

# Pesticide Standards Reference Guide



AccuStandard®

# Over 6,000 Standards from Abamectin to Ziram

## Welcome to AccuStandard's Pesticide Desk Reference Guide

This guide includes the following for each individual Pesticide:

- Chemical name
- Structure
- CAS number
- Molecular formula
- Molecular weight
- Physical state

Included for most:

- Solvent solubility
- Specific gravity
- Melting or Boiling point
- Flash point
- Common Synonyms

A CAS number index is included for easy reference on page 75.

700 pesticides are available as single component solutions and neats. Also included are standards for over 50 EPA and international methods.



Master Catalog

AccuStandard is recognized for the widest range of Reference Standards.

### Organics

- QC Standards
- PCBs
- PBDEs
- Dioxins
- PAHs
- Pesticides
- VOCs
- Phthalates
- Explosives
- Fuels & Hydrocarbons
- Plastic Additives
- Allergens
- Dyes
- EPA Methods
- Petrochemicals
- (including 100 ASTM methods)
- Custom Formulations and much more.

### Inorganics

- ICP
- ICP/MS
- AA
- Ion Chrom
- EPA Methods
- Wet Chemistry
- OrganoMetallics

ISO 17025  
Accredited

ISO  
34  
GUIDE

ISO 9001  
Certified



# Table of Contents

|                                                 |                |
|-------------------------------------------------|----------------|
| <b>Individual Neats and Solutions</b>           | <b>1-74</b>    |
| <b>CAS Number Index</b>                         | <b>75</b>      |
| <b>Triazines and Metabolites</b>                | <b>76</b>      |
| <b>Pesticide &amp; Herbicide Kits</b>           | <b>77</b>      |
| <b>EPA Pesticide Method - Table of Content</b>  | <b>78</b>      |
| <b>CLPs</b>                                     | <b>79</b>      |
| <b>EPA Method 500 Series</b>                    | <b>79-88</b>   |
| <b>EPA Method 600 Series</b>                    | <b>89-92</b>   |
| <b>EPA Method 1300 Series</b>                   | <b>93</b>      |
| <b>EPA Method 1600 Series</b>                   | <b>94-97</b>   |
| <b>EPA Method 8000 Series</b>                   | <b>98-104</b>  |
| <b>EU Methods and other Methodologies</b>       | <b>105-108</b> |
| <b>ISO Guide 34 with Scope of Accreditation</b> | <b>109-110</b> |

**Contact us for Synthesis of rare Pesticides and Metabolites**



**Visit our website to search for additional pesticide formulations or  
contact our Technical Service Department**

# Purchasing Pesticide Standards

## Buying an Analytical Reference Standard in Solution Rather than Making it from Neats

Good scientific operations, and also many auditors, urge analytical chemists to purchase analytical reference standards from a manufacturer of standards that is accredited to ISO 17025. There are three reasons for this:

1. **Safety** - Using solutions rather than neats reduces the laboratory personnel's intensity and frequency of exposure to chemicals. The less time a person is exposed to chemicals, the less risk for accidents. Further, neats are usually not fully consumed in a single use, rather, they are partially used, then stored, and then used again. This increases the potential for exposure from the chemical (as well as the risk of contamination, cost of expired dates and disposal and other risks).
2. **Certification** - AccuStandard is accredited to quality certifications including ISO 9001:2008, ISO/IEC 17025 and ISO Guide 34 for producing and certifying chemical reference standards. In addition, the customer's ISO certification and laboratory procedures often require that an independent party manufacture calibration standards (rather than being manufactured by the customer's laboratory). This promotes sound scientific conclusions and true independence of standards.
3. **Savings** - Even if a larger amount of a neat is the same price as the same chemical in solution, using the neat compound is not cheaper than using solutions. Dilution and sample preparation time is required.

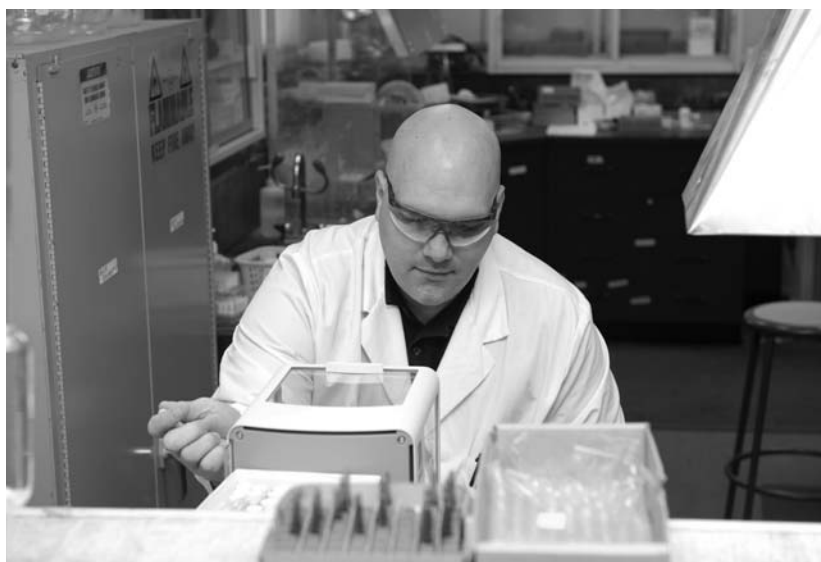
## Purchasing Neat Pesticides

There are two ways to purchase neat standards: 1) exact weight and 2) nominal weight. With exact weight, the standards will ship with the exact weight (to 3 significant figures) taped on the label over the nominal weight. For example, the label on a vial of 5 milligrams of a neat will have the nominal weight (5 mg) printed on the label. Over it will be taped the printout from the balance indicating the exact weight (for example, 0.005 g). There is a small additional charge for this service. To order, indicate on the order "X-WT" as a separate line item under the catalog number of the neat you wish to purchase.

If "X-WT" is not specified on the order, the neat standards ship with a nominal weight shown on the label. AccuStandard routinely overfills each vial by up to 10%.

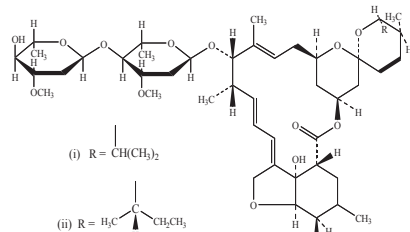
### Transferring Small Amounts of Neats, the procedure is as follows:

1. Wipe the outside of the vial (containing the Standard) clean and dry (including the cap).
2. Weigh the entire unit on an analytical balance. Record the weight to the nearest 0.1 mg.
3. Carefully transfer the contents to a volumetric flask using a suitable solvent. Rinse the cap and vial several times to assure a complete transfer.
4. Dry inside and outside of the vial and cap with mild heat or inert gas.
5. Weigh the empty dry vial and cap on the same analytical balance to the nearest 0.1 mg. The difference is amount of material transferred.





## Abamectin

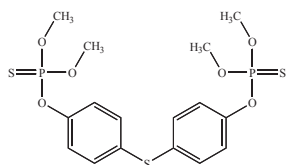


**CAS** 71751-41-2 **MF** C<sub>48</sub>H<sub>72</sub>O<sub>14</sub> / C<sub>47</sub>H<sub>70</sub>O<sub>14</sub>  
**MW** 873.09 / 859.06 **PS** S **SOL** T, A, IPA  
**SG** 1.18 g/cm<sup>3</sup> **MP** 165 °C **BP** N/A **FP** >150 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-615N   | 10 mg |
| 100 µg/mL in MeOH | P-615S   | 1 mL  |

## Abate

O,O,O'-Tetramethyl O,O'-thiodi-p-phenylene bis(phosphorothioate)



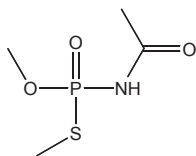
**CAS** 3383-96-8 **MF** C<sub>16</sub>H<sub>20</sub>O<sub>6</sub>P<sub>2</sub>S<sub>3</sub> **MW** 466.47  
**PS** S **SOL** H **SG** 1.32 g/cm<sup>3</sup> **MP** 30 °C **BP** 120 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-101N   | 10 mg |
| 100 µg/mL in MeOH | P-101S   | 1 mL  |

**Acarol** see **Bromopropylate**  
**Accent** see **Nicosulfuron**

## Acephate

O,S-Dimethyl acetylphosphoramidothioate



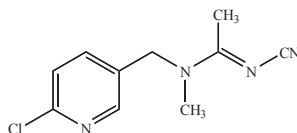
**CAS** 30560-19-1 **MF** C<sub>4</sub>H<sub>10</sub>NO<sub>3</sub>PS **MW** 183.17  
**PS** S **SG** 1.35 g/cm<sup>3</sup> **MP** 88 °C **BP** N/A **FP** N/A

| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-200N   | 10 mg |
| 100 µg/mL in Acetone | P-200S-A | 1 mL  |

Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.

## Acetamiprid

N-((6-chloro-3-pyridinyl)methyl)-N'-cyano-N-methylethanimidamide

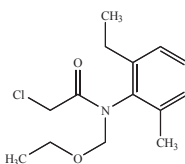


**CAS** 135410-20-7 **MF** C<sub>10</sub>H<sub>11</sub>ClN<sub>4</sub> **MW** 222.67  
**PS** S **SOL** H, D, A **SG** 1.33 g/cm<sup>3</sup> **MP** 98 - 99 °C  
**BP** ~350 °C **FP** 167 °C

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-820S-CN | 1 mL |

## Acetochlor

2-Chloro-N-ethoxymethyl-6'-ethylacet-o-toluidide

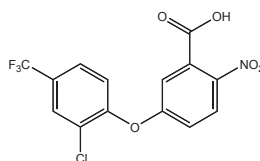


**CAS** 34256-82-1 **MF** C<sub>14</sub>H<sub>20</sub>ClNO<sub>2</sub> **MW** 269.77  
**PS** L **SOL** MeOH, A, EA **SG** 1.12 g/cm<sup>3</sup> **MP** 11 °C  
**BP** 172 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-465N   | 10 mg |
| 100 µg/mL in MeOH | P-465S   | 1 mL  |

## Acifluorfen Δ

5-(2-Chloro-alpha,alpha,alpha-trifluoro-o-tolyloxy)-2-nitrobenzoic acid

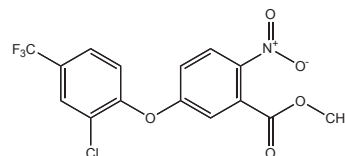


**CAS** 50594-66-6 **MF** C<sub>14</sub>H<sub>6</sub>ClF<sub>3</sub>NO<sub>5</sub> **MW** 383.65  
**PS** S **SOL** A, H **SG** 1.47 g/cm<sup>3</sup> **MP** 124 - 125 °C  
**BP** 422 °C **FP** 209 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-245N    | 10 mg |
| 100 µg/mL in MeOH | P-245S    | 1 mL  |
| 100 µg/mL in AcCN | P-245S-CN | 1 mL  |

