-Xylene                | 1,000 µg/mL   |
| o-Xylene                | 1,000 µg/mL   |
| p-Xylene                | 1,000 µg/mL   |

1 mL in Methanol

**Catalog#: PA-BTEX-H**

### Purgeable Aromatics for Gasoline Identification

#### 11 Certified Components:

|                     |                         |
|---------------------|-------------------------|
| Benzene             | methyl tert-butyl ether |
| Chlorobenzene       | Toluene                 |
| 1,2-Dichlorobenzene | o-Xylene                |
| 1,3-Dichlorobenzene | m-Xylene                |
| 1,4-Dichlorobenzene | p-Xylene                |
| Ethylbenzene        |                         |

1 mL @ 2,000 µg/mL in Methanol

**Catalog#: P-GAS**

### Gasoline Range Organics

#### 9 Certified Components:

|                 |                        |
|-----------------|------------------------|
| Benzene         | 1,2,4-Trimethylbenzene |
| Ethylbenzene    | 2,2,4-Trimethylpentane |
| 3-Methylpentane | o-Xylene               |
| Naphthalene     | m-Xylene               |
| Toluene         |                        |

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: GRO-1000**

### Gasoline Range Organics (EPA)

#### 9 Certified Components:

|                 | µg/mL |                        | µg/mL |
|-----------------|-------|------------------------|-------|
| Benzene         | 500   | 1,2,4-Trimethylbenzene | 1,500 |
| Ethylbenzene    | 500   | 2,2,4-Trimethylpentane |       |
| Heptane         | 500   | (isooctane)            | 1,500 |
| 2-Methylpentane | 1,500 | o-Xylene               | 1,500 |
| Toluene         | 1,500 | m-Xylene               | 1,500 |

1 mL in Methanol

**Catalog#: GRO-EPA**

## Gasoline Range Organics (EPA) Alternative Formulation

### 10 Certified Components:

|                        | $\mu\text{g/mL}$ | $\mu\text{g/mL}$       |
|------------------------|------------------|------------------------|
| Benzene                | 500              | 2,2,4-Trimethylpentane |
| Ethylbenzene           | 500 (isooctane)  | 1,500                  |
| Heptane                | 500              | o-Xylene               |
| 2-Methylpentane        | 1,500            | m-Xylene               |
| Toluene                | 1,500            | p-Xylene               |
| 1,2,4-Trimethylbenzene | 1,000            |                        |

1 mL in Methanol

Catalog#: GRO-EPA-2

## Diesel Range Organics Mix

### 10 Certified Components:

|              |               |
|--------------|---------------|
| n-Decane     | n-Hexadecane  |
| n-Docosane   | n-Octacosane  |
| n-Dodecane   | n-Octadecane  |
| n-Eicosane   | n-Tetracosane |
| n-Hexacosane | n-Tetradecane |

1 mL @ 1,000  $\mu\text{g/mL}$  in Methylene chloride

Catalog#: DRO-1000

## Alkanes Reference Table

SPEX CertiPrep offers all compounds listed below as 1,000  $\mu\text{g/mL}$  single component standards in the matrix listed.

| Component      | Formula                      | Matrix          | Single-Component Standard Part# |
|----------------|------------------------------|-----------------|---------------------------------|
| Butane         | $\text{C}_4\text{H}_{10}$    | MeOH            | S-605                           |
| Decane         | $\text{C}_{10}\text{H}_{22}$ | $\text{MeCl}_2$ | S-1112                          |
| Docosane       | $\text{C}_{22}\text{H}_{46}$ | $\text{MeCl}_2$ | S-1790                          |
| Dodecane       | $\text{C}_{12}\text{H}_{26}$ | $\text{MeCl}_2$ | S-1795                          |
| Dotetracontane | $\text{C}_{42}\text{H}_{86}$ | $\text{CS}_2$   | S-1809                          |
| Dotriacontane  | $\text{C}_{32}\text{H}_{66}$ | $\text{MeCl}_2$ | S-1810                          |
| Eicosane       | $\text{C}_{20}\text{H}_{42}$ | $\text{MeCl}_2$ | S-1820                          |
| Ethane         | $\text{C}_2\text{H}_6$       | MeOH            | S-1880                          |
| Heneicosane    | $\text{C}_{21}\text{H}_{44}$ | MeOH            | S-2090                          |
| Hentriacontane | $\text{C}_{31}\text{H}_{64}$ | $\text{MeCl}_2$ | S-2095                          |
| Heptacosane    | $\text{C}_{27}\text{H}_{56}$ | $\text{MeCl}_2$ | S-2115                          |
| Heptadecane    | $\text{C}_{17}\text{H}_{36}$ | MeOH            | S-2120                          |
| Heptane        | $\text{C}_7\text{H}_{16}$    | MeOH            | S-2125                          |

| Component         | Formula                       | Matrix                                     | Single-Component Standard Part# |
|-------------------|-------------------------------|--------------------------------------------|---------------------------------|
| Hexacontane       | $\text{C}_{60}\text{H}_{122}$ | P-Xylene                                   | S-2166                          |
| Hexacosane        | $\text{C}_{26}\text{H}_{54}$  | $\text{MeCl}_2$                            | S-2170                          |
| Hexadecane        | $\text{C}_{16}\text{H}_{34}$  | $\text{MeCl}_2$                            | S-2175                          |
| Hexane            | $\text{C}_6\text{H}_{14}$     | MeOH                                       | S-2190                          |
| Hexatriacontane   | $\text{C}_{36}\text{H}_{74}$  | P-Xylene                                   | S-2210                          |
| Methane           | $\text{CH}_4$                 | MeOH                                       | S-2379                          |
| Nonacosane        | $\text{C}_{29}\text{H}_{60}$  | $\text{MeCl}_2$                            | S-2775                          |
| Nonadecane        | $\text{C}_{19}\text{H}_{40}$  | $\text{MeCl}_2$                            | S-2780                          |
| Nonane            | $\text{C}_9\text{H}_{20}$     | MeOH                                       | S-2785                          |
| Octacosane        | $\text{C}_{28}\text{H}_{58}$  | $\text{MeCl}_2$                            | S-2845                          |
| Octadecane        | $\text{C}_{18}\text{H}_{38}$  | MeOH                                       | S-2850                          |
| Octane            | $\text{C}_8\text{H}_{18}$     | MeOH                                       | S-2870                          |
| Octatriacontane   | $\text{C}_{38}\text{H}_{78}$  | $\text{MeCl}_2$                            | S-2886                          |
| Pentacontane      | $\text{C}_{50}\text{H}_{102}$ | $\text{CS}_2$ /Pentane/<br>$\text{MeCl}_2$ | S-2953                          |
| Pentacosane       | $\text{C}_{25}\text{H}_{52}$  | $\text{MeCl}_2$                            | S-2955                          |
| Pentadecane       | $\text{C}_{15}\text{H}_{32}$  | MeOH                                       | S-2960                          |
| Pentane           | $\text{C}_5\text{H}_{12}$     | MeOH                                       | S-2975                          |
| Pentatriacontane  | $\text{C}_{35}\text{H}_{72}$  | Hexane                                     | S-2990                          |
| Propane           | $\text{C}_3\text{H}_8$        | MeOH                                       | S-3145                          |
| Tetracosane       | $\text{C}_{24}\text{H}_{50}$  | FREON113                                   | S-3435                          |
| Tetracontane      | $\text{C}_{40}\text{H}_{82}$  | Hexane                                     | S-3430                          |
| Tetradecane       | $\text{C}_{14}\text{H}_{30}$  | $\text{MeCl}_2$                            | S-3440                          |
| Tetratetracontane | $\text{C}_{44}\text{H}_{90}$  | $\text{MeCl}_2$                            | S-3480                          |
| Tetratriacontane  | $\text{C}_{34}\text{H}_{70}$  | FREON113                                   | S-3485                          |
| Triacontane       | $\text{C}_{30}\text{H}_{62}$  | $\text{MeCl}_2$                            | S-3540                          |
| Tricosane         | $\text{C}_{23}\text{H}_{48}$  | $\text{MeCl}_2$                            | S-3685                          |
| Tridecane         | $\text{C}_{13}\text{H}_{28}$  | MeOH                                       | S-3690                          |
| Trtriacontane     | $\text{C}_{33}\text{H}_{68}$  | $\text{MeCl}_2$                            | S-3775                          |
| Undecane          | $\text{C}_{11}\text{H}_{24}$  | MeOH-                                      | S-3780                          |



### Multi-State Hydrocarbon Standard Hexane Tetratetracontane Even Alkanes Mix (C<sub>6</sub>-C<sub>44</sub>)

#### 20 Certified Components:

|                   |                     |
|-------------------|---------------------|
| n-Decane          | n-Octacosane        |
| n-Docosane        | n-Octadecane        |
| n-Dodecane        | n-Octane            |
| n-Dotetracontane  | n-Octatriacontane   |
| n-Dotriacontane   | n-Tetracontane      |
| n-Eicosane        | n-Tetracosane       |
| n-Hexacosane      | n-Tetradecane       |
| n-Hexadecane      | n-Tetratetracontane |
| n-Hexane          | n-Tetratriacontane  |
| n-Hexatriacontane | n-Triacontane       |

1 mL @ 100 µg/mL in Cyclohexane:carbon Disulfide

**Catalog#: PROALK6-44**

1 mL @ 1,000 µg/mL in Cyclohexane:carbon Disulfide

**Catalog#: PROALK6-44-H**

### C<sub>11</sub> through C<sub>18</sub> Alkanes Mix

#### 8 Certified Components:

|               |               |
|---------------|---------------|
| n-Dodecane    | n-Pentadecane |
| n-Heptadecane | n-Tetradecane |
| n-Hexadecane  | n-Tridecane   |
| n-Octadecane  | n-Undecane    |