## Acifluorfen methyl ester

Methyl 5-(2-Chloro-alpha,alpha,alpha-trifluoro-o-tolyloxy)-2-nitrobenzoate

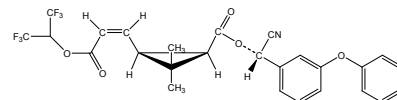


**CAS** 50594-67-7 **MF** C<sub>15</sub>H<sub>9</sub>ClF<sub>3</sub>NO<sub>5</sub> **MW** 375.69  
**PS** S **SG** 1.47 g/cm<sup>3</sup> **MP** N/A **BP** 392 °C  
**FP** 191 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-246N   | 10 mg |
| 100 µg/mL in MeOH | P-246S   | 1 mL  |

## Acrinathrin

(S)-(alpha)-cyano-3-phenoxybenzyl (Z)-(1R,3S)-2,2-dimethyl-3-[2-(2,2,2-trifluoro-1-trifluoromethylethoxy-carbonyl)vinyl]cyclopropanecarboxylate



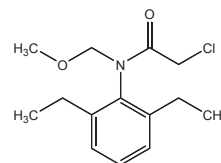
**CAS** 101007-06-1 **MF** C<sub>26</sub>H<sub>21</sub>F<sub>6</sub>NO<sub>5</sub> **MW** 541.44  
**PS** S **SOL** H, E, A **SG** 1.38 g/cm<sup>3</sup> **MP** 81 °C  
**BP** ~230 °C **FP** >230 °C

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-842S-CN | 1 mL |

**Admiral** see **Pyriproxyfen**  
**Affirm** see **Abamectin**  
**Agritox** see **Trichloronate**

## Alachlor

2-Chloro-2',6'-diethyl-N-methoxymethylacetanilide



**CAS** 15972-60-8 **MF** C<sub>14</sub>H<sub>20</sub>ClNO<sub>2</sub> **MW** 269.77  
**PS** S **SG** 1.12 g/cm<sup>3</sup> **MP** 39 - 42 °C **BP** 404 °C  
**FP** 198 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-102N   | 10 mg |
| 100 µg/mL in MeOH | P-102S   | 1 mL  |

### Property Key

**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

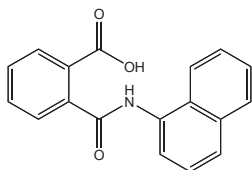
**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water



# Pesticide Standards

## Alanap

Sodium 2-[(1-naphthalenylamino)carbonyl]benzoate

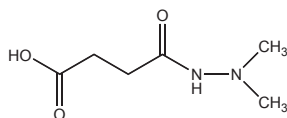


**CAS** 132-66-1 **MF** C<sub>18</sub>H<sub>13</sub>NO<sub>3</sub> **MW** 291.32 **PS** S  
**SOL** DMSO, A **SG** 1.40 g/cm<sup>3</sup> **MP** 203 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-274N   | 10 mg |
| 100 µg/mL in MeOH | P-274S   | 1 mL  |

## Alar (SADH)

N-Dimethylaminosuccinic acid

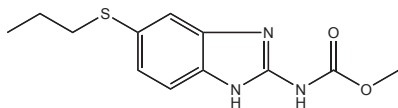


**CAS** 1596-84-5 **MF** C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub> **MW** 160.2 **PS** S  
**SOL** MeOH, CN **SG** 1.18 g/cm<sup>3</sup> **MP** 154 - 156 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-174N   | 10 mg |
| 100 µg/mL in MeOH | P-174S   | 1 mL  |

## Albendazole

Methyl-5-(propylthio)-2-benzimidazolecarbamate

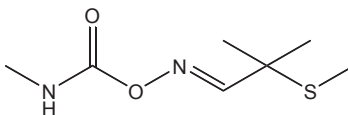


**CAS** 54965-21-8 **MF** C<sub>12</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub>S **MW** 265.33  
**PS** S **SG** 1.30 g/cm<sup>3</sup> **MP** 215 °C **BP** 473 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-498N   | 10 mg |
| 100 µg/mL in MeOH | P-498S   | 1 mL  |

## Aldicarb

2-Methyl-2-(methylthio)propionaldehyde O-methylcarbamoyloxime

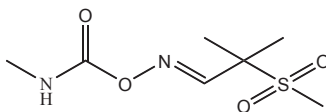


**CAS** 116-06-3 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 190.29 **PS** S  
**SOL** A, D **SG** 1.20 g/cm<sup>3</sup> **MP** 99 °C **BP** N/A  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-001N   | 10 mg |
| 100 µg/mL in MeOH | P-001S   | 1 mL  |

## Aldicarb sulfone

2-Methyl-2-(methylsulfonyl)propanal O-[(methylamino)carbonyl]-oxime

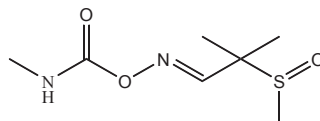


**CAS** 1646-88-4 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>4</sub>S **MW** 222.26  
**PS** S **SG** 1.23 g/cm<sup>3</sup> **MP** 132 - 135 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-130N   | 10 mg |
| 100 µg/mL in MeOH | P-130S   | 1 mL  |

## Aldicarb sulfoxide

2-Methyl-2-(methylsulfinyl)propanal o-[(methylamino)carbonyl]



**CAS** 1646-87-3 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 206.26  
**PS** S **SG** 1.21 g/cm<sup>3</sup> **MP** N/A **BP** N/A **FP** N/A

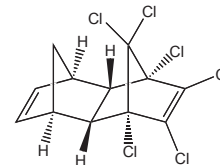
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-131N   | 10 mg |
| 100 µg/mL in MeOH | P-131S   | 1 mL  |

## Aldoxycarb

see Aldicarb sulfone

## Aldrin

1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-exo-1,4-endo-5,8-dimethanonaphthalene

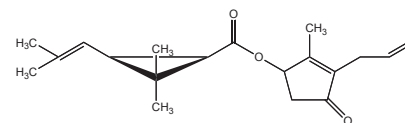


**CAS** 309-00-2 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub> **MW** 364.9 **PS** S  
**SG** 1.73 g/cm<sup>3</sup> **MP** 104 °C **BP** 385 °C **FP** 186 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-002N   | 10 mg |
| 100 µg/mL in MeOH | P-002S   | 1 mL  |

## Allethrin

(RS)-3-allyl-2-methyl-4-oxocyclopent-2-enyl(1RS,3RS;1RS,3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate



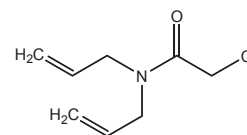
**CAS** 584-79-2 **MF** C<sub>19</sub>H<sub>26</sub>O<sub>3</sub> **MW** 302.45 **PS** L  
**SOL** MeOH, H **SG** 1.00 g/cm<sup>3</sup> **MP** N/A **BP** 160 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-267N   | 10 mg |
| 100 µg/mL in MeOH | P-267S   | 1 mL  |

*d-trans-Allethrin* see Bioallethrin *d-trans-allethrin*

## Allidochlor

2-chloro-N,N-di(prop-2-enyl)acetamide



**CAS** 93-71-0 **MF** C<sub>8</sub>H<sub>12</sub>ClNO **MW** 173.66  
**PS** L **SG** 1.09 g/cm<sup>3</sup> **MP** N/A **BP** 241 °C  
**FP** 100 °C

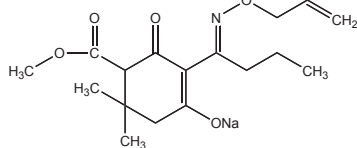
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-670N   | 10 mg |
| 100 µg/mL in MeOH | P-670S   | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



## Alloxydim-sodium

3-(1-(Allyloxyamino)butylidene)-6,6-dimethyl-2,4-dioxocyclohexanecarboxylic acid, methyl ester, sodium salt



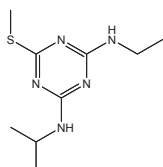
**CAS** 55635-13-7 **MF** C<sub>17</sub>H<sub>24</sub>NO<sub>5</sub>Na **MW** 345.41  
**PS** S **SOL** MeOH **SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-510N   | 10 mg |
| 100 µg/mL in MeOH | P-510S   | 1 mL  |

**Alphamethrin** see *a-Cypermethrin*  
**Amber** see *Triasulfuron*  
**Ampro** see *Hydramethylnon*

## Ametryn

N<sub>2</sub>-Ethyl-N<sub>4</sub>-isopropyl-6-methylthio-1,3,5-triazine-2,4-diamine



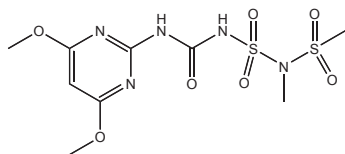
**CAS** 834-12-8 **MF** C<sub>9</sub>H<sub>17</sub>N<sub>5</sub>S **MW** 227.33 **PS** S  
**SOL** A, MeOH, T **SG** 1.18 g/cm<sup>3</sup> **MP** 86 °C  
**BP** 337 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-003N   | 10 mg |
| 100 µg/mL in MeOH | P-003S   | 1 mL  |

**Amiben** see *Chloramben*

## Amidosulfuron

1-(4,6-dimethoxypyrimidin-2-yl)-3-mesyl(methyl)sulfamoylurea



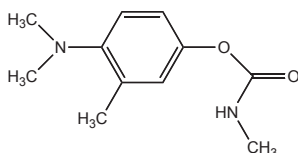
**CAS** 120923-37-7 **MF** C<sub>9</sub>H<sub>15</sub>N<sub>5</sub>O<sub>5</sub>S<sub>2</sub> **MW** 369.38  
**PS** S **SOL** A, IPA, MeOH **SG** 1.50 g/cm<sup>3</sup>  
**MP** 160 - 163 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-821N    | 10 mg |
| 100 µg/mL in AcCN | P-821S-CN | 1 mL  |

Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.