1 mL @ 1,000 µg/mL in Cyclohexane

**Catalog#: C11-18**

### C<sub>15</sub> through C<sub>35</sub> Odd Alkanes Mix

#### 11 Certified Components:

|                  |                    |
|------------------|--------------------|
| n-Heneicosane    | n-Pentacosane      |
| n-Hentriacontane | n-Pentadecane      |
| n-Heptacosane    | n-Pentatriacontane |
| n-Heptadecane    | n-Tricosane        |
| n-Nonacosane     | n-Tritriacontane   |
| n-Nonadecane     |                    |

1 mL @ 1,000 µg/mL Methylene chloride

**Catalog#: ENC-ODD-1K**

### (C<sub>16</sub> through C<sub>36</sub>) Even Alkanes Mix

#### 11 Certified Components:

|                   |                    |
|-------------------|--------------------|
| n-Docosane        | n-Octacosane       |
| n-Dotriacontane   | n-Octadecane       |
| n-Eicosane        | n-Tetracosane      |
| n-Hexacosane      | n-Tetratriacontane |
| n-Hexadecane      | n-Triacontane      |
| n-Hexatriacontane |                    |

1 mL @ 1,000 µg/mL Methylene chloride

**Catalog#: ENC-EVEN-1K**

### State of TX – C<sub>6</sub>-C<sub>35</sub> Alkanes

#### 18 Certified Components:

|               |                    |
|---------------|--------------------|
| n-Decane      | n-Octacosane       |
| n-Dodecane    | n-Octadecane       |
| n-Eicosane    | n-Octane           |
| n-Heptadecane | n-Pentacosane      |
| n-Heptane     | n-Pentadecane      |
| n-Hexadecane  | n-Pentatriacontane |
| n-Hexane      | n-Tetradecane      |
| n-Nonadecane  | n-Tridecane        |
| n-Nonane      | n-Undecane         |

1 mL @ 1,000 mg/mL in Pentane

**Catalog#: TX-HC-18**



## Single-Component Petrochemical Fuel Standards

| Component                 | Concentration 1mL @                | Certified Components | Catalog#    |
|---------------------------|------------------------------------|----------------------|-------------|
| Regular Unleaded Gasoline | 1,000 µg/mL in Methylene chloride  | 1                    | S-RG-1000   |
|                           | 20,000 µg/mL in Methanol           | 1                    | S-RG-20K    |
| Premium Unleaded Gasoline | 1,000 µg/mL in Methylene chloride  | 1                    | S-PG-1000   |
|                           | 20,000 µg/mL in Methanol           | 1                    | S-PG-20K    |
| Motor Oil, SAE 30W        | 1,000 µg/mL in Methylene chloride  | 1                    | S-030W-1000 |
|                           | 20,000 µg/mL in Methylene chloride | 1                    | S-030W-20K  |
| Motor Oil, SAE 40W        | 1,000 µg/mL in Methylene chloride  | 1                    | S-040W-1000 |
|                           | 20,000 µg/mL in Methylene chloride | 1                    | S-040W-20K  |
| Motor Oil, SAE 50W        | 1,000 µg/mL in Methylene chloride  | 1                    | S-050W-1000 |
|                           | 20,000 µg/mL in Methylene chloride | 1                    | S-050W-20K  |
| #2 Diesel Fuel Oil        | 1,000 µg/mL in Methanol            | 1                    | S-DF2-1000  |
|                           | 20,000 µg/mL in Methylene chloride | 1                    | S-DF2-20K   |
| Kerosene                  | 1,000 µg/mL in Methanol            | 1                    | S-K-1000    |
|                           | 20,000 µg/mL in Methanol           | 1                    | S-K-20K     |
| Mineral Spirits           | 1,000 µg/mL in Methanol            | 1                    | S-MS-1000   |
|                           | 20,000 µg/mL in Methanol           | 1                    | S-MS-20K    |

## Weathered Fuel Standards

| Component                 | Concentration                                 | Certified Components | Catalog# |
|---------------------------|-----------------------------------------------|----------------------|----------|
| Regular Unleaded Gasoline | 25% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WG-25  |
|                           | 50% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WG-50  |
|                           | 75% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WG-75  |
| #2 Diesel Fuel Oil        | 25% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WDF-25 |
|                           | 50% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WDF-50 |
|                           | 75% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WDF-75 |
| Kerosene                  | 25% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WK-25  |
|                           | 50% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WK-50  |
|                           | 75% weathered, 1 mL @ 5,000 µg/mL in Methanol | 1                    | S-WK-75  |

## Auxiliary Standards

### Surrogate

**1 Certified Component:**

o-Terphenyl

1 mL @ 5,000 µg/mL in Methylene chloride

**Catalog#: DIESEL-I**

### Internal Standard

**1 Certified Component:**

5-a-Androstane

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-211**

### Surrogate

**1 Certified Component:**

1-Chlorooctadecane

1 mL @ 1,000 µg/mL in Methanol

**Catalog#: S-893**

## In the beginning...

Art and Harriet Mitteldorf founded SPEX Industries, Inc. in 1954.

They started selling graphite electrodes and spectrographic plates and film for arc/spark spectroscopy. They quickly developed their own analytical standards and sample preparation equipment, and those two traditions and product lines are proudly continued today by SPEX CertiPrep and SPEX SamplePrep.

## 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

##### 20 Certified Components:

|                     |                    |
|---------------------|--------------------|
| 2-Methylnaphthalene | n-Hexatriacontane  |
| Naphthalene         | n-Nonane           |
| n-Decane            | n-Octacosane       |
| n-Docosane          | n-Octadecane       |
| n-Dodecane          | n-Octatriacontane  |
| n-Dotriacontane     | n-Tetracontane     |
| n-Eicosane          | n-Tetracosane      |
| n-Heneicosane       | n-Tetradecane      |
| n-Hexacosane        | n-Tetratriacontane |
| n-Hexadecane        | n-Triacontane      |

1 mL @ 2000 µg/mL in Hexane:Carbon Disulfide

Catalog#: NJDEP-EPH-ALCS

#### Aliphatics Fractionation Check Mix

##### 18 Certified Components:

|                   |                    |
|-------------------|--------------------|
| n-Decane          | n-Nonane           |
| n-Docosane        | n-Octacosane       |
| n-Dodecane        | n-Octadecane       |
| n-Dotriacontane   | n-Octatriacontane  |
| n-Eicosane        | n-Tetracontane     |
| n-Heneicosane     | n-Tetracosane      |
| n-Hexacosane      | n-Tetradecane      |
| n-Hexadecane      | n-Tetratriacontane |
| n-Hexatriacontane | n-Triacontane      |

5 mL @ 400 µg/mL in Hexane

Catalog#: NJDEP-EPH-ALFC

#### Aliphatics Matrix Spike Mix

##### 18 Certified Components:

|                   |                    |
|-------------------|--------------------|
| n-Decane          | n-Nonane           |
| n-Docosane        | n-Octacosane       |
| n-Dodecane        | n-Octadecane       |
| n-Dotriacontane   | n-Octatriacontane  |
| n-Eicosane        | n-Tetracontane     |
| n-Heneicosane     | n-Tetracosane      |
| n-Hexacosane      | n-Tetradecane      |
| n-Hexadecane      | n-Tetratriacontane |
| n-Hexatriacontane | n-Triacontane      |

5 mL @ 200 µg/mL in Pentane

Catalog#: NJDEP-EPH-ALMS

#### Aromatics Calibration Standard

##### 18 Certified Components:

|                        |                         |
|------------------------|-------------------------|
| 1,2,3-Trimethylbenzene | Benzo(k)fluoranthene    |
| 2-Methylnaphthalene    | Chrysene                |
| Acenaphthene           | Dibenz(a,h)anthracene   |
| Acenaphthylene         | Fluoranthene            |
| Anthracene             | Fluorene                |
| Benz(a)anthracene      | Indeno(1,2,3-c,d)pyrene |
| Benzo(a)pyrene         | Naphthalene             |
| Benzo(b)fluoranthene   | Phenanthrene            |
| Benzo(g,h,i)perylene   | Pyrene                  |

1 mL @ 2000 µg/mL in Methylene Chloride

Catalog#: NJDEP-EPH-ARCS

#### Aromatics Fraction Check Mix

##### 16 Certified Components:

|                        |                         |
|------------------------|-------------------------|
| 1,2,3-Trimethylbenzene | Benzo(k)fluoranthene    |
| Acenaphthene           | Chrysene                |
| Acenaphthylene         | Dibenz(a,h)anthracene   |
| Anthracene             | Fluoranthene            |
| Benz(a)anthracene      | Fluorene                |
| Benzo(a)pyrene         | Indeno(1,2,3-c,d)pyrene |
| Benzo(b)fluoranthene   | Phenanthrene            |
| Benzo(g,h,i)perylene   | Pyrene                  |

5 mL @ 400 µg/mL in Hexane:Toluene

Catalog#: NJDEP-EPH-ARFS

#### Aromatics Matrix Spike Mix

##### 18 Certified Components:

|                        |                         |
|------------------------|-------------------------|
| 1,2,3-Trimethylbenzene | Benzo(k)fluoranthene    |
| 2-Methylnaphthalene    | Chrysene                |
| Acenaphthene           | Dibenz(a,h)anthracene   |
| Acenaphthylene         | Fluoranthene            |
| Anthracene             | Fluorene                |
| Benz(a)anthracene      | Indeno(1,2,3-c,d)pyrene |
| Benzo(a)pyrene         | Naphthalene             |
| Benzo(b)fluoranthene   | Phenanthrene            |
| Benzo(g,h,i)perylene   | Pyrene                  |

5 mL @ 200 µg/mL in Acetone:Toluene

Catalog#: NJDEP-EPH-ARMS

#### EPH Fractionation Surrogate Spike Mix

##### 2 Certified Components:

|                    |                  |
|--------------------|------------------|
| 2-Bromonaphthalene | 2-Fluorobiphenyl |
|--------------------|------------------|

1 mL @ 4000 µg/mL in Hexane

Catalog#: NJDEP-EPH-FSS

#### EPH Surrogate Spike Mix

##### 2 Certified Components:

|                    |             |
|--------------------|-------------|
| 1-Chlorooctadecane | o-Terphenyl |
|--------------------|-------------|

1 mL @ 4000 µg/mL in Acetone

Catalog#: NJDEP-EPH-SS

## 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 impurity standards 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 grade standards. 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 the components.