## Aminocarb

4-Dimethylamino-m-tolyl methylcarbamate

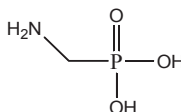


**CAS** 2032-59-9 **MF** C<sub>11</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub> **MW** 208.29  
**PS** S **SG** 1.10 g/cm<sup>3</sup> **MP** 93 - 94 °C **BP** 307 °C  
**FP** 140 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-062N   | 10 mg |
| 100 µg/mL in MeOH | P-062S   | 1 mL  |

## Aminomethyl phosphonic acid

Aminomethylphosphonic acid

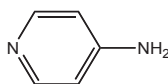


**CAS** 1066-51-9 **MF** CH<sub>6</sub>NO<sub>3</sub>P **MW** 111.04  
**PS** S **SG** 1.64 g/cm<sup>3</sup> **MP** 61 - 62 °C **BP** 358 °C  
**FP** 170 °C

| Matrix             | Cat. No. | Unit  |
|--------------------|----------|-------|
| Neat               | P-625N   | 10 mg |
| 100 µg/mL in Water | P-625S   | 1 mL  |

## 4-Aminopyridine

4-Aminopyridine

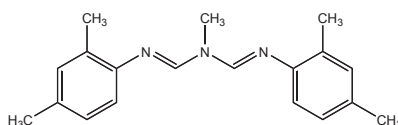


**CAS** 504-24-5 **MF** C<sub>5</sub>H<sub>6</sub>N<sub>2</sub> **MW** 94.12  
**PS** S **SG** N/A **MP** 160 - 162 °C **BP** 273 °C  
**FP** 156 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-407N   | 10 mg |
| 100 µg/mL in MeOH | P-407S   | 1 mL  |

## Amitraz Δ

N-Methylbis(2,4-xylyliminomethyl)amine



**CAS** 33089-61-1 **MF** C<sub>19</sub>H<sub>23</sub>N<sub>3</sub> **MW** 293.45 **PS** S  
**SOL** T, A **SG** 0.98 g/cm<sup>3</sup> **MP** 86 °C **BP** N/A **FP** N/A

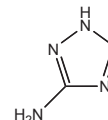
| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-409N    | 10 mg |
| 100 µg/mL in AcCN | P-409S-CN | 1 mL  |

**Amitrol**

see *4-Aminopyridine*

## Amitrole (ATA)

Amino-1,2,4-triazole

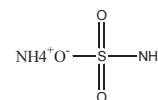


**CAS** 61-82-5 **MF** C<sub>2</sub>H<sub>3</sub>N<sub>3</sub> **MW** 384.1 **PS** S  
**SOL** MeOH, EA, D **SG** 1.14 g/cm<sup>3</sup> **MP** 154 - 159 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-103N   | 10 mg |
| 100 µg/mL in MeOH | P-103S   | 1 mL  |

## Ammonium sulfamate

Ammonium sulfamate

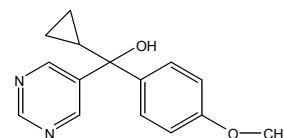


**CAS** 7773-06-0 **MF** H<sub>6</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 114.1 **PS** S  
**SOL** W **SG** 1.01 g/cm<sup>3</sup> **MP** 132 - 135 °C  
**BP** 160 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-530N   | 10 mg |
| 100 µg/mL in MeOH | P-530S   | 1 mL  |

## Ancymidol

alpha-Cyclopropyl-4-methoxy-alpha-(pyrimidin-5-yl)benzyl alcohol

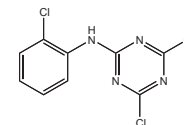


**CAS** 12771-68-5 **MF** C<sub>15</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub> **MW** 256.3 **PS** S  
**SOL** MeOH, A, H **SG** 1.26 g/cm<sup>3</sup> **MP** 110 - 111 °C  
**BP** 442 °C **FP** 221 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-410N   | 10 mg |
| 100 µg/mL in MeOH | P-410S   | 1 mL  |

## Anilazine

2,4-Dichloro-6-(o-chloroanilino)-s-triazine



**CAS** 101-05-3 **MF** C<sub>9</sub>H<sub>5</sub>Cl<sub>3</sub>N<sub>4</sub> **MW** 275.52  
**PS** S **SG** 1.61 g/cm<sup>3</sup> **MP** 159 - 160 °C **BP** 460 °C  
**FP** 232 °C

| Matrix                   | Cat. No. | Unit  |
|--------------------------|----------|-------|
| Neat                     | P-287N   | 10 mg |
| 100 µg/mL in H-A (80:20) | P-287S-H | 1 mL  |

**Apache**

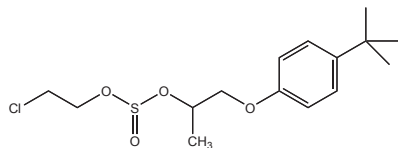
see *Cadusafos*



# Pesticide Standards

## Aramite

2-(4-tert-Butylphenoxy)-1-methylethyl 2-chloroethyl sulfide



**CAS** 140-57-8 **MF** C<sub>15</sub>H<sub>23</sub>ClO<sub>2</sub>S **MW** 334.86  
**PS** S **SG** 1.19 g/cm<sup>3</sup> **MP** N/A **BP** 426 °C  
**FP** 212 °C

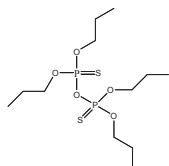
| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-132S   | 1 mL |

## Asana

see *Esfenvalerate*

## Aspon

O,O,O',O'-Tetrapropyl dithiopyrophosphate



**CAS** 3244-90-4 **MF** C<sub>12</sub>H<sub>28</sub>O<sub>5</sub>P<sub>2</sub>S<sub>2</sub> **MW** 378.46  
**PS** L **SG** 1.12 g/cm<sup>3</sup> **MP** N/A **BP** 375 °C **FP** N/A

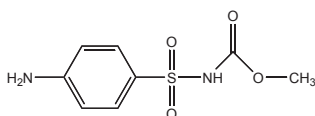
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-309N   | 10 mg |
| 100 µg/mL in MeOH | P-309S   | 1 mL  |

## Assure

see *Quizalofop ethyl*

## Asulam

Methyl sulfanilylcarbamate



**CAS** 3337-71-1 **MF** C<sub>8</sub>H<sub>10</sub>N<sub>2</sub>O<sub>4</sub>S **MW** 230.26  
**PS** S **SOL** A, MeOH **SG** 1.42 g/cm<sup>3</sup>  
**MP** 143 - 144 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-276N   | 10 mg |
| 100 µg/mL in MeOH | P-276S   | 1 mL  |

## Asulox

see *Asulam*

## ATCP

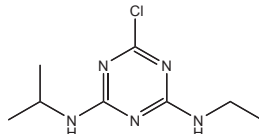
see *Picloram*

## Atraton

see *Gesatamine*

## Atrazine

6-Chloro-N<sub>2</sub>-ethyl-N<sub>4</sub>-isopropyl-1,3,5-triazine-2,4-diamine

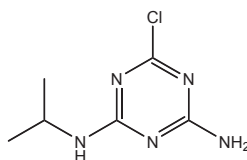


**CAS** 1912-24-9 **MF** C<sub>8</sub>H<sub>14</sub>ClN<sub>5</sub> **MW** 215.68 **PS** S  
**SOL** A, D, EA **SG** 1.23 g/cm<sup>3</sup> **MP** 176 °C  
**BP** 20 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-005N   | 10 mg |
| 100 µg/mL in MeOH | P-005S   | 1 mL  |

## Atrazine Desethyl

2-Amino-4-chloro-6-isopropylamino-1,3,5-triazine

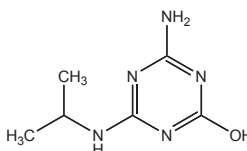


**CAS** 6190-65-4 **MF** C<sub>6</sub>H<sub>10</sub>ClN<sub>5</sub> **MW** 187.63  
**PS** S **SOL** DMSO, EA, MeOH  
**SG** 1.23 g/cm<sup>3</sup> **MP** 130 - 133 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-343N   | 10 mg |
| 100 µg/mL in MeOH | P-343S   | 1 mL  |

## Atrazine-desethyl-2-hydroxy

4-amino-2-hydroxy-6-isopropylamino-s-triazine

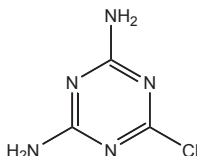


**CAS** 19988-24-0 **MF** C<sub>6</sub>H<sub>11</sub>N<sub>5</sub>O **MW** 169.18  
**PS** S **SG** 1.51 g/cm<sup>3</sup> **MP** 159 - 160 °C  
**BP** 274 °C **FP** 119 °C

| Matrix          | Cat. No.  | Unit |
|-----------------|-----------|------|
| 100 µg/mL in MC | P-544S-MC | 1 mL |

## Atrazine-desethyl-desisopropyl

2-Chloro-4,6-diamino-1,3,5-triazine

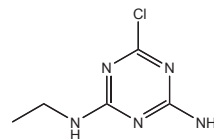


**CAS** 3397-62-4 **MF** C<sub>3</sub>H<sub>4</sub>ClN<sub>5</sub> **MW** 145.55  
**PS** S **SG** 1.70 g/cm<sup>3</sup> **MP** >320 °C **BP** 488 °C  
**FP** 249 °C

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-428N   | 10 mg |

## Atrazine-desisopropyl

2-Amino-4-chloro-6-ethylamino-1,3,5-triazine

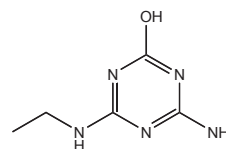


**CAS** 1007-28-9 **MF** C<sub>5</sub>H<sub>8</sub>N<sub>5</sub>Cl **MW** 173.6 **PS** S  
**SG** N/A **MP** 173 - 177 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-345N   | 10 mg |
| 100 µg/mL in MeOH | P-345S   | 1 mL  |

## Atrazine-desisopropyl-2-hydroxy

4-Amino-2-hydroxy-6-(ethylamino)-1,3,5-triazine



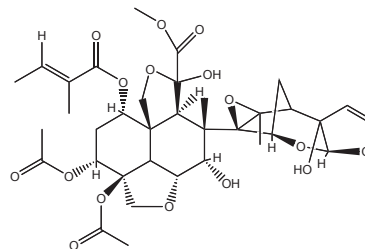
**CAS** 7313-54-4 **MF** C<sub>5</sub>H<sub>9</sub>N<sub>5</sub>O **MW** 155.16  
**PS** L **SG** N/A **MP** N/A **BP** >310 °C **FP** N/A

| Matrix          | Cat. No.  | Unit  |
|-----------------|-----------|-------|
| Neat            | P-344N    | 10 mg |
| 100 µg/mL in MC | P-344S-MC | 1 mL  |

## Avid

see *Abamectin*

## Azadirachtin



**CAS** 11141-17-6 **MF** C<sub>35</sub>H<sub>44</sub>O<sub>16</sub> **MW** 720.71  
**PS** S **SG** 1.51 g/cm<sup>3</sup> **MP** 159 °C **BP** 792 °C  
**FP** 245 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-711S   | 1 mL |

## Property Key

|            |                                       |
|------------|---------------------------------------|
| <b>CAS</b> | Chemical Abstract Service Number      |
| <b>MF</b>  | Molecular Formula                     |
| <b>MW</b>  | Molecular Weight                      |
| <b>PS</b>  | Physical State (Solid, Liquid)        |
| <b>SOL</b> | Solubility                            |
| <b>SG</b>  | Specific Gravity (g/cm <sup>3</sup> ) |
| <b>MP</b>  | Melting Point (°C)                    |
| <b>BP</b>  | Boiling Point (°C)                    |
| <b>FP</b>  | Flash Point (°C)                      |

## Solubility Key (SOL)

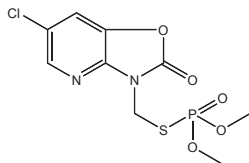
|             |                     |
|-------------|---------------------|
| <b>A</b>    | Acetone             |
| <b>CN</b>   | Acetonitrile (AcCN) |
| <b>D</b>    | Methylene chloride  |
| <b>DMSO</b> | Dimethyl sulfoxide  |
| <b>EA</b>   | Ethyl acetate       |
| <b>H</b>    | Hexane              |
| <b>IPA</b>  | Isopropanol         |
| <b>MeOH</b> | Methanol            |
| <b>MC</b>   | Methyl cellosolve   |
| <b>T</b>    | Toluene             |
| <b>TP</b>   | Isooctane           |
| <b>W</b>    | Water               |