In addition, all standards are supplied with a detailed comprehensive Certificate of Analysis. The charts below outline some of the available Biodiesel Standards offered by SPEX CertiPrep. For a custom standard quote, please visit [www.spexcertiprep.com/customorganics](http://www.spexcertiprep.com/customorganics) for further information.

### Glyceride Impurity Standards for Biodiesel

| Component                                            | Concentration (µg/mL) | Matrix   | Volume (mL) | Catalog#  |
|------------------------------------------------------|-----------------------|----------|-------------|-----------|
| 1,3-Diolein                                          | 50                    | Pyridine | 1           | BD-3509   |
| Glycerol                                             | 5                     |          |             |           |
| Monolein                                             | 100                   |          |             |           |
| Triolein                                             | 50                    |          |             |           |
| 1,3-Diolein                                          | 100                   | Pyridine | 1           | BD-3510   |
| Glycerol                                             | 15                    |          |             |           |
| Monolein                                             | 250                   |          |             |           |
| Triolein                                             | 100                   |          |             |           |
| 1,3-Diolein                                          | 200                   | Pyridine | 1           | BD-3511   |
| Glycerol                                             | 25                    |          |             |           |
| Monolein                                             | 500                   |          |             |           |
| Triolein                                             | 200                   |          |             |           |
| 1,3-Diolein                                          | 350                   | Pyridine | 1           | BD-3512   |
| Glycerol                                             | 35                    |          |             |           |
| Monolein                                             | 750                   |          |             |           |
| Triolein                                             | 350                   |          |             |           |
| 1,3-Diolein                                          | 500                   | Pyridine | 1           | BD-3513   |
| Glycerol                                             | 50                    |          |             |           |
| Monolein                                             | 1,000                 |          |             |           |
| Triolein                                             | 500                   |          |             |           |
| (S)-1,2,4-Butanetriol                                | 1,000                 | Pyridine | 5           | BD-3514   |
| Tricaprin                                            | 1,000                 | Pyridine | 5           | BD-3515   |
| N-trimethylsilyl-N-methyl trifluoroacetamide (MSTFA) | Neat                  | N/A      | 5           | NEAT-4419 |

Kit contains one each of BD-3509 through BD-3515

BD-3508

## Fatty Acids Methyl Esters (FAME)

| Component             | Concentration (µg/mL) | Matrix   | Volume (mL) | Catalog# |
|-----------------------|-----------------------|----------|-------------|----------|
| Methyl Caproate       | 1,000                 | Methanol | 1           | S-4220   |
| Methyl Heptanoate     | 1,000                 | Methanol | 1           | S-4648   |
| Methyl Caprylate      | 1,000                 | Methanol | 1           | S-4649   |
| Methyl Nonanoate      | 1,000                 | Methanol | 1           | S-4650   |
| Methyl Caprate        | 1,000                 | Methanol | 1           | S-4217   |
| Methyl Undecanoate    | 1,000                 | Methanol | 1           | S-4651   |
| Methyl Laurate        | 1,000                 | Methanol | 1           | S-4652   |
| Methyl Tridecanoate   | 1,000                 | Methanol | 1           | S-4653   |
| Methyl Myristate      | 1,000                 | Methanol | 1           | S-4654   |
| Methyl Pentadecanoate | 1,000                 | Methanol | 1           | S-4655   |
| Methyl Palmitate      | 1,000                 | Methanol | 1           | S-4656   |
| Methyl Heptadecanoate | 1,000                 | Methanol | 1           | S-4657   |
| Methyl Stearate       | 1,000                 | Methanol | 1           | S-4658   |
| Methyl Nonadecanoate  | 1,000                 | Methanol | 1           | S-4659   |
| Methyl Arachidate     | 1,000                 | Methanol | 1           | S-4660   |
| Methyl Heneicosanoate | 1,000                 | Methanol | 1           | S-4661   |
| Methyl Behenate       | 1,000                 | Methanol | 1           | S-4662   |
| Methyl Tricosanoate   | 1,000                 | Methanol | 1           | S-4663   |
| Methyl Lignocerate    | 1,000                 | Methanol | 1           | S-4664   |



## ASTM

ASTM 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 assuring accuracy within the testing process.

### ASTM Method D2887 Standard

#### 20 Certified Components:

|                   |                     |
|-------------------|---------------------|
| n-Decane          | n-Octacosane        |
| n-Dodecane        | n-Octadecane        |
| n-Dotriacontane   | n-Octane            |
| n-Eicosane        | n-Pentadecane       |
| n-Heptadecane     | n-Pentane           |
| n-Heptane         | n-Tetracontane      |
| n-Hexadecane      | n-Tetracosane       |
| n-Hexane          | n-Tetradecane       |
| n-Hexatriacontane | n-Tetratetracontane |
| n-Nonane          | n-Undecane          |

1 mL @ 1%wt/wt in Carbon Disulfide

**Catalog#: ASTM-D2887**

### ASTM Method D3710 Standard

#### 16 Certified Components:

#### Concentration (%wt/wt)

|                     |      |
|---------------------|------|
| n-Butylbenzene      | 3.5  |
| n-Decane            | 3.5  |
| 2,4-Dimethylpentane | 5.8  |
| n-Dodecane          | 3.5  |
| n-Heptane           | 10.5 |
| n-Hexane            | 5.8  |
| 2-Methylbutane      | 10.5 |
| 2-Methylpentane     | 5.8  |
| n-Octane            | 5.8  |
| n-Pentadecane       | 2.3  |
| n-Pentane           | 8.1  |
| n-Propylbenzene     | 14   |
| n-Tetradecane       | 2.3  |
| Toluene             | 11.6 |
| n-Tridecane         | 2.3  |
| p-Xylene            | 14   |

1 mL Neat

**Catalog#: ASTM-D3710**

## Did You Know?

SPEX CertiPrep is accredited by A2LA for Organic and Inorganic Certified Reference Materials. In addition to being registered as an ISO 9001 facility, SPEX CertiPrep is accredited by A2LA as complying with the requirements of ISO/IEC 17025 and ISO/IEC Guide 34. Our scope is the **most comprehensive** in the industry.



## ASTM Method D6160 Aroclor Singles

|              | Concentration | Matrix    | Catalog#     |
|--------------|---------------|-----------|--------------|
| Aroclor 1016 | 200 µg/mL     | Hexane    | PCB-1016     |
|              | 1,000 µg/mL   | Hexane    | PCB-1016H    |
|              | 1,000 µg/mL   | Methanol  | S-310        |
| Aroclor 1221 | 200 µg/mL     | Hexane    | PCB-1221     |
|              | 1,000 µg/mL   | Hexane    | PCB-1221H    |
|              | 1,000 µg/mL   | Methanol  | S-315        |
| Aroclor 1232 | 200 µg/mL     | Hexane    | PCB-1232     |
|              | 1,000 µg/mL   | Hexane    | PCB-1232H    |
|              | 1,000 µg/mL   | Methanol  | S-317        |
| Aroclor 1242 | 200 µg/mL     | Hexane    | PCB-1242     |
|              | 1,000 µg/mL   | Hexane    | PCB-1242H    |
|              | 1,000 µg/mL   | Methanol  | S-325        |
| Aroclor 1248 | 200 µg/mL     | Hexane    | PCB-1248     |
|              | 1,000 µg/mL   | Hexane    | PCB-1248H    |
|              | 1,000 µg/mL   | Methanol  | S-330        |
| Aroclor 1254 | 200 µg/mL     | Hexane    | PCB-1254     |
|              | 1,000 µg/mL   | Hexane    | PCB-1254H    |
|              | 1,000 µg/mL   | Methanol  | S-335        |
|              | 1,000 µg/mL   | Isooctane | S-335-ISOOCT |
| Aroclor 1260 | 200 µg/mL     | Hexane    | PCB-1260     |
|              | 1,000 µg/mL   | Hexane    | PCB-1260H    |
|              | 1,000 µg/mL   | Methanol  | S-340        |
|              | 1,000 µg/mL   | Isooctane | S-340-ISOOCT |
| Aroclor 1262 | 200 µg/mL     | Hexane    | PCB-1262     |
|              | 1,000 µg/mL   | Hexane    | PCB-1262H    |
|              | 1,000 µg/mL   | Hexane    | S-345        |
| Aroclor 1268 | 200 µg/mL     | Hexane    | PCB-1268     |
|              | 1,000 µg/mL   | Hexane    | PCB-1268H    |
|              | 1,000 µg/mL   | Hexane    | S-350        |

## ASTM Method D6296 Standards

### 11 Certified Components:

|                        | Concentration (%wt/wt) |
|------------------------|------------------------|
| n-Decane               | 5                      |
| 1-Decene               | 1                      |
| n-Dodecane             | 1                      |
| Ethyl-tert-Butyl ether | 5                      |
| 1-Heptene              | 1                      |
| 1-Hexene               | 1                      |
| 1-Nonene               | 1                      |
| Octene-1               | 1                      |
| 1-Pentene              | 1                      |
| 2,2,4-Trimethylpentane | 86                     |
| n-Undecane             | 1                      |

1 mL Neat

Catalog#: ASTM-D6296-E

## Alternate ASTM Method D6296 Standards

### 10 Certified Components:

|                         | Concentration (%wt/wt) |
|-------------------------|------------------------|
| 1-Decene                | 1                      |
| n-Dodecane              | 1                      |
| 1-Heptene               | 1                      |
| 1-Hexene                | 1                      |
| Methyl-tert-butyl ether | 5                      |
| 1-Nonene                | 1                      |
| Octene-1                | 1                      |
| 1-Pentene               | 1                      |
| 2,2,4-Trimethylpentane  | 87                     |
| n-Undecane              | 1                      |