## Azamethiphos

S-6-Chloro-2,3-dihydro-2-oxo-oxazolo[4,5-b]pyridin-3-ylmethyl O,O-dimethyl phosphorothioate

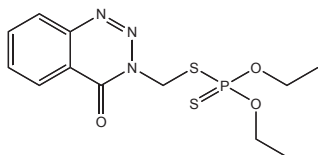


**CAS** 35575-96-3 **MF** C<sub>9</sub>H<sub>10</sub>ClN<sub>2</sub>O<sub>5</sub>PS **MW** 324.68  
**PS** S **SOL** D, MeOH **SG** 1.60 g/cm<sup>3</sup> **MP** 89 °C  
**BP** N/A **FP** >150 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-352N   | 10 mg |
| 100 µg/mL in MeOH | P-352S   | 1 mL  |

## Azinphos-ethyl

S-(3,4-Dihydro-4-oxobenzo[d][1,2,3]-triazin-3-ylmethyl) O,O-diethyl phosphorodithioate

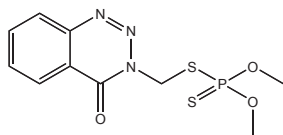


**CAS** 2642-71-9 **MF** C<sub>12</sub>H<sub>16</sub>N<sub>3</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 345.38  
**PS** S **SOL** D, T, IPA **SG** 1.28 g/cm<sup>3</sup>  
**MP** 70.0 - 72.0 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-201N   | 10 mg |
| 100 µg/mL in MeOH | P-201S   | 1 mL  |

## Azinphos-methyl

O,O-Dimethyl-S-(4-oxo-3H-1,2,3-benzotriazin-3-ylmethyl)phosphorodithioate

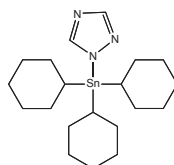


**CAS** 86-50-0 **MF** C<sub>10</sub>H<sub>12</sub>N<sub>3</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 317.33  
**PS** S **SOL** D, CN, A **SG** 1.52 g/cm<sup>3</sup> **MP** 73 °C  
**BP** 200 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-007N   | 10 mg |
| 100 µg/mL in MeOH | P-007S   | 1 mL  |

## Azocyclotin

Tri(cyclohexyl)-1H-1,2,4-triazol-1-yltin



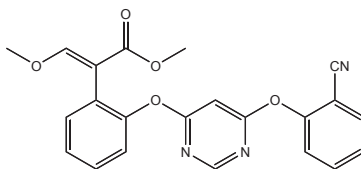
**CAS** 41083-11-8 **MF** C<sub>20</sub>H<sub>35</sub>N<sub>3</sub>Sn **MW** 436.27 **PS** S  
**SOL** IPA, D, T **SG** 1.34 g/cm<sup>3</sup> **MP** 210 °C  
**BP** 487 °C **FP** 249 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-353N   | 10 mg |
| 100 µg/mL in MeOH | P-353S   | 1 mL  |

**Azodrin** see *Monocrotophos*  
**Azophos** see *Methyl parathion*

## Azoxystrobin

Methyl-(E)-{2-[6-(2-cyanophenoxy)pyrimidin-4-yl]oxyphenyl}-3-methoxyacrylate



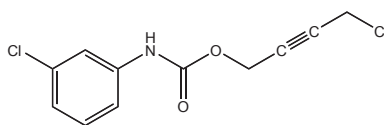
**CAS** 131860-33-8 **MF** C<sub>22</sub>H<sub>17</sub>N<sub>3</sub>O<sub>5</sub> **MW** 403.39  
**PS** S **SOL** D, CN, EA **SG** 1.33 g/cm<sup>3</sup>  
**MP** 118 - 119 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-719N   | 10 mg |
| 100 µg/mL in MeOH | P-719S   | 1 mL  |

**Balan** see *Bentfluralin*  
**Bancol** see *Bensultap*  
**Banvel-D** see *Dicamba*

## Barbamate

4-Chloro-2-butenyl (3-chlorophenyl)carbamate



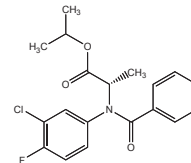
**CAS** 101-27-9 **MF** C<sub>11</sub>H<sub>9</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 258.11  
**PS** S **SG** 1.39 g/cm<sup>3</sup> **MP** 75 - 76 °C **BP** 341 °C  
**FP** 160 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-202N   | 10 mg |
| 100 µg/mL in MeOH | P-202S   | 1 mL  |

**Barban** see *Barbamate*

## Barnon

Isopropyl-N-benzoyl-N-(3-chloro-4-fluorophenyl)-DL-alanine



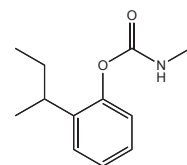
**CAS** 52756-22-6 **MF** C<sub>19</sub>H<sub>19</sub>ClFNO<sub>3</sub> **MW** 363.84  
**PS** S **SG** 1.31 g/cm<sup>3</sup> **MP** 72.5 - 74.5 °C **BP** 476 °C  
**FP** 242 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-646N   | 10 mg |
| 100 µg/mL in MeOH | P-646S   | 1 mL  |

**Basagran** see *Bentazon*  
**Basitac** see *Mepronil*  
**Basudin** see *Diazinon*  
**Batasan** see *Fentin Acetate*

## Baycarb

2-sec-Butylphenyl methylcarbamate



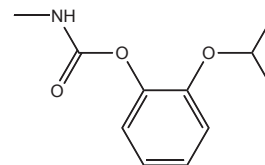
**CAS** 3766-81-2 **MF** C<sub>12</sub>H<sub>17</sub>NO<sub>2</sub> **MW** 207.3  
**PS** L, S **SG** 1.02 g/cm<sup>3</sup> **MP** 32 °C **BP** 282 °C  
**FP** 125 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-347N   | 10 mg |
| 100 µg/mL in MeOH | P-347S   | 1 mL  |

**Baycor** see *Bitertanol*

## Baygon

2-Isopropoxyphenyl methylcarbamate



**CAS** 114-26-1 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>3</sub> **MW** 209.24  
**PS** S **SG** 1.17 g/cm<sup>3</sup> **MP** 90 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-009N   | 10 mg |
| 100 µg/mL in MeOH | P-009S   | 1 mL  |

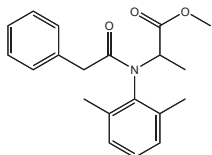
**Bayleton** see *Triadimefon*  
**Baytex** see *Fenthion*  
**Baythroid I** see *Cyfluthrin*  
**Beacon** see *Primisulfuron-methyl*  
**Beam** see *Tricyclazole*  
**Belmark** see *Fenvalerate*



# Pesticide Standards

## Benalaxyl

Methyl N-phenylacetyl-N-2,6-xylyl-DL-alaninate

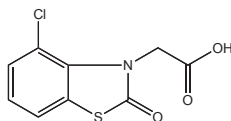


**CAS** 71626-11-4 **MF** C<sub>20</sub>H<sub>23</sub>NO<sub>3</sub> **MW** 325.4 **PS** S  
**SOL** MeOH, A, EA **SG** 1.18 g/cm<sup>3</sup> **MP** 79 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-559N   | 10 mg |
| 100 µg/mL in MeOH | P-559S   | 1 mL  |

## Benazolin

4-Chloro-2-oxobenzothiazolin-3-ylacetic acid

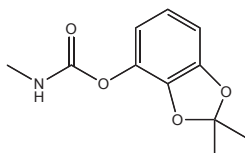


**CAS** 3813-05-6 **MF** C<sub>9</sub>H<sub>6</sub>ClNO<sub>3</sub>S **MW** 243.67  
**PS** S **SOL** A, IPA, EA **SG** 1.63 g/cm<sup>3</sup> **MP** 193 °C  
**BP** 468 °C **FP** 233 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-397N   | 10 mg |
| 100 µg/mL in MeOH | P-397S   | 1 mL  |

## Bendiocarb

2,3-Isopropylidenedioxyphenyl methyl carbamate



**CAS** 22781-23-3 **MF** C<sub>17</sub>H<sub>13</sub>NO<sub>4</sub> **MW** 223.23  
**PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** 130 °C **BP** N/A  
**FP** >100 °C

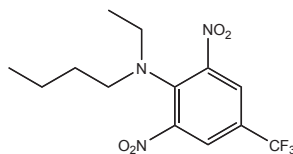
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-203N   | 10 mg |
| 100 µg/mL in MeOH | P-203S   | 1 mL  |

**Benefin**

see **Benfluralin**

## Benfluralin

N-Butyl-N-ethyl-α,α,α-trifluoro-2,6-dinitro-p-toluidine

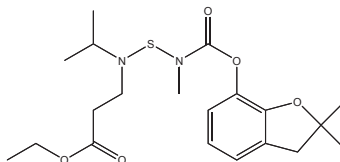


**CAS** 1861-40-1 **MF** C<sub>13</sub>H<sub>16</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub> **MW** 335.28  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 66 °C **BP** 150 °C  
**FP** 151 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-237N   | 10 mg |
| 100 µg/mL in MeOH | P-237S   | 1 mL  |

## Benfuracarb

Ethyl-3-[[[(2,2-dimethyl-3H-1-benzofuran-7-yl)oxycarbonyl-methylamino]sulfanyl-propan-2-ylamino]propanoate

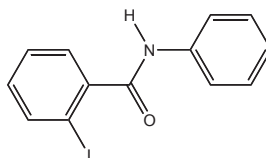


**CAS** 82560-54-1 **MF** C<sub>20</sub>H<sub>30</sub>N<sub>2</sub>O<sub>5</sub>S **MW** 410.5  
**PS** L **SOL** H, D, A **SG** 1.15 g/cm<sup>3</sup> **MP** N/A  
**BP** >190 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-454N   | 10 mg |
| 100 µg/mL in MeOH | P-454S   | 1 mL  |

## Benodanil

2-Iodobenzanilide

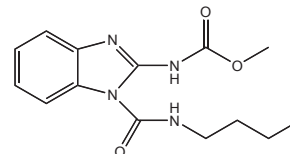


**CAS** 15310-01-7 **MF** C<sub>13</sub>H<sub>10</sub>INO **MW** 323.13 **PS** S  
**SOL** A, EA **SG** 1.70 g/cm<sup>3</sup> **MP** 137 °C **BP** 323 °C  
**FP** 149 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-671N   | 10 mg |
| 100 µg/mL in MeOH | P-671S   | 1 mL  |

## Benomyl

1-(Butylcarbamoyl)-2-benzimidazolecarbamic acid methyl ester

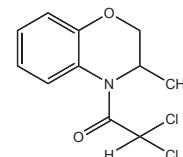


**CAS** 17804-35-2 **MF** C<sub>14</sub>H<sub>18</sub>N<sub>4</sub>O<sub>3</sub> **MW** 290.32 **PS** S  
**SOL** A **SG** 1.28 g/cm<sup>3</sup> **MP** 140 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No.    | Unit  |
|-------------------|-------------|-------|
| Neat              | P-104N      | 10 mg |
| 100 µg/mL in AcCN | P-104S-CN ‡ | 1 mL  |