1 mL Neat

Catalog#: ASTM-D6296-M

## ASTM Method D6379 Standard

### 3 Certified Components:

|                     | Concentration (mg/mL) |
|---------------------|-----------------------|
| Cyclohexane         | 50                    |
| 1-Methylnaphthalene | 50                    |
| o-Xylene            | 150                   |

1 mL in Heptane

Catalog#: ASTM-D6379

## ASTM Method D6042 Standard

### 7 Certified Components:

|              |              |
|--------------|--------------|
| BHT          | Irganox 1076 |
| Erucylamide  | Irganox 3114 |
| Irgafos 168  | Vitamin E    |
| Irganox 1010 |              |

1 mL @ 50 ug/mL in Isopropanol

Catalog#: ASTM-D6042

## ASTM Method D6042 Internal Standard

### 1 Certified Component:

Tinuvin P

1 mL @ 51.8 ug/mL in Isopropanol

Catalog#: ASTM-D6042-IS

## UOP Methods

UOP or Universal Oil Products Methods are analytical methods and procedures used to analyze process streams and feedstocks within the petroleum industry. There are several hundred UOP methods in publication in conjunction with methods by ASTM, and the American Petroleum Institute (API). Methods are devoted to all aspects of the petroleum process in industry.

SPEX CertiPrep offers our customers chemical standards for use in the analytical and chemically based UOP methods. Our standards can be used for the testing of a wide range of petrochemicals under the guidance of the UOP methods from aromatics to xylene. Our standards are suitable for a wide range of analytical techniques including: GC and GC-MS.

### UOP Method 543 Standard

#### 2 Certified Components:

|            | Concentration (%wt/wt) |
|------------|------------------------|
| n-Dodecane | 70                     |
| Toluene    | 30                     |

1 mL Neat

Catalog#: UOP-543

### UOP Method 551 Standard

#### 7 Certified Components:

|              | Concentration (%wt/wt) |
|--------------|------------------------|
| Benzene      | 14                     |
| Ethylbenzene | 14                     |
| n-Hexane     | 14                     |
| Toluene      | 14                     |
| m-Xylene     | 14                     |
| o-Xylene     | 14                     |
| p-Xylene     | 14                     |

1 mL Neat

Catalog#: UOP-551

### UOP Method 690 Standard

#### 7 Certified Components:

|              | Concentration (%wt/wt) |
|--------------|------------------------|
| Benzene      | 14                     |
| Ethylbenzene | 14                     |
| n-Octane     | 14                     |
| Toluene      | 14                     |
| m-Xylene     | 14                     |
| o-Xylene     | 14                     |
| p-Xylene     | 14                     |

1 mL Neat

Catalog#: UOP-690

### UOP Method 720 Standard

#### 5 Certified Components:

|              | Concentration (%wt/wt) |
|--------------|------------------------|
| Ethylbenzene | 0.1                    |
| n-Undecane   | 1                      |
| m-Xylene     | 0.1                    |
| o-Xylene     | 0.1                    |
| p-Xylene     | 98.7                   |

1 mL Neat

Catalog#: UOP-720

### UOP Method 744 Standard

#### 8 Certified Components:

|                            | Concentration (%wt/wt) |
|----------------------------|------------------------|
| Benzene                    | 15                     |
| 2-Ethyltoluene             | 10                     |
| n-Heptane                  | 25                     |
| 1,2,3,4-Tetramethylbenzene | 10                     |
| Toluene                    | 20                     |
| m-Xylene                   | 6.7                    |
| o-Xylene                   | 6.6                    |
| p-Xylene                   | 6.7                    |

1 mL Neat

Catalog#: UOP-744

### UOP Method 868 Standard

#### 10 Certified Components:

|                  |                     |
|------------------|---------------------|
| Cyclohexane      | Methylcyclohexane   |
| n-Decane         | n-Nonane            |
| Ethylcyclohexane | n-Octane            |
| n-Heptane        | N-Butylcyclohexane  |
| n-Hexane         | N-Propylcyclohexane |

1 mL @ 500 ug/g in Toluene

Catalog#: UOP-868

### UOP Method 931 Standard

#### 5 Certified Components:

|                | Concentration (%wt/wt) |
|----------------|------------------------|
| Benzene        | 2                      |
| 2-Ethyltoluene | 2                      |
| n-Heptane      | 92                     |
| Toluene        | 2                      |
| n-Undecane     | 2                      |

1 mL Neat

Catalog#: UOP-931

# 60 Years of Support to the Environmental Community

## Manufacturing Organic and Inorganic Certified Reference Materials



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- New Inorganic Multi-Element Standards for the latest EPA methods
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CRMSales@spex.com  
www.spexcertiprep.com



## SECTION 8

# QC Samples





# QC Samples

The end-product of most analytical laboratories is data. It is therefore imperative that the quality of the data produced meet or exceed performance criteria. The implementation of quality control processes helps control error and estimate uncertainty. Quality control can be a tool in method development, regulatory processes, laboratory training and performance monitoring. QC samples can help an analytical laboratory determine its precision, accuracy, linear range and method ruggedness. QC samples allow the laboratories to fulfil documentation requirements as well as correct errors in a root cause analysis of a possible failure. Finally, QC samples monitor the effectiveness of the laboratory analysts to produce accurate data.

SPEX CertiPrep proudly partners with ERA to offer Quality Control Samples. All of ERA's QC samples have been tested in-house with the USEPA, NIST, NELAC and ISO protocols to ensure accuracy, homogeneity and stability.



## Ready-to-Use Wastewater

### Whole-Volume CRMs QC

The following whole-volume standards are ready to use as provided and require no dilution before analysis. These QC standards are guaranteed stable for a minimum of one month after receipt at your facility.

#### Oil & Grease

**Oil & Grease** ..... 20-200 mg/bottle

One 250 mL whole-volume bottle is ready to analyze with EPA hexane extraction method 1664. Certified values are provided for IR and gravimetric methods.

**Catalog#: 504**

#### Solids (Available monthly)

**Total solids at 105°C** ..... 140-800 mg/L

**Total dissolved solids at 180°C** ..... 140-800 mg/L

**Non-filterable residue (TSS)** ..... 20-100 mg/L

**pH** ..... 5-10 units

One 500 mL whole-volume bottle is ready to analyze.

**Catalog#: 499**

#### Demand

**5-day BOD** ..... 18-230 mg/L

**Carbonaceous BOD** ..... 18-230 mg/L

**COD** ..... 30-250 mg/L

**TOC** ..... 6-100 mg/L

One 500 mL whole-volume bottle is ready to analyze.

**Catalog#: 743**

### Simple Nutrients

**Ammonia as N** ..... 1-20 mg/L

**Nitrate as N** ..... 2-25 mg/L

**Nitrate plus nitrite as N** ..... 2-25 mg/L

**Orthophosphate as P** ..... 0.5-5.5 mg/L

One 500 mL whole-volume bottle is ready to analyze.

**Catalog#: 739**

### Complex Nutrients

**Total Kjeldahl-nitrogen as N** ..... 3-35 mg/L

**Total phosphorus as P** ..... 0.5-10 mg/L

One 500 mL whole-volume bottle is ready to analyze.

**Catalog#: 741**



## Water Pollution

### Volatiles

#### Volatiles

|                             |                                |
|-----------------------------|--------------------------------|
| Acetone                     | 1,3-Dichloropropane            |
| Acetonitrile                | 1,2-Dichloropropane            |
| Acrolein                    | 2,2-Dichloropropane            |
| Acrylonitrile               | cis-1,3-Dichloropropene        |
| Benzene                     | 1,1-Dichloropropene            |
| Bromobenzene                | trans-1,3-Dichloropropene      |
| Bromochloromethane          | Ethylbenzene                   |
| Bromodichloromethane        | Hexachlorobutadiene            |
| Bromoform                   | Hexachloroethane               |
| Bromomethane                | 2-Hexanone                     |
| 2-Butanone (MEK)            | Isopropylbenzene               |
| n-Butylbenzene              | p-Isopropyltoluene             |
| sec-Butylbenzene            | Methyl tert-butyl ether (MTBE) |
| tert-Butylbenzene           | 4-Methyl-2-pentanone (MIBK)    |
| Carbon disulfide            | Methylene chloride             |
| Ethylbenzene                | Naphthalene                    |
| Chlorobenzene               | Nitrobenzene                   |
| Chlorodibromomethane        | n-Propylbenzene                |
| Chloroethane                | Styrene                        |
| 2-Chloroethyl vinyl ether   | 1,1,1,2-Tetrachloroethane      |
| Chloroform                  | 1,1,2,2-Tetrachloroethane      |
| Chloromethane               | Tetrachloroethene              |
| 2-chlorotoluene             | Toluene                        |
| 4-chlorotoluene             | 1,2,3-Trichlorobenzene         |
| 1,2-Dibromo-3-chloropropane | 1,2,4-Trichlorobenzene         |
| (DBCP)                      | 1,1,1-Trichloroethane          |
| 1,2-Dibromoethane (EDB)     | 1,1,2-Trichloroethane          |
| Dibromomethane              | Trichloroethene                |
| 1,2-Dichlorobenzene         | Trichlorofluoromethane         |
| 1,3-Dichlorobenzene         | 1,2,3-Trichloropropane         |
| 1,4-Dichlorobenzene         | 1,2,4-Trimethylbenzene         |
| Dichlorodifluoromethane     | 1,3,5-Trimethylbenzene         |
| 1,1-Dichloroethane          | Vinyl acetate                  |
| 1,2-Dichloroethane          | Vinyl chloride                 |
| cis-1,2-Dichloroethene      | m&p Xylene                     |
| 1,1-Dichloroethene          | o-Xylene                       |
| trans-1,2-Dichloroethene    | Xylenes, total                 |

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA methods 601, 602, 8021, 624 and 8260. Contains a subset of the EPA/NELAC analytes in the required range 5-300 µg/L.