## Benoxacor

4-(dichloroacetyl)-3,4-dihydro-3-methyl-2H-1,4-benzoxazine



**CAS** 98730-04-2 **MF** C<sub>11</sub>H<sub>11</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 260.12  
**PS** S **SOL** D, A, T **SG** 1.35 g/cm<sup>3</sup> **MP** 107 °C  
**BP** 409 °C **FP** 201 °C

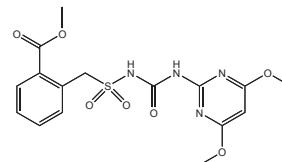
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-490N   | 10 mg |
| 100 µg/mL in MeOH | P-490S   | 1 mL  |

**Bensecal**

see **Benazolin**

## Bensulfuron-methyl

Methyl α-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-o-toluate



**CAS** 83055-99-6 **MF** C<sub>16</sub>H<sub>18</sub>N<sub>4</sub>O<sub>7</sub>S **MW** 410.4 **PS** S  
**SOL** D, A, CN **SG** 1.44 g/cm<sup>3</sup> **MP** 185 - 188 °C  
**BP** 580 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-597N   | 10 mg |
| 100 µg/mL in MeOH | P-597S   | 1 mL  |

### Property Key

**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

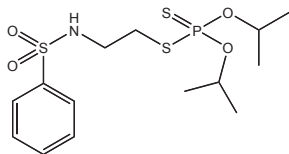
**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



## Bensulide

S-2-benzenesulfonamidoethyl O,O-di-isopropyl phosphorodithioate

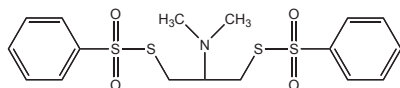


**CAS** 741-58-2 **MF** C<sub>14</sub>H<sub>24</sub>NO<sub>4</sub>PS<sub>3</sub> **MW** 397.54  
**PS** S **SOL** A **SG** 1.23 g/cm<sup>3</sup> **MP** 34 °C **BP** 200 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-204N   | 10 mg |
| 100 µg/mL in MeOH | P-204S   | 1 mL  |

## Bensultap

S,S'-2-dimethylaminotrimethylene di(benzenethiosulfonate)

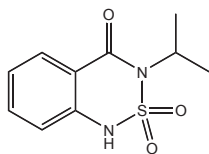


**CAS** 17606-31-4 **MF** C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>S<sub>4</sub> **MW** 431.63  
**PS** S **SOL** D, EA, T **SG** 1.35 g/cm<sup>3</sup> **MP** 83 - 84 °C  
**BP** 591 °C **FP** 311 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-678N   | 10 mg |
| 100 µg/mL in MeOH | P-678S   | 1 mL  |

## Bentazon Δ

3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide

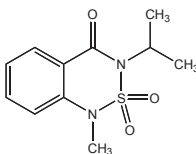


**CAS** 25057-89-0 **MF** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 240.28 **PS** S  
**SOL** A, MeOH, EA **SG** 1.41 g/cm<sup>3</sup> **MP** 138 °C  
**BP** N/A **FP** N/A

| Matrix               | Cat. No.  | Unit  |
|----------------------|-----------|-------|
| Neat                 | P-177N    | 10 mg |
| 100 µg/mL in AcCN    | P-177S-CN | 1 mL  |
| 100 µg/mL in Acetone | P-177S-A  | 1 mL  |

## Bentazon methyl

3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide methyl ester



**CAS** 61592-45-8 **MF** C<sub>11</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 254.31  
**PS** S **SG** N/A **MP** 137 - 139 °C **BP** N/A **FP** N/A

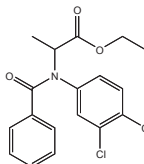
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-241N   | 10 mg |
| 100 µg/mL in MeOH | P-241S   | 1 mL  |

## Benthiocarb

see Thiobencarb

## Benzoylprop-ethyl

N-Benzoyl-N-(3,4-dichlorophenyl)-DL-alanine ethyl ester

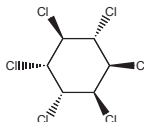


**CAS** 22212-55-1 **MF** C<sub>18</sub>H<sub>17</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 366.26  
**PS** S **SG** 1.30 g/cm<sup>3</sup> **MP** 180 °C **BP** 493 °C  
**FP** 252 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-340N   | 10 mg |
| 100 µg/mL in MeOH | P-340S   | 1 mL  |

## a-BHC

alpha-1,2,3,4,5,6-Hexachlorocyclohexane

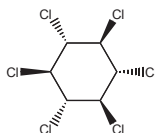


**CAS** 319-84-6 **MF** C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> **MW** 290.83 **PS** S  
**SOL** MeOH, A, EA **SG** 1.88 g/cm<sup>3</sup> **MP** 156 - 161 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-010N   | 10 mg |
| 100 µg/mL in MeOH | P-010S   | 1 mL  |

## b-BHC

beta-1,2,3,4,5,6-Hexachlorocyclohexane

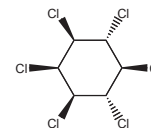


**CAS** 319-85-7 **MF** C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> **MW** 290.83 **PS** S  
**SOL** MeOH, A, EA **SG** 1.59 g/cm<sup>3</sup> **MP** 112 °C  
**BP** 288 °C **FP** 157 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-011N   | 10 mg |
| 100 µg/mL in MeOH | P-011S   | 1 mL  |

## d-BHC

delta-1,2,3,4,5,6-Hexachlorocyclohexane



**CAS** 319-86-8 **MF** C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> **MW** 290.83 **PS** S  
**SG** 1.88 g/cm<sup>3</sup> **MP** 138-139 °C **BP** N/A **FP** N/A

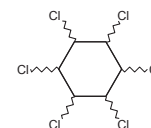
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-012N   | 10 mg |
| 100 µg/mL in MeOH | P-012S   | 1 mL  |

## g-BHC

see Lindane

## BHC Tech

1,2,3,4,5,6-Hexachlorocyclohexanes



**CAS** 608-73-1 **MF** C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> **MW** 290.83 **PS** S  
**SG** 1.87 g/cm<sup>3</sup> **MP** 150 - 160 °C **BP** N/A **FP** N/A

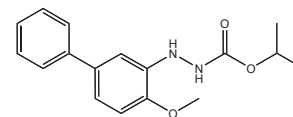
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-081N   | 10 mg |
| 100 µg/mL in MeOH | P-081S   | 1 mL  |

## Bidrin

see Dicrotophos

## Bifenazate

Isopropyl 3-(4-methoxybiphenyl-3-yl)carbazate

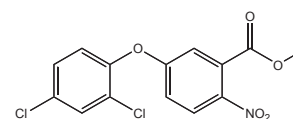


**CAS** 149877-41-8 **MF** C<sub>17</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub> **MW** 300.35  
**PS** S **SG** 1.15 g/cm<sup>3</sup> **MP** 157 - 158 °C **BP** 417 °C  
**FP** N/A

| Matrix            | Cat. No.   | Unit |
|-------------------|------------|------|
| Neat              | P-772N-5MG | 5 mg |
| 100 µg/mL in MeOH | P-772S     | 1 mL |

## Bifenox

Methyl 5-(2,4-dichlorophenoxy)-2-nitrobenzoate



**CAS** 42576-02-3 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 342.13  
**PS** S **SOL** A **SG** 1.46 g/cm<sup>3</sup> **MP** 84-89 °C  
**BP** 421 °C **FP** 208 °C

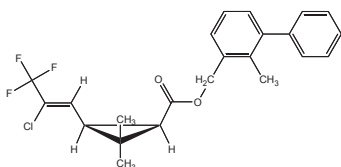
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-257N   | 10 mg |
| 100 µg/mL in MeOH | P-257S   | 1 mL  |



# Pesticide Standards

## Bifenthrin

2-Methylbiphenyl-3-ylmethyl (Z)-(1R)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate

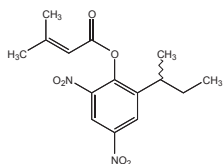


**CAS** 82657-04-3 **MF** C<sub>23</sub>H<sub>22</sub>ClF<sub>3</sub>O<sub>2</sub> **MW** 422.9  
**PS** S **SG** 1.21 g/cm<sup>3</sup> **MP** 68 - 71 °C **BP** N/A  
**FP** 165 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-445N   | 10 mg |
| 100 µg/mL in MeOH | P-445S   | 1 mL  |

## Binapacryl

2-(1-Methylpropyl)-4,6-dinitrophenyl 3-methyl-2-butenate

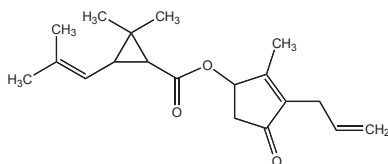


**CAS** 485-31-4 **MF** C<sub>15</sub>H<sub>18</sub>N<sub>2</sub>O<sub>6</sub> **MW** 322.31  
**PS** S **SOL** A, H **SG** 1.24 g/cm<sup>3</sup> **MP** 65.0 - 67.0 °C  
**BP** 437 °C **FP** 172 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-499N   | 10 mg |
| 100 µg/mL in MeOH | P-499S   | 1 mL  |

## Bioallethrin d-trans-allethrin

D-trans-2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate

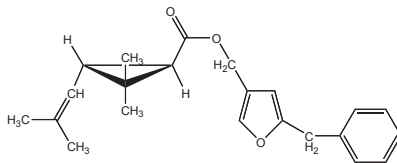


**CAS** 28057-48-9 **MF** C<sub>19</sub>H<sub>26</sub>O<sub>3</sub> **MW** 302.41  
**PS** L **SG** 1.05 g/cm<sup>3</sup> **MP** N/A **BP** 387 °C  
**FP** 166 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-665N   | 10 mg |
| 100 µg/mL in MeOH | P-665S   | 1 mL  |

## Bioresmethrin

5-Benzyl-3-furylmethyl (1R,3R)-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate

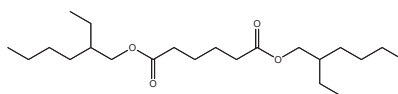


**CAS** 28434-01-7 **MF** C<sub>22</sub>H<sub>26</sub>O<sub>3</sub> **MW** 338.44 **PS** L  
**SOL** H, D, T **SG** 1.05 g/cm<sup>3</sup> **MP** 32 °C  
**BP** ~180 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-594N   | 10 mg |
| 100 µg/mL in MeOH | P-594S   | 1 mL  |

## bis(2-Ethylhexyl)adipate

bis(2-Ethylhexyl)adipate

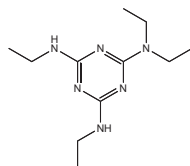


**CAS** 103-23-1 **MF** C<sub>22</sub>H<sub>42</sub>O<sub>4</sub> **MW** 370.57 **PS** L  
**SG** 0.92 g/cm<sup>3</sup> **MP** -67.8 °C **BP** 417 °C **FP** 110 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-233N   | 10 mg |
| 100 µg/mL in MeOH | P-233S   | 1 mL  |

## 2,4-bis(Ethylamino)-6-diethylamino-s-triazine

2,4-bis(Ethylamino)-6-diethylamino-s-triazine

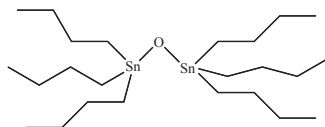


**CAS** N/A **MF** C<sub>11</sub>H<sub>22</sub>N<sub>6</sub> **MW** 238.33 **PS** S **SG** N/A  
**MP** N/A **BP** N/A **FP** N/A

| Matrix          | Cat. No.  | Unit  |
|-----------------|-----------|-------|
| Neat            | P-536N    | 10 mg |
| 100 µg/mL in MC | P-536S-MC | 1 mL  |

## bis(Tributyltin)oxide

bis(Tributyltin)oxide

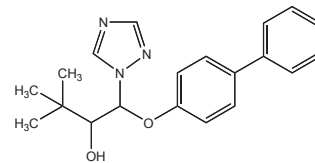


**CAS** 56-35-9 **MF** C<sub>24</sub>H<sub>54</sub>OSn<sub>2</sub> **MW** 596.1 **PS** L  
**SG** 1.17 g/cm<sup>3</sup> **MP** N/A **BP** 180 °C **FP** 113 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-455N   | 10 mg |
| 100 µg/mL in MeOH | P-455S   | 1 mL  |

## Bitertanol

1-(Biphenyl-4-yloxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)butan-2-ol

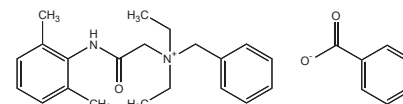


**CAS** 55179-31-2 **MF** C<sub>20</sub>H<sub>23</sub>N<sub>3</sub>O<sub>2</sub> **MW** 337.42  
**PS** S **SOL** D, IPA **SG** 1.14 g/cm<sup>3</sup> **MP** 127 °C  
**BP** 541 °C **FP** 281 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-351N   | 10 mg |
| 100 µg/mL in MeOH | P-351S   | 1 mL  |

## Bitrex

Benzyl-diethyl-((2,6-xylylcarbamoyl)methyl) ammonium benzoate



**CAS** 3734-33-6 **MF** C<sub>21</sub>H<sub>29</sub>N<sub>2</sub>O•C<sub>7</sub>H<sub>5</sub>O<sub>2</sub> **MW** 446.64  
**PS** L **SG** 0.79 g/cm<sup>3</sup> **MP** -114.1 °C **BP** 78.5 °C  
**FP** N/A

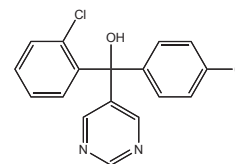
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-679N   | 10 mg |
| 100 µg/mL in MeOH | P-679S   | 1 mL  |

## Bladex

see Cyanazine

## Bloc

2,4'-Dichloro-α-(pyrimidine-5-yl)benzhydralcohol



**CAS** 60168-88-9 **MF** C<sub>17</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>2</sub>O **MW** 331.2  
**PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 117 - 119 °C **BP** N/A  
**FP** 100 °C

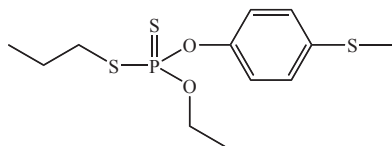
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-086N   | 10 mg |
| 100 µg/mL in MeOH | P-086S   | 1 mL  |





## Bolstar

O-Ethyl O-4-(methylthio)phenyl S-propyl phosphorodithioate



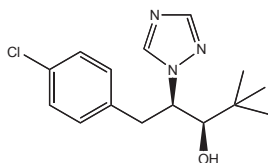
**CAS** 35400-43-2 **MF** C<sub>12</sub>H<sub>19</sub>O<sub>2</sub>PS<sub>3</sub> **MW** 322.46  
**PS** L **SG** 1.20 g/cm<sup>3</sup> **MP** N/A **BP** 155 - 158 °C  
**FP** 198 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-108N   | 10 mg |
| 100 µg/mL in MeOH | P-108S   | 1 mL  |

**Boltage** see **Pyraclufos**

## Bonzi

(+/-)-R\*,R\*-beta-((4-Chlorophenyl)methyl)-alpha-(1,1-dimethylethyl)-1H-1,2,4-triazol-1-ethanol

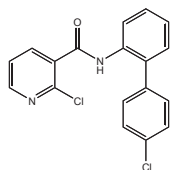


**CAS** 76738-62-0 **MF** C<sub>15</sub>H<sub>20</sub>ClN<sub>3</sub>O **MW** 293.83  
**PS** S **SG** 1.22 g/cm<sup>3</sup> **MP** 165-166 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-669N   | 10 mg |
| 100 µg/mL in MeOH | P-669S   | 1 mL  |

## Boscalid

2-Chloro-N-(4'-chlorobiphenyl-2-yl)nicotinamide

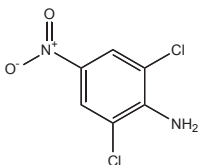


**CAS** 188425-85-6 **MF** C<sub>18</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>2</sub>O **MW** 343.21  
**PS** S **SOL** M, A, T **SG** 1.37 g/cm<sup>3</sup> **MP** 143 - 144 °C  
**BP** ~448 °C **FP** 225 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-811S ‡ | 1 mL |

## Botran

2,6-Dichloro-4-nitroaniline



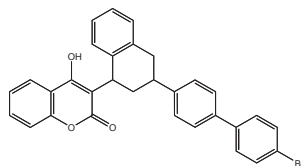
**CAS** 99-30-9 **MF** C<sub>6</sub>H<sub>4</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub> **MW** 207.01  
**PS** S **SG** 0.28 g/cm<sup>3</sup> **MP** 195 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-013N   | 10 mg |
| 100 µg/mL in MeOH | P-013S   | 1 mL  |

**BPMC** see **Baycarb**  
**Brodan** see **Dursban**

## Brodifacoum

4-Hydroxy-3-(3-(4'-bromo-4-biphenyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin

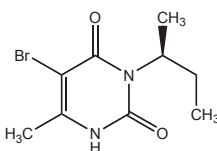


**CAS** 56073-10-0 **MF** C<sub>31</sub>H<sub>23</sub>BrO<sub>3</sub> **MW** 523.45  
**PS** S **SOL** A **SG** 1.43 g/cm<sup>3</sup> **MP** 228 - 230 °C  
**BP** 644 °C **FP** 343 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-677N   | 10 mg |
| 100 µg/mL in MeOH | P-677S   | 1 mL  |

## Bromacil

5-Bromo-3-sec-butyl-6-methyluracil

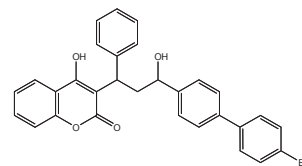


**CAS** 314-40-9 **MF** C<sub>9</sub>H<sub>13</sub>BrN<sub>2</sub>O<sub>2</sub> **MW** 261.12 **PS** S  
**SOL** A, CN, T **SG** 1.55 g/cm<sup>3</sup> **MP** 158 - 159 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-181N   | 10 mg |
| 100 µg/mL in MeOH | P-181S   | 1 mL  |

## Bromadiolone

3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxycoumarin



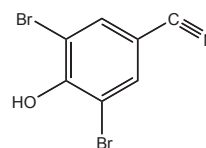
**CAS** 28772-56-7 **MF** C<sub>30</sub>H<sub>23</sub>BrO<sub>4</sub> **MW** 527.44 **PS** S  
**SOL** A, EA, W **SG** 1.45 g/cm<sup>3</sup> **MP** 200 - 210 °C  
**BP** 687 °C **FP** 369 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-316N   | 10 mg |
| 100 µg/mL in MeOH | P-316S ‡ | 1 mL  |

**Bromfenacoum** see **Brodifacoum**

## Brominal

3,5-Dibromo-4-hydroxybenzonitrile

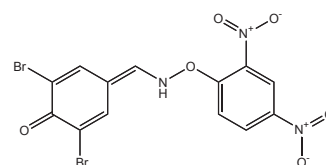


**CAS** 1689-84-5 **MF** C<sub>7</sub>H<sub>3</sub>Br<sub>2</sub>NO **MW** 276.91 **PS** S  
**SOL** MeOH, A **SG** 2.24 g/cm<sup>3</sup> **MP** 194 - 195 °C  
**BP** 266 °C **FP** 114 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-256N   | 10 mg |
| 100 µg/mL in MeOH | P-256S   | 1 mL  |

## Bromofenoxim

3,5-Dibromo-4-hydroxybenzaldehyde 2,4-dinitrophenyloxime



**CAS** 13181-17-4 **MF** C<sub>13</sub>H<sub>7</sub>Br<sub>2</sub>N<sub>3</sub>O<sub>6</sub> **MW** 461.02  
**PS** S **SOL** H **SG** 2.01 g/cm<sup>3</sup> **MP** 196 - 197 °C  
**BP** 526 °C **FP** 272 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-511N   | 10 mg |
| 100 µg/mL in MeOH | P-511S   | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |

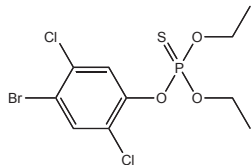
‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



# Pesticide Standards

## Bromophos-ethyl

O-(4-Bromo-2,5-dichlorophenyl) O,O-diethyl phosphorothioate

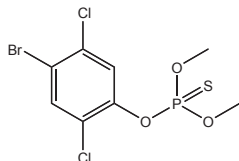


**CAS** 4824-78-6 **MF** C<sub>10</sub>H<sub>12</sub>BrCl<sub>2</sub>O<sub>3</sub>PS **MW** 394.05  
**PS** L **SG** 1.53 g/cm<sup>3</sup> **MP** N/A **BP** 122 - 123 °C  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-372N   | 10 mg |
| 100 µg/mL in MeOH | P-372S   | 1 mL  |

## Bromophos-methyl

O-4-Bromo-2,5-dichlorophenyl O,O-dimethyl phosphorothioate

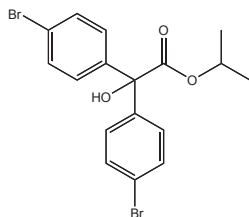


**CAS** 2104-96-3 **MF** C<sub>8</sub>H<sub>6</sub>BrCl<sub>2</sub>O<sub>3</sub>PS **MW** 366  
**PS** S **SG** 1.32 g/cm<sup>3</sup> **MP** 53 - 56 °C **BP** N/A  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-484N   | 10 mg |
| 100 µg/mL in MeOH | P-484S   | 1 mL  |

## Bromopropylate

Isopropyl 4,4'-dibromobenzilate



**CAS** 18181-80-1 **MF** C<sub>17</sub>H<sub>16</sub>Br<sub>2</sub>O<sub>3</sub> **MW** 428.1  
**PS** S **SOL** D, A, MeOH **SG** 1.59 g/cm<sup>3</sup> **MP** 77 °C  
**BP** N/A **FP** > 100 °C