**Catalog#: 710**

#### Volatile Aromatics

|                     |               |
|---------------------|---------------|
| 1,2-Dichlorobenzene | Ethylbenzene  |
| 1,3-Dichlorobenzene | Toluene       |
| 1,4-Dichlorobenzene | Total Xylenes |
| Benzene             |               |

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA methods 602 and 8021.

Each standard contains all listed analytes at 5-300 µg/L after dilution.

**Catalog#: 4452**

#### BTEX & MTBE in Water

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA methods 602 and 8021.

Includes all BTEX compounds and MTBE at 5-300 µg/L after dilution.

**Catalog#: 760**

#### Gasoline Range Organics (GRO) in Water

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with both purge & trap and modified EPA 8015 GC-FID methods to test for GRO at 400-4,000 µg/L. Also use to test for BTEX in gasoline.

**Catalog#: 762**

## Herbicides

### Chlorinated Acid Herbicides

|                          |                   |
|--------------------------|-------------------|
| Acifluorfen              | Dichlorprop       |
| Bentazon                 | Dinoseb           |
| Chloramben               | MCPA              |
| 2,4-D                    | MCPP              |
| 2,4-DB                   | 4-Nitrophenol     |
| Dacthal diacid (DCPA)    | Pentachlorophenol |
| Dalapon                  | Picloram          |
| Dicamba                  | 2,4,5-T           |
| 3,5-Dichlorobenzoic acid | 2,4,5-TP (Silvex) |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 615 and 8151.

Contains a subset of the analytes listed (above) at 2-10 µg/L (Except MCPA and MCPP at 10-100 µg/L).

Note: 4-nitrophenol and pentachlorophenol are not within the EPA/NELAC range.

Use the Acids standard for these compounds in the EPA/NELAC range.

**Catalog#: 718**

## PCBs

### PCBs in Water

|              |              |
|--------------|--------------|
| Aroclor 1016 | Aroclor 1248 |
| Aroclor 1221 | Aroclor 1254 |
| Aroclor 1232 | Aroclor 1260 |
| Aroclor 1242 |              |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 608 and 8082.

Contains a different Aroclor, randomly selected from the list above at 2-10 µg/L.

**Catalog#: 734S**

### PCBs in Oil

|              |              |
|--------------|--------------|
| Aroclor 1016 | Aroclor 1242 |
| Aroclor 1254 | Aroclor 1260 |

One 10 mL flame-sealed ampule is ready to analyze.

Use with EPA method 8082.

Contains a different Aroclor, randomly selected from the NELAC list, in the EPA/NELAC required range 12-50 mg/kg.

**Catalog#: 729S**



## Semivolatiles

### Base/Neutrals

|                                          |                               |
|------------------------------------------|-------------------------------|
| Acenaphthene                             | Dimethyl phthalate            |
| Acenaphthylene                           | Di-n-butylphthalate           |
| 2-Amino-1-methylbenzene<br>(o-Toluidine) | 2,4-Dinitrotoluene            |
| Aniline                                  | 2,6-Dinitrotoluene            |
| Anthracene                               | Di-n-octylphthalate Benzidine |
| Benzo(a)anthracene                       | bis(2-Ethylhexyl)phthalate    |
| Benzo(b)fluoranthene                     | Fluoranthene                  |
| Benzo(k)fluoranthene                     | Fluorene                      |
| Benzo(g,h,i)perylene                     | Hexachlorobenzene             |
| Benzo(a)pyrene                           | Hexachlorobutadiene           |
| Benzyl alcohol                           | Hexachlorocyclo-pentadiene    |
| 4-Bromophenyl-phenylether                | Hexachloroethane              |
| Butylbenzylphthalate                     | Indeno(1,2,3-cd)pyrene        |
| Carbazole                                | Isophorone                    |
| 4-Chloroaniline                          | 2-Methylnaphthalene           |
| bis(2-Chloroethoxy)methane               | Naphthalene                   |
| bis(2-Chloroethyl)ether                  | 2-Nitroaniline                |
| bis(2-Chloroisopropyl)ether              | 3-Nitroaniline                |
| 1-Chloronaphthalene                      | 4-Nitroaniline                |
| 2-Chloronaphthalene                      | Nitrobenzene                  |
| 4-Chlorophenyl-phenylether               | N-Nitrosodiethylamine         |
| Chrysene                                 | N-Nitrosodimethylamine        |
| Dibenz(a,h)anthracene                    | N-Nitroso-di-n-propylamine    |
| Dibenzofuran                             | N-Nitrosodiphenylamine        |
| 1,2-Dichlorobenzene                      | Pentachlorobenzene            |
| 1,3-Dichlorobenzene                      | Phenanthrene                  |
| 1,4-Dichlorobenzene                      | Pyrene                        |
| 3,3'-Dichlorobenzidine                   | Pyridine                      |
| Diethyl phthalate                        | 1,2,4,5-Tetrachlorobenzene    |
|                                          | 1,2,4-Trichlorobenzene        |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 625 and 8270.

Contains a subset of the analytes in the required range 10-225 µg/L (except Benzidine at 200-1,000 µg/L).

**Catalog#: 711**

### Acids

|                            |                           |
|----------------------------|---------------------------|
| Benzoic Acid               | 3&4-Methylphenol          |
| 4-Chloro-3-methylphenol    | 2-Nitrophenol             |
| 2-Chlorophenol             | 4-Nitrophenol             |
| 2,4-Dichlorophenol         | Pentachlorophenol         |
| 2,6-Dichlorophenol         | Phenol                    |
| 2,4-Dimethylphenol         | 2,3,4,6-Tetrachlorophenol |
| 2,4-Dinitrophenol          | 2,4,5-Trichlorophenol     |
| 2-Methyl-4,6-dinitrophenol | 2,4,6-Trichlorophenol     |
| 2-Methylphenol             |                           |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 604, 625, 8041 and 8270

Contains a subset of the analytes listed at 30-200 µg/L.

**Catalog#: 712**

### Diesel Range Organics (DRO) in Water

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with modified EPA 8015 GC/FID methods.

Includes #2 Diesel in the EPA/NELAC required range 800-6,000 µg/L.

**Catalog#: 764**

### Low-Level Nitroaromatics & Nitramines

|                            |                       |
|----------------------------|-----------------------|
| 4-Amino-2,6-dinitrotoluene | 2-Nitrotoluene        |
| 2-Amino-4,6-dinitrotoluene | 3-Nitrotoluene        |
| 1,3-Dinitrobenzene         | 4-Nitrotoluene        |
| 2,4-Dinitrotoluene         | RDX                   |
| 2,6-Dinitrotoluene         | Tetryl                |
| HMX                        | 1,3,5-Trinitrobenzene |
| Nitrobenzene               | 2,4,6-Trinitrotoluene |

One 2 mL flame-sealed ampule yields up to 2 liters of sample after dilution.

Use with EPA methods 8330 and 8091 for explosive and explosive residue analytes.

Contains at least 80% of the EPA/NELAC analytes, randomly selected from the list above, in the required range 1-20 µg/L.

**Catalog#: 677**



**Low-Level PAHs**

|                      |                        |
|----------------------|------------------------|
| Acenaphthene         | Chrysene               |
| Acenaphthylene       | Dibenz(a,h)anthracene  |
| Anthracene           | Fluoranthene           |
| Benzo(a)anthracene   | Fluorene               |
| Benzo(b)fluoranthene | Indeno(1,2,3-cd)pyrene |
| Benzo(k)fluoranthene | Naphthalene            |
| Benzo(g,h,i)perylene | Phenanthrene           |
| Benzo(a)pyrene       | Pyrene                 |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA HPLC methods 610 and 8310 and GC-MS method 8270 SIM.

Contains at least 80% of the EPA/NELAC analytes, randomly selected from the list above, in the required range 0.5-20 µg/L.

**Catalog#: 715**

**PAHs - GC-GCMS**

|                      |                          |
|----------------------|--------------------------|
| Acenaphthene         | Chrysene                 |
| Acenaphthylene       | Dibenz(a,h)anthracene    |
| Anthracene           | Fluoranthene             |
| Benzo(a)anthracene   | Fluorene                 |
| Benzo(a)pyrene       | Indeno (1,2,3-cd) pyrene |
| Benzo(b)fluoranthene | Naphthalene              |
| Benzo(k)fluoranthene | Phenanthrene             |
| Benzo(g,h,i)perylene | Pyrene                   |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 625, 8100 and 8270.

Each standard contains a subset of the analytes listed at 10-200 µg/L.

**Catalog#: 4882**

**Pesticides****Organochlorine Pesticides**

|                     |                           |
|---------------------|---------------------------|
| Aldrin              | Dieldrin                  |
| alpha-BHC           | Endosulfan I              |
| beta-BHC            | Endosulfan II             |
| delta-BHC           | Endosulfan sulfate        |
| gamma-BHC (Lindane) | Endrin                    |
| alpha-Chlordane     | Endrin aldehyde           |
| gamma-Chlordane     | Endrin ketone             |
| 4,4'-DDD            | Heptachlor                |
| 4,4'-DDE            | Heptachlor epoxide (beta) |
| 4,4'-DDT            | Methoxychlor              |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 608 and 8081.

Contains a subset of the analytes listed at 1-20 µg/L.

**Catalog#: 713**

**Chlorodane**

One 2 mL flame-sealed ampule yields up to 2 liters of sample after dilution.

Use with EPA methods 608 and 8081.

Contains technical chlordane in the EPA/NELAC required range 3-25 µg/L.

**Catalog#: 716**

**Toxaphene**

One 2 mL flame-sealed ampule yields up to 2 liters of sample after dilution.

Use with EPA methods 608 and 8081.

Contains toxaphene in the EPA/NELAC at required range 20-100 µg/L.

**Catalog#: 717**

**Carbamate Pesticides**

|                    |                     |
|--------------------|---------------------|
| Aldicarb           | Diuron              |
| Aldicarb sulfone   | 3-Hydroxycarbofuran |
| Aldicarb sulfoxide | Methiocarb          |
| Baygon             | Methomyl            |
| Carbaryl           | Oxamyl (vydate)     |
| Carbofuran         | Propham             |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA method 632 for carbamates at 5-200 µg/L.

Contains a subset of the analytes 5-200 µg/L.

**Catalog#: 908**

## Nitrogen Pesticides

|                      |             |
|----------------------|-------------|
| Alachlor             | Hexazinon   |
| Ametryn              | Metolachlor |
| Anilazine            | Metribuzin  |
| Atraton              | Napropamide |
| Atrazine             | Prometon    |
| Bromacil             | Prometryn   |
| Butachlor            | Pronamide   |
| Butylate             | Propachlor  |
| Cyanazine            | Propazine   |
| Deethyl atrazine     | Simazine    |
| Deisopropyl atrazine | Terbacil    |
| Diaminoatrazine      | Trifluralin |
| EPTC (Eptam)         |             |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 619, 633, 8141 and 8270 for pesticides at 2-20 µg/L.

Contains a subset of the analytes from the list above at 2-20 µg/L.

**Catalog#: 674**

## Organophosphorus Pesticides (OPP)

|                           |                                |
|---------------------------|--------------------------------|
| Azinphos-methyl (Guthion) | Ethyl Parathion (Parathion)    |
| Carbophenothion           | Famphur                        |
| Chlorpyrifos              | Fonofos                        |
| Demeton O & S             | Malathion                      |
| Diazinon                  | Methyl parathion               |
| Dichlorvos (DDVP)         | Phorate                        |
| Dimethoate                | Phosmet                        |
| Dioxathion                | Ronnel                         |
| Disulfoton                | Stiropfos (tetrachlorovinphos) |
| Ethion                    | Terbufos                       |
| Ethoprop                  |                                |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 614, 622 and 8141.

Contains a subset of the analytes in the required range 2-20 µg/L.

**Catalog#: 665**



## QC Plus Standards

ERA's QC Plus program includes environmental analytes at concentrations that reflect realistic levels of pollutants in an industrial setting. Each sample level is designed for wastewater and industrial analysis. These QC samples are an asset to any quality assurance program because they enable you to test your internal systems to ensure that your equipment, methods, and analysts are producing quality data.

### QC Plus - Demand

#### Biochemical Oxygen Demand

(BOD) ..... 100-300 mg/L

Carbonaceous BOD ..... 87.0-256 mg/L

#### Chemical Oxygen Demand

(COD) ..... 150-500 mg/L

#### Total Organic Carbon

(TOC) ..... 50.0-200 mg/L

One screw-cap vial yields up to 1 liter after dilution.

Catalog#: 4013

### QC Plus - Hexavalent Chromium

Chromium, Hexavalent ..... 100-1,000 µg/L

One screw-cap vial yields up to 2 liters after dilution.

Catalog#: 4183

### QC Plus - Nutrients

Ammonia Nitrogen as N ..... 0.250-10.0 mg/L

Nitrate Nitrogen as N ..... 0.250-10.0 mg/L

Orthophosphate as P ..... 0.0500-10.0 mg/L

Total Kjeldahl Nitrogen ..... 0.250-10.0 mg/L

Total Phosphorus as P ..... 0.100-10.0 mg/L

Two screw-cap vials yield up to 2 liters each after dilution.

Catalog#: 4023

### QC Plus - Oil & Grease

Oil & Grease ..... 10.0-100 mg/L

One screw-cap vial yields up to 2 liters after dilution.

Catalog#: 4123

### QC Plus - pH

pH ..... 2.00-12.0 Units

One 250 mL whole-volume bottle is ready to analyze.

Catalog#: 4063

### QC Plus - Fluoride

Fluoride ..... 5-20 mg/L

One screw-cap vial yields up to 2 liters after dilution.

Catalog#: 4423

### QC Plus - Solids

Total Dissolved Solids at 180°C ..... 500-2,000 mg/L

Total Solids ..... 600-2,500 mg/L

Total Suspended Solids ..... 100-500 mg/L

One screw-cap vial yields up to 1 liter after dilution.

Catalog#: 4033

### QC Plus - Total Cyanide

Total Cyanide ..... 1.00-5.00 mg/L

One screw-cap vial yields up to 2 liters after dilution.

Catalog#: 4093

### QC Plus - Total Phenolics

Total Phenolics (4-AAP) ..... 0.0500-0.500 mg/L

One screw-cap vial yields up to 2 liters after dilution.

Catalog#: 4083

### QC Plus - Total Residual Chlorine

Total Residual Chlorine ..... 0.100-1.00 mg/L

One screw-cap vial yields up to 2 liters of solution after dilution.

Catalog#: #4103

### Disinfection By-Products

#### Chloral Hydrate

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA method 551.

Includes chloral hydrate in the EPA/NELAC required range, 4-30 µg/L.

**Catalog#: 676**

#### Haloacetic Acids (HAA)

|                        |                       |
|------------------------|-----------------------|
| Bromochloroacetic Acid | Monobromoacetic Acid  |
| Dibromoacetic Acid     | Monochloroacetic Acid |
| Dichloroacetic Acid    | Trichloroacetic Acid  |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA method 552.

Includes all the analytes above in the EPA/NELAC required range, 5-50 µg/L.

**Catalog#: 684**

### Volatile Organics

#### Gasoline Additives

tert-Amylmethylether (TAME)

tert-Butyl Alcohol

Di-isopropylether (DIPE)

Ethyl tert-butyl ether (ETBE)

Methyl tert-butyl ether (MTBE)

Trichlorofluoromethane (Freon® 11)

Trichlorotrifluoroethane (Freon® 113)

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA method 524.2 for gasoline additives/oxygenates.

Contains all of the analytes above, 5-50 µg/L.

**Catalog#: 909**

#### Halomethanes (THMs)

Bromodichloromethane

Chlorodibromomethane

Bromoform

Chloroform

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA methods 502.2, 524.2 and 551.

Contains all of the analytes above in the required range, 5-50 µg/L.

**Catalog#: 702**

#### Regulated Volatiles

Benzene

Methylene Chloride

Carbon tetrachloride

Styrene

Chlorobenzene

Tetrachloroethylene

1,2-Dichlorobenzene

Toluene

1,4-Dichlorobenzene

1,2,4-Trichlorobenzene

1,2-Dichloroethane

1,1,1-Trichloroethane

1,1-Dichloroethylene

1,1,2-Trichloroethane

cis-1,2-Dichloroethylene

Trichloroethylene

trans-1,2-Dichloroethylene

Vinyl Chloride

1,2-Dichloropropane

Xylenes, total

Ethylbenzene

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA methods 502.2 and 524.2.

Contains all of the analytes above in the EPA/NELAC required range, 2-50 µg/L.

**Catalog#: 703**

**Unregulated Volatiles**

|                         |                           |
|-------------------------|---------------------------|
| Bromobenzene            | 1,1-Dichloropropene       |
| Bromochloromethane      | cis-1,3-Dichloropropene   |
| Bromomethane            | trans-1,3 Dichloropropene |
| n-Butylbenzene          | Fluorotrichloromethane    |
| sec-Butylbenzene        | Hexachlorobutadiene       |
| tert-Butylbenzene       | Isopropylbenzene          |
| Chloroethane            | 4-Isopropyltoluene        |
| Chloromethane (MTBE)    | Methyl tert-butyl ether   |
| 2-Chlorotoluene         | Naphthalene               |
| 4-Chlorotoluene         | n-Propylbenzene           |
| Dibromomethane          | 1,1,1,2-Tetrachloroethane |
| 1,3-Dichlorobenzene     | 1,1,2,2-Tetrachloroethane |
| Dichlorodifluoromethane | 1,2,3-Trichlorobenzene    |
| 1,1-Dichloroethane      | 1,2,3-Trichloropropane    |
| 1,3-Dichloropropane     | 1,2,4-Trimethylbenzene    |
| 2,2-Dichloropropane     | 1,3,5-Trimethylbenzene    |

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA methods 502.2 and 524.2.

Contains at least 60% of the analytes randomly selected from the list above in the EPA/NELAC required range, 2-50 µg/L.

**Catalog#: 683**

**Pesticides****Pesticides**

|                           |                           |
|---------------------------|---------------------------|
| Alachlor                  | Hexachlorocyclopentadiene |
| Aldrin                    | Lindane (gamma-BHC)       |
| Atrazine                  | Methoxychlor              |
| Bromacil                  | Metolachlor               |
| Butachlor                 | Metribuzin                |
| Diazinon                  | Molinate (Ordram)         |
| Dieldrin                  | Prometon                  |
| Endrin                    | Propachlor                |
| Heptachlor                | Simazine                  |
| Heptachlor Epoxide (beta) | Thiobencarb               |
| Hexachlorobenzene         | Trifluralin               |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 505, 507, 508 and 525 for organochlorine, nitrogen and organophosphorus pesticides.

Each standard contains at least 14 analytes randomly selected from the list above in the required range 0.2-20 µg/L.

**Catalog#: 709**

**Carbamate/Carbamoxyl oxime Pesticides**

|                    |                     |
|--------------------|---------------------|
| Aldicarb           | Carbofuran          |
| Aldicarb sulfone   | 3-Hydroxycarbofuran |
| Aldicarb sulfoxide | Methiocarb          |
| Baygon             | Methomyl            |
| Carbaryl           | Oxamyl (Vydate)     |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 531.1, 531.2 and 632.