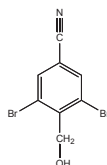
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-457N   | 10 mg |
| 100 µg/mL in MeOH | P-457S   | 1 mL  |

## Bromoxynil

see Brominal

## Bromoxynil methyl ether

3,5-Dibromo-4-methoxybenzonitrile

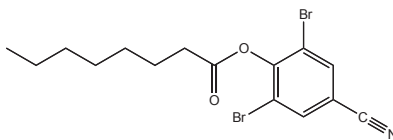


**CAS** 3336-39-8 **MF** C<sub>8</sub>H<sub>5</sub>Br<sub>2</sub>NO **MW** 290.94  
**PS** S **SG** 1.95 g/cm<sup>3</sup> **MP** 97 - 98 °C **BP** 309 °C  
**FP** 140 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-573N   | 10 mg |
| 100 µg/mL in MeOH | P-573S   | 1 mL  |

## Bromoxynil octanoate

2,6-Dibromo-4-cyanophenyl octanoate

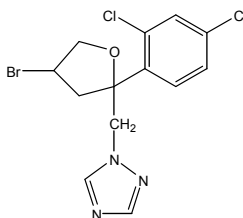


**CAS** 1689-99-2 **MF** C<sub>15</sub>H<sub>17</sub>Br<sub>2</sub>NO<sub>2</sub> **MW** 403.11  
**PS** S **SOL** A, EA, T **SG** 0.98 g/cm<sup>3</sup> **MP** 45-46 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-550N   | 10 mg |
| 100 µg/mL in MeOH | P-550S   | 1 mL  |

## Bromucanazol

1-((2RS,4RS,2RS,4SR)-4-Bromo-2-(2,4-dichlorophenyl)tetrahydrofurfuryl)-1H-1,2,4-triazole



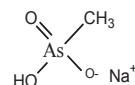
**CAS** 116255-48-2 **MF** C<sub>13</sub>H<sub>12</sub>BrCl<sub>2</sub>N<sub>3</sub>O **MW** 377.06  
**PS** S **SOL** T, H, A **SG** 1.71 g/cm<sup>3</sup> **MP** 84 °C  
**BP** 504 °C **FP** 259 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-843N    | 10 mg |
| 100 µg/mL in AcCN | P-843S-CN | 1 mL  |

Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.

## Bueno

Monosodium acid methane arsonate

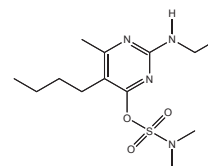


**CAS** 2163-80-6 **MF** CH<sub>4</sub>AsNaO<sub>3</sub> **MW** 161.95  
**PS** S **SG** 1.54 g/cm<sup>3</sup> **MP** 113 - 116 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-279N   | 10 mg |
| 100 µg/mL in MeOH | P-279S   | 1 mL  |

## Bupirimate

5-Butyl-2-ethylamino-6-methylpyrimidin-4-yl dimethylsulfamate

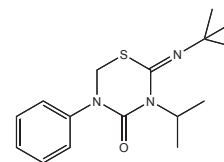


**CAS** 41483-43-6 **MF** C<sub>13</sub>H<sub>24</sub>N<sub>4</sub>O<sub>3</sub>S **MW** 316.47  
**PS** L **SOL** W **SG** 1.20 g/cm<sup>3</sup> **MP** N/A **BP** 463 °C  
**FP** 234 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-672N   | 10 mg |
| 100 µg/mL in MeOH | P-672S   | 1 mL  |

## Buprofezin

2-tert-butylimino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one

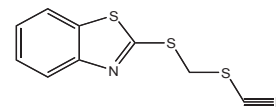


**CAS** 69327-76-0 **MF** C<sub>16</sub>H<sub>23</sub>N<sub>3</sub>OS **MW** 305.44  
**PS** S **SOL** D, T, A **SG** 1.12 g/cm<sup>3</sup> **MP** 104.5 - 105.5 °C **BP** 395 °C **FP** 193 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-595N   | 10 mg |
| 100 µg/mL in MeOH | P-595S   | 1 mL  |

## Busan Δ

2-(Thiocyanomethylthio)benzothiazole



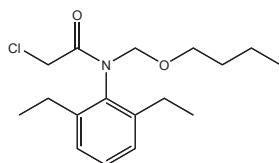
**CAS** 21564-17-0 **MF** C<sub>9</sub>H<sub>6</sub>N<sub>2</sub>S<sub>3</sub> **MW** 238.35  
**PS** L **SG** 1.47 g/cm<sup>3</sup> **MP** N/A **BP** 406 °C  
**FP** 199 °C

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-072S-CN | 1 mL |



## Butachlor

N-Butoxymethyl-2-chloro-2',6'-diethylacetanilide



**CAS** 23184-66-9 **MF** C<sub>17</sub>H<sub>26</sub>ClNO<sub>2</sub> **MW** 311.89  
**PS** L **SOL** H, A, EA **SG** 1.07 g/cm<sup>3</sup> **MP** -5 °C  
**BP** N/A **FP** N/A

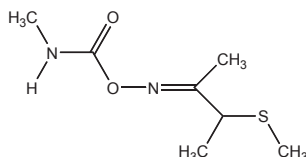
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-191N   | 10 mg |
| 100 µg/mL in MeOH | P-191S   | 1 mL  |

## Butam

see Tebutam

## Butocarboxim

3-(Methylthio)butanone O-methylcarbamoyloxime

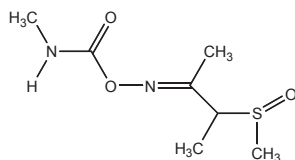


**CAS** 34681-10-2 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 190.29  
**PS** S **SOL** A **SG** 1.12 g/cm<sup>3</sup> **MP** 25 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-518N   | 10 mg |
| 100 µg/mL in MeOH | P-518S   | 1 mL  |

## Butocarboxim sulfoxide

3-(methylsulphonyl)butan-2-one O-[(methylamino) carbonyl]oxime



**CAS** 34681-24-8 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 206.26  
**PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** 62 - 63 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-701N   | 10 mg |
| 100 µg/mL in MeOH | P-701S   | 1 mL  |

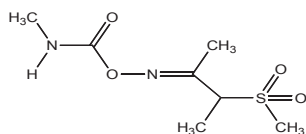
## Butoffin

see Deltamethrin

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isocetane           |
|              |                                       | <b>W</b>             | Water               |

## Butoxycarboxim

3-Mesylbutanone O-methylcarbamoyloxime

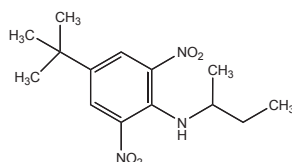


**CAS** 34681-23-7 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>4</sub>S **MW** 222.26  
**PS** S **SOL** A, IPA, T **SG** 1.26 g/cm<sup>3</sup> **MP** 85 - 89 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-822N    | 10 mg |
| 100 µg/mL in AcCN | P-822S-CN | 1 mL  |

## Butralin

N-sec-Butyl-4-tert-butyl-2,6-dinitroaniline

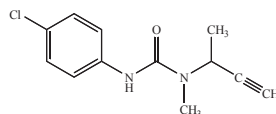


**CAS** 33629-47-9 **MF** C<sub>14</sub>H<sub>21</sub>N<sub>3</sub>O<sub>4</sub> **MW** 295.33 **PS** S  
**SOL** A, H, MeOH **SG** 1.06 g/cm<sup>3</sup> **MP** 61 °C  
**BP** 135 °C **FP** 184 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-574N   | 10 mg |
| 100 µg/mL in MeOH | P-574S   | 1 mL  |

## Buturon

3-(4-Chlorophenyl)-1-methyl-1-(1-methylprop-2-ynyl)-urea

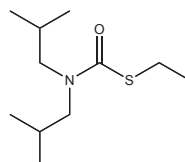


**CAS** 3766-60-7 **MF** C<sub>12</sub>H<sub>13</sub>ClN<sub>2</sub>O **MW** 236.72  
**PS** S **SG** 1.23 g/cm<sup>3</sup> **MP** N/A **BP** 395 °C  
**FP** 193 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-301N   | 10 mg |
| 100 µg/mL in MeOH | P-301S   | 1 mL  |

## Butylate

S-Ethyl diisobutylthiocarbamate

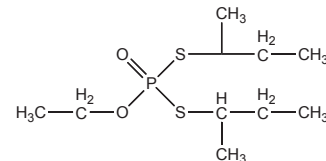


**CAS** 2008-41-5 **MF** C<sub>11</sub>H<sub>23</sub>NOS **MW** 217.37  
**PS** L **SOL** A **SG** 0.94 g/cm<sup>3</sup> **MP** N/A **BP** 138 °C  
**FP** 115 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-088N   | 10 mg |
| 100 µg/mL in MeOH | P-088S   | 1 mL  |

## Cadusafos

O-Ethyl-S,S-bis(1-methylpropyl)phosphorodithioate



**CAS** 95465-99-9 **MF** C<sub>10</sub>H<sub>23</sub>O<sub>2</sub>PS<sub>2</sub> **MW** 270.39  
**PS** L **SOL** MeOH, CN, D **SG** 1.05 g/cm<sup>3</sup> **MP** N/A  
**BP** 113 °C **FP** 129 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-794N   | 10 mg |
| 100 µg/mL in MeOH | P-794S   | 1 mL  |

## Calirus

see Benodanil

## Calypso

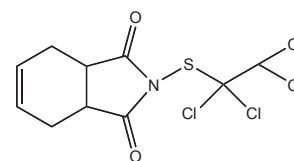
see Thiacloprid

## Camphechlor

see Toxaphene

## Captafol

N-(1,1,2,2-Tetrachloroethylthio)cyclohex-4-ene-1,2-dicarboximide

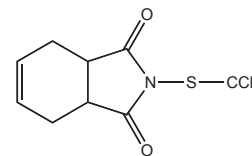


**CAS** 2425-06-1 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>4</sub>NO<sub>2</sub>S **MW** 349.06  
**PS** S **SOL** DMSO, A, T **SG** 1.75 g/cm<sup>3</sup>  
**MP** 160 - 161 °C **BP** N/A **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-254N   | 10 mg |
| 100 µg/mL in MeOH | P-254S   | 1 mL  |

## Captan

N-(Trichloromethylthio)cyclohex-4-ene-1,2-dicarboximide



**CAS** 133-06-2 **MF** C<sub>9</sub>H<sub>8</sub>Cl<sub>3</sub>NO<sub>2</sub>S **MW** 300.59  
**PS** S **SOL** A, T, IPA **SG** 1.74 g/cm<sup>3</sup> **MP** 178 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-182N   | 10 mg |
| 100 µg/mL in MeOH | P-182S ‡ | 1 mL  |

## Capture

see Bifenthrin

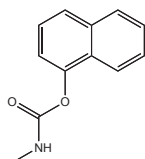
‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