Each standard contains at least 8 analytes above in the EPA/NELAC required range 15-150 µg/L.

**Catalog#: 707**

**Chlorodane**

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 505, 508 and 525.

Each standard contains technical chlordane in the EPA/NELAC required range 2-20 µg/L.

**Catalog#: 705**



## Toxaphene

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 505, 508 and 525.

Each standard contains toxaphene in the EPA/NELAC required range 2-20 µg/L.

**Catalog#: 700**

## EDB/DBCP/TCP

1,2-Dibromo-3-Chloropropane (DBCP)

Ethylene Dibromide (EDB)

1,2,3-Trichloropropane (1,2,3-TCP)

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution.

Use with EPA methods 504 and 551.

Each lot contains all analytes above in the EPA/NELAC required range 0.05-2 µg/L.

**Catalog#: 706**

## Semivolatile Organics

### Dioxin

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 613, 1613, 8280 and 8290

Each standard contains 2,3,7,8-TCDD in the EPA/NELAC required range 20-100 µg/L.

**Catalog#: 663**

### PCBs as Decachlorobiphenyl

Aroclor 1016

Aroclor 1248

Aroclor 1221

Aroclor 1254

Aroclor 1232

Aroclor 1260

Aroclor 1242

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA quantitative method 508A.

This standard can also be used for Aroclor identification and quantification using EPA methods 505, 508, and 508.1.

Includes an Aroclor randomly selected from the list above in the EPA/NELAC required range 0.5-5 µg/L.

**Catalog#: 708**

### Semivolatiles #1

Acenaphthene

Diethylphthalate

Acenaphthylene

Dimethylphthalate

Anthracene

Di-n-octylphthalate

Benzo(a)anthracene

bis(2-Ethylhexyl)adipate

Benzo(b)fluoranthene

bis(2-Ethylhexyl)

Benzo(k)fluoranthene

phthalate

Benzo(g,h,i)perylene

Fluoranthene

Benzo(a)pyrene

Fluorene

Butylbenzylphthalate

Indeno(1,2,3-cd)pyrene

Chrysene

Naphthalene

Dibenz(a,h)anthracene

Phenanthrene

Di-n-butylphthalate

Pyrene

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 506, 525 and 550 for PAHs, phthalates and adipates.

Each standard contains Benzo(a)pyrene, Bis(2-ethylhexyl)adipate, Bis(2-ethylhexyl)phthalate plus at least 13 of the analytes randomly selected from the list above in the EPA/NELAC required range 0.2-50 µg/L.

**Catalog#: 690**

## Herbicides

### Chlorinated Acid Herbicides

|                       |                          |
|-----------------------|--------------------------|
| Acifluorfen           | 3,5-Dichlorobenzoic acid |
| Bentazon              | Dichloroprop             |
| Chloramben            | Dinoseb                  |
| 2,4-D                 | 4-Nitrophenol            |
| 2,4-DB                | Pentachlorophenol        |
| Dacthal diacid (DCPA) | Picloram                 |
| Dalapon               | 2,4,5-T                  |
| Dicamba               | 2,4,5-TP (Silvex)        |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 515.1, 515.2, 515.3, 515.4 and 555.

Includes at least 10 of the analytes above in the EPA/NELAC required range 1-120 µg/L.

**Catalog#: 704**

### Semivolatiles #2 Herbicides

|           |            |
|-----------|------------|
| Diquat    | Glyphosate |
| Endothall | Paraquat   |

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Use with EPA methods 547, 548, and 549.

Each standard contains all the analytes above in the EPA/NELAC required range 8-800 µg/L.

**Catalog#: 691**



## UCMR 2 Organics

### UCMR 2 Pesticides and Flame Retardants in Water

Dimethoate  
2,2',4,4',5-Pentabromodiphenyl ether (BDE-99)  
2,2',4,4',6-Pentabromodiphenyl ether (BDE-100)  
2,2',4,4',5,5'-Hexabromobiphenyl (245-HBB)  
2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE-153)  
Terbufos sulfone  
2,2',4,4'-Tetrabromodiphenyl ether (BDE-47)

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution.

Use with EPA method 527.

Each standard contains all analytes above at 0.5-10 µg/L after dilution.

**Catalog#: 151**

### UCMR 2 Nitrosamines in Water

N-Nitrosodiethylamine (NDEA)  
N-Nitrosodimethylamine (NDMA)  
N-Nitrosodi-n-butylamine (NDBA)  
N-Nitrosodi-n-propylamine (NDPA)  
N-Nitrosomethylethylamine (NMEA)  
N-Nitrosopyrrolidine (NPYR)

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution.

Use with EPA method 521.

Each standard contains all analytes above at 5-100 ng/L after dilution.

**Catalog#: 153**

### UCMR 2 Explosives in Water

1,3-Dinitrobenzene  
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)  
2,4,6-Trinitrotoluene (TNT)

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution.

Use with EPA method 529.

Each standard contains all analytes above at 1-15 µg/L after dilution.

**Catalog#: 152**

## UCMR 2 Chlorinated Pesticides in Water

Acetochlor  
Alachlor  
Metolachlor

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution.

Use with EPA method 525.2.

Each standard contains all analytes above at 1-20 µg/L after dilution.

**Catalog#: 154**

## UCMR 2 Herbicide Degradates in Water

Acetochlor ethane sulfonic acid (ESA)  
Acetochlor oxanilic acid (OA)  
Alachlor ethane sulfonic acid (ESA)  
Alachlor oxanilic acid (OA)  
Metolachlor ethane sulfonic acid (ESA)  
Metolachlor oxanilic acid (OA)

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution.

Use with EPA method 535.

Each standard contains all analytes above at 1-20 µg/L after dilution.

**Catalog#: 155**





# International Standards

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# International Standards

SPEX CertiPrep offers standards for global applications. Around the world, analytical labs are required to meet their countries requirements for environmental and safety testing. SPEX CertiPrep prides itself as being a standards provider for the international market.

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## QuEChERS Kits

Meeting all of your QuEChERS needs with general purpose kits for EN Method 15662 suitable for removal of polar organic acids, some low to moderate levels of sugars and lipids.

### QuEChERS Citrate Buffered Extraction Tubes (15 mL - 50 Pack)

#### Contents:

4 g  $\text{MgSO}_4$   
1 g NaCl, 0.5 g sodium citrate dibasic sesquihydrate  
1 g sodium citrate tribasic dihydrate  
(Kit includes 50 empty 50mL tubes)

1 mL @ 2,000  $\mu\text{g/mL}$  in Methanol

Catalog#: EN-CIT-50ML

### QuEChERS PSA Dispersive SPE Clean-Up Tubes (15 mL - 50 Pack)

#### Contents:

150 mg PSA  
900 mg  $\text{MgSO}_4$

Catalog#: EN-PSA-15ML

### QuEChERS PSA Dispersive SPE Clean-Up Tubes (2 mL - 100 Pack)

#### Contents:

25 mg PSA  
150 mg  $\text{MgSO}_4$

Catalog#: EN-PSA-2ML

## Netherlands

### PCB Congeners Mix for NEN 5734 Dutch 7

#### Components:

|                                      |                  |
|--------------------------------------|------------------|
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | CAS#: 35065-29-3 |
| 2,2',3,4,4',5'-Hexachlorobiphenyl    | 35065-28-2       |
| 2,2',4,4',5,5'-Hexachlorobiphenyl    | 35065-27-1       |
| 2,2',4,5,5'-Pentachlorobiphenyl      | 37680-73-2       |
| 2,2',5,5'-Tetrachlorobiphenyl        | 35693-99-3       |
| 2,3',4,4',5-Pentachlorobiphenyl      | 31508-00-6       |
| 2,4,4'-Trichlorobiphenyl             | 7012-37-5        |

**Volume:** 1mL in Isooctane

**Concentration:** 10  $\mu\text{g/mL}$

**Method:** NEN-5734, EPA 8082

**Catalog#:** PCB-DUTCH7



## Spain

### 4-Component Organic Standard

#### 1 mL Ampule:

|                             | CAS#:     |
|-----------------------------|-----------|
| Aldrin                      | 309-00-2  |
| Dieldrin                    | 60-57-1   |
| Heptachlor                  | 76-44-8   |
| Heptachlor-2, 3-exo-epoxide | 1024-57-3 |

**Concentration:** 1 µg/mL in Methanol

**Catalog#:** 140-2003-C

### 7-Component Organic Standard

#### 1 mL Ampule:

|                      | CAS#:    |
|----------------------|----------|
| Bromodichloromethane | 75-27-4  |
| Bromoform            | 75-25-2  |
| Chloroform           | 67-66-3  |
| Dibromochloromethane | 124-48-1 |
| Trichloroethene      | 79-01-6  |
| Tetrachloroethene    | 127-18-4 |
| 1,2-Dichloroethene   | 107-06-2 |

**Concentration:** 1 µg/mL in Methanol

**Catalog#:** 140-2003-D

### 2-Component Organic Standard

#### 1 mL Ampule:

|                | CAS#:   |
|----------------|---------|
| Benzene        | 71-43-2 |
| Benzo(a)pyrene | 50-32-8 |

**Concentration:** 1 µg/mL in Methanol

**Catalog#:** 140-2003-E

### 4-Component Organic Standard

#### 1 mL Ampule:

|                         | CAS#:    |
|-------------------------|----------|
| Benzo(b)fluoranthene    | 205-99-2 |
| Benzo(g,h,i)perylene    | 191-24-2 |
| Benzo(k)fluoranthene    | 207-08-9 |
| Indeno(1,2,3-c,d)pyrene | 193-39-5 |

**Concentration:** 1 µg/mL in Methanol

**Catalog#:** 140-2003-F

## Brazil

The Safety and testing of water supplies in the world is of critical importance in many countries. In Brazil, the Brazilian national Environmental Council (Conselho Nacional do Meio Ambiente; "CONAMA") is responsible for the monitoring of wastewater and effluent discharges under Resolution 430. Resolution 430 implements a new testing and monitoring standard for environmental testing laboratories. Drinking water regulations in Brazil are governed by Portaria 2.914 which is the regulation that provides for the control and monitoring procedures of the quality of water intended for human consumption.

### 2-Component Organic Standard

#### Components:

|                                       | CAS#:   |
|---------------------------------------|---------|
| 2,4-D(2,4-Dichlorophenoxyacetic acid) | 94-75-7 |
| 2,4,5-Trichlorophenoxy acetic acid    | 93-76-5 |

**Concentration:** 1000 µg/mL in Acetone

**Catalog#:** POR-2914-A

### 16-Component Organic Standard

#### 1 mL Ampule:

|                    | CAS#:      |
|--------------------|------------|
| Alachlor           | 15972-60-8 |
| Aldrin             | 309-00-2   |
| alpha-BHC          | 319-84-6   |
| beta-BHC           | 319-85-7   |
| delta-BHC          | 319-86-8   |
| gamma-BHC          | 58-89-9    |
| alpha-Chlordane    | 5103-71-9  |
| gamma-Chlordane    | 5103-74-2  |
| Dieldrin           | 60-57-1    |
| p,p'-DDT           | 50-29-3    |
| p,p'-DDD           | 72-54-8    |
| p,p'-DDE           | 72-55-9    |
| Endosulfan I       | 959-98-8   |
| Endosulfan II      | 33213-65-9 |
| Endosulfan sulfate | 1031-07-8  |
| Endrin             | 72-20-8    |

**Concentration:** 1000 µg/mL in Acetone

**Catalog#:** POR-2914-B

**21-Component Organic Standard****1 mL Ampule:****CAS#:**

|                           |             |
|---------------------------|-------------|
| Aldicarb                  | 116-06-3    |
| Aldicarb sulfone          | 1646-88-4   |
| Aldicarb sulfoxide        | 1646-87-3   |
| Atrazine                  | 1912-24-9   |
| Benomyl                   | 17804-35-2  |
| Carbendazim               | 10605-21-7  |
| Carbofuran                | 1563-66-2   |
| Chlorpyrifos              | 2921-88-2   |
| Chlorpyrifos Oxon         | 5598-15-2   |
| Diuron                    | 330-54-1    |
| Folicur                   | 107534-96-3 |
| Methamidophos             | 10265-92-6  |
| Methyl parathion          | 298-00-0    |
| Metolachlor               | 51218-45-2  |
| Molinate                  | 2212-67-1   |
| Permethrin (t=53%; c=46%) | 52645-53-1  |
| Profenofos                | 41198-08-7  |
| Prowl (Pendimethalin)     | 40487-42-1  |
| Simazine                  | 122-34-9    |
| Terbufos                  | 13071-79-9  |
| Trifluralin               | 1582-09-8   |

**Concentration:** 100 µg/mL in Acetone:Methanol**Catalog#:** POR-2914-C**9-Component Organic Standard****1 mL Ampule:****CAS#:**

|                          |            |
|--------------------------|------------|
| Bromoacetic acid         | 79-08-3    |
| Bromochloroacetic acid   | 5589-96-8  |
| Bromodichloroacetic acid | 71133-14-7 |
| Chloroacetic acid        | 79-11-8    |
| Dalapon                  | 75-99-0    |
| Dibromoacetic acid       | 631-64-1   |
| Dichloroacetic acid      | 79-43-6    |
| Tribromoacetic acid      | 75-96-7    |
| Trichloroacetic acid     | 76-03-9    |

**Concentration:** 1000 µg/mL in MTBE**Catalog#:** POR-2914-D**18-Component Organic Standard****1 mL Ampule:****CAS#:**

|                            |          |
|----------------------------|----------|
| Acrylamide                 | 79-06-1  |
| Benzene                    | 71-43-2  |
| Benzo(a)pyrene             | 50-32-8  |
| Carbon tetrachloride       | 56-23-5  |
| 1,2-Dichloroethane         | 107-06-2 |
| 1,1-Dichloroethene         | 75-35-4  |
| cis-1,2-Dichloroethene     | 156-59-2 |
| trans-1,2-Dichloroethene   | 156-60-5 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 |
| Methylene chloride         | 75-09-2  |
| Pentachlorophenol          | 87-86-5  |
| Styrene                    | 100-42-5 |
| Tetrachloroethene          | 127-18-4 |
| 1,2,4-Trichlorobenzene     | 120-82-1 |
| 1,3,5-Trichlorobenzene     | 108-70-3 |
| 1,2,3-Trichlorobenzene     | 87-61-6  |
| Trichloroethene            | 79-01-6  |
| Vinyl chloride             | 75-01-4  |

**Concentration:** 1000 µg/mL in Methanol**Catalog#:** POR-2914-E**2-Component Organic Standard****1 mL Ampule:****CAS#:**

|                             |           |
|-----------------------------|-----------|
| Aminomethyl phosphonic acid | 1066-51-9 |
| Glyphosate                  | 1071-83-6 |

**Concentration:** 1000 µg/mL in DI Water**Catalog#:** POR-2914-F

## 19-Component Organic Standard

### 1 mL Ampule:

|                               | CAS#:      |
|-------------------------------|------------|
| Alachlor                      | 15972-60-8 |
| Aldrin                        | 309-00-2   |
| alpha-Chlordane               | 5103-71-9  |
| Dieldrin                      | 60-57-1    |
| Endosulfan I                  | 959-98-8   |
| Endosulfan II                 | 33213-65-9 |
| Endosulfan sulfate            | 1031-07-8  |
| Endrin                        | 72-20-8    |
| gamma-BHC                     | 58-89-9    |
| gamma-Chlordane               | 5103-74-2  |
| Heptachlor                    | 76-44-8    |
| Heptachlor epoxide (Isomer B) | 1024-57-3  |
| Methoxychlor                  | 72-43-5    |
| Metolachlor                   | 51218-45-2 |
| p,p'-DDD                      | 72-54-8    |
| p,p'-DDE                      | 72-55-9    |
| p,p'-DDT                      | 50-29-3    |
| Toxaphene                     | 8001-35-2  |
| Trifluralin                   | 1582-09-8  |

**Concentration:** 2000 µg/mL in Benzene

**Catalog#:** CON-430-A

## 3-Component Organic Standard

### 1 mL Ampule:

|             | CAS#:     |
|-------------|-----------|
| Carbaryl    | 63-25-2   |
| Demeton O+S | 8065-48-3 |
| Malathion   | 121-75-5  |

**Concentration:** 2000 µg/mL in Methylene Chloride

**Catalog#:** CON-430-B

## Trihalomethanes

### 1 mL Ampule:

|                      | CAS#:    |
|----------------------|----------|
| Bromodichloromethane | 75-27-4  |
| Bromoform            | 75-25-2  |
| Chloroform           | 67-66-3  |
| Dibromochloromethane | 124-48-1 |

**Concentration:** 200 µg/mL in Methanol

**Catalog#:** THM-X

## BTEX Standard

### 1 mL Ampule:

|              | CAS#:    |
|--------------|----------|
| Benzene      | 71-43-2  |
| Ethylbenzene | 100-41-4 |
| Toluene      | 108-88-3 |
| m-Xylene     | 108-38-3 |
| o-Xylene     | 95-47-6  |
| p-Xylene     | 106-42-3 |

**Concentration:** 200 µg/mL in Methanol

**Catalog#:** BTEX

## PAH Analyte Mix in Acetonitrile

| Component               | Concentration | CAS#     |
|-------------------------|---------------|----------|
| Acenaphthene            | 1000 µg/mL    | 83-32-9  |
| Acenaphthylene          | 1000 µg/mL    | 208-96-8 |
| Anthracene              | 50 µg/mL      | 120-12-7 |
| Benz(a)anthracene       | 1 µg/mL       | 56-55-3  |
| Benzo(b)fluoranthene    | 1 µg/mL       | 205-99-2 |
| Benzo(k)fluoranthene    | 1 µg/mL       | 207-08-9 |
| Benzo(a)pyrene          | 5 µg/mL       | 50-32-8  |
| Benzo(g,h,i)perylene    | 5 µg/mL       | 191-24-2 |
| Chrysene                | 50 µg/mL      | 218-01-9 |
| Dibenz(a,h)anthracene   | 10 µg/mL      | 53-70-3  |
| Fluoranthene            | 5 µg/mL       | 206-44-0 |
| Fluorene                | 100 µg/mL     | 86-73-7  |
| Indeno(1,2,3-c,d)pyrene | 10 µg/mL      | 193-39-5 |
| Naphthalene             | 1000 µg/mL    | 91-20-3  |
| Phenanthrene            | 50 µg/mL      | 85-01-8  |
| Pyrene                  | 50 µg/mL      | 129-00-0 |

**Catalog#:** 550-A

## Aroclor Mix 1

### 1 mL Ampule:

|              | CAS#:      |
|--------------|------------|
| Aroclor 1016 | 12674-11-2 |
| Aroclor 1232 | 11141-16-5 |
| Aroclor 1248 | 12672-29-6 |
| Aroclor 1260 | 11096-82-5 |

**Concentration:** 200 µg/mL in Hexane

**Catalog#:** PCB-M1

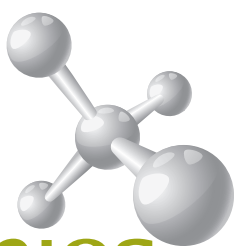
## Aroclor Mix 2

### 1 mL Ampule:

|              | CAS#:      |
|--------------|------------|
| Aroclor 1221 | 11104-28-2 |
| Aroclor 1242 | 53469-21-9 |
| Aroclor 1254 | 11097-69-1 |

**Concentration:** 200 µg/mL in Hexane

**Catalog#:** PCB-M2



# SPEXOrganics

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# Organic

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