# Pesticide Standards

## Carbaryl

Methylcarbamic acid, 1-naphthyl ester



**CAS** 63-25-2 **MF** C<sub>12</sub>H<sub>11</sub>NO<sub>2</sub> **MW** 201.22 **PS** S  
**SOL** DMSO, A, IPA **SG** 1.23 g/cm<sup>3</sup> **MP** 142 °C  
**BP** N/A **FP** N/A

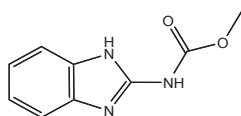
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-083N   | 10 mg |
| 100 µg/mL in MeOH | P-083S   | 1 mL  |

## Carbathiin

see Carboxin

## Carbendazim

Methyl benzimidazole-2-ylcarbamate

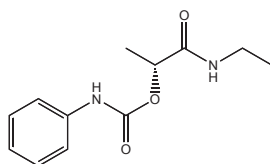


**CAS** 10605-21-7 **MF** C<sub>9</sub>H<sub>9</sub>N<sub>3</sub>O<sub>2</sub> **MW** 191.19 **PS** S  
**SOL** A, EA, D **SG** 1.45 g/cm<sup>3</sup> **MP** 305 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-278N   | 10 mg |
| 100 µg/mL in MeOH | P-278S   | 1 mL  |

## Carbetamide

(R)-1-(Ethylcarbamoyl)ethyl carbanilate



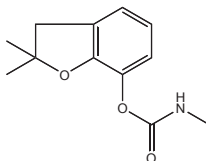
**CAS** 16118-49-3 **MF** C<sub>12</sub>H<sub>16</sub>N<sub>2</sub>O<sub>3</sub> **MW** 236.27 **PS** S  
**SOL** MeOH, A **SG** 1.17 g/cm<sup>3</sup> **MP** 119 °C  
**BP** 378 °C **FP** 183 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-562N   | 10 mg |
| 100 µg/mL in MeOH | P-562S   | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |

## Carbofuran

2,3-Dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate

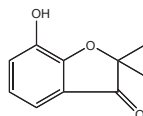


**CAS** 1563-66-2 **MF** C<sub>12</sub>H<sub>15</sub>NO<sub>3</sub> **MW** 221.25 **PS** S  
**SOL** D, IPA, T **SG** 1.18 g/cm<sup>3</sup> **MP** 154 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-106N   | 10 mg |
| 100 µg/mL in MeOH | P-106S   | 1 mL  |

## Carbofuran phenol-3-ketone

2,3-Dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate phenol-3-ketone

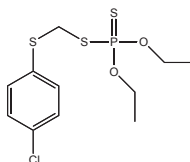


**CAS** N/A **MF** C<sub>10</sub>H<sub>10</sub>O<sub>3</sub> **MW** 178.18

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-630S   | 1 mL |

## Carbophenothion

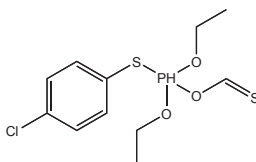
S-(4-Chlorophenylthiomethyl) O,O-diethylphosphorodithioate



**CAS** 786-19-6 **MF** C<sub>11</sub>H<sub>16</sub>ClO<sub>2</sub>PS<sub>3</sub> **MW** 342.87  
**PS** L **SG** 1.28 g/cm<sup>3</sup> **MP** N/A **BP** 82 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-095N   | 10 mg |
| 100 µg/mL in MeOH | P-095S   | 1 mL  |

## Carbophenothion methyl-O-analog

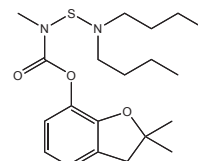


**CAS** N/A **MF** C<sub>11</sub>H<sub>16</sub>ClO<sub>3</sub>PS<sub>2</sub> **MW** 326.8

| Matrix         | Cat. No.       | Unit |
|----------------|----------------|------|
| 10 µg/mL in EA | P-637S-EA-0.1X | 1 mL |

## Carbosulfan

2,3-Dihydro-2,2-dimethylbenzofuran-7-yl (dibutylaminothio)methylcarbamate

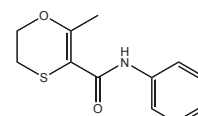


**CAS** 55285-14-8 **MF** C<sub>20</sub>H<sub>32</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 380.55  
**PS** L **SOL** MeOH, H, D **SG** 1.05 g/cm<sup>3</sup> **MP** N/A  
**BP** 462 °C **FP** 233 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-446N   | 10 mg |
| 100 µg/mL in MeOH | P-446S   | 1 mL  |

## Carboxin

5,6-Dihydro-2-methyl-1,4-oxathi-ine-3-carboxanilide

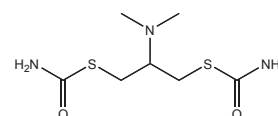


**CAS** 5234-68-4 **MF** C<sub>12</sub>H<sub>13</sub>NO<sub>2</sub>S **MW** 235.32  
**PS** S **SOL** A, EA, MeOH **SG** 1.45 g/cm<sup>3</sup>  
**MP** 91 - 92 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-216N   | 10 mg |
| 100 µg/mL in MeOH | P-216S   | 1 mL  |

## Cartap

S,S'-(2-Dimethylaminotrimethylene) bis(thiocarbamate)

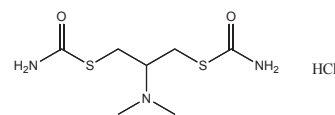


**CAS** 15263-53-3 **MF** C<sub>7</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub>S<sub>2</sub> **MW** 273.35  
**PS** S **SG** 1.31 g/cm<sup>3</sup> **MP** 179 - 181 °C **BP** 407 °C  
**FP** 200 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-577S   | 1 mL |

## Cartap hydrochloride

S,S'-(2-Dimethylaminotrimethylene) bis(thiocarbamate) hydrochloride



**CAS** 22042-59-7 **MF** C<sub>7</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub>S<sub>2</sub>•HCl **MW** 237.35  
**PS** S **MP** 187 - 188 °C

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-949N   | 10 mg |

## Casoron

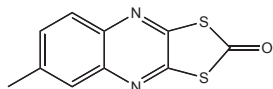
see Dichlobenil





## Chinomethionate

6-Methyl-1,3-dithiol[4,5-b]quinoxalin-2-one

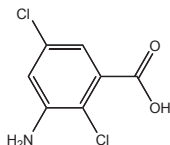


**CAS** 2439-01-2 **MF** C<sub>10</sub>H<sub>6</sub>N<sub>2</sub>OS<sub>2</sub> **MW** 234.3 **PS** S  
**SG** 1.56 g/cm<sup>3</sup> **MP** 170 °C **BP** N/A **FP** N/A

| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-399N   | 10 mg |
| 100 µg/mL in Acetone | P-399S-A | 1 mL  |

## Chloramben

3-Amino-2,5-dichlorobenzoic acid

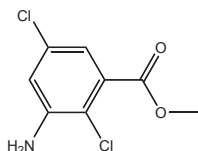


**CAS** 133-90-4 **MF** C<sub>7</sub>H<sub>5</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 206.03 **PS** S  
**SOL** MeOH, A, IPA **SG** 1.61 g/cm<sup>3</sup>  
**MP** 194 - 201 °C **BP** 373 °C **FP** 180 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-243N   | 10 mg |
| 100 µg/mL in MeOH | P-243S   | 1 mL  |

## Chloramben methyl ester

3-Amino-2,5-dichlorobenzoic acid methyl ester



**CAS** 7286-84-2 **MF** C<sub>8</sub>H<sub>7</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 220.06  
**PS** L **SG** 1.43 g/cm<sup>3</sup> **MP** N/A **BP** 340 °C **FP** 160 °C

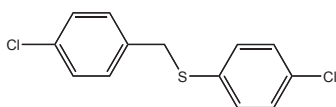
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-272N   | 10 mg |
| 100 µg/mL in MeOH | P-272S   | 1 mL  |

## Chloramizol

see Imazalil

## Chlorbenside

4-Chlorobenzyl 4-chlorophenyl sulfide

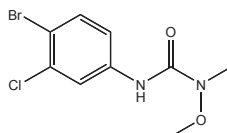


**CAS** 103-17-3 **MF** C<sub>13</sub>H<sub>10</sub>Cl<sub>2</sub>S **MW** 269.19 **PS** S  
**SG** 1.32 g/cm<sup>3</sup> **MP** 70 - 72 °C **BP** 374 °C  
**FP** 168 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-107N   | 10 mg |
| 100 µg/mL in MeOH | P-107S   | 1 mL  |

## Chlorbromuron

3-(4-Bromo-3-chlorophenyl)-1-methoxy-1-methylurea

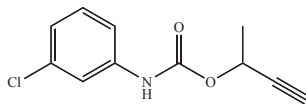


**CAS** 13360-45-7 **MF** C<sub>9</sub>H<sub>10</sub>BrClN<sub>2</sub>O<sub>2</sub> **MW** 293.54  
**PS** S **SOL** A, D, H **SG** 1.62 g/cm<sup>3</sup> **MP** 95 - 97 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-520N   | 10 mg |
| 100 µg/mL in MeOH | P-520S   | 1 mL  |

## Chlorbufam

1-Methylprop-2-ynyl 3-chlorocarbanilate

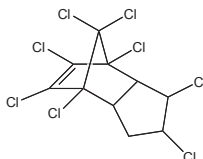


**CAS** 1967-16-4 **MF** C<sub>11</sub>H<sub>10</sub>ClNO<sub>2</sub> **MW** 223.66  
**PS** S **SOL** MeOH, A **SG** 1.28 g/cm<sup>3</sup> **MP** 45 °C  
**BP** 270 °C **FP** 117 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-558N   | 10 mg |
| 100 µg/mL in MeOH | P-558S   | 1 mL  |

## Chlordane

1,2,4,5,6,7,8-Octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methanoindene

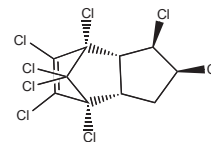


**CAS** 12789-03-6 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>8</sub> **MW** 409.78  
**PS** L **SG** 1.63 g/cm<sup>3</sup> **MP** 104 - 107 °C **BP** 175 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-017N   | 10 mg |
| 100 µg/mL in MeOH | P-017S   | 1 mL  |

## a-Chlordane

(1alpha,2alpha,3aalpha,4beta,7beta,7aalpha)-1,2,4,5,6,7,8-Octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methanoindene



**CAS** 5103-71-9 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>8</sub> **MW** 409.76  
**PS** S **SG** 1.80 g/cm<sup>3</sup> **MP** 106 °C **BP** 425 °C  
**FP** 212 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-134N   | 10 mg |
| 100 µg/mL in MeOH | P-134S   | 1 mL  |

## cis-Chlordane

see a-Chlordane

## trans-Chlordane

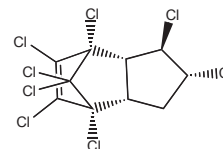
see g-Chlordane

## Chlordecone

see Kepone

## g-Chlordane

(1alpha,2beta,3aalpha,4beta,7beta,7aalpha)-1,2,4,5,6,7,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-Methano-1H-indene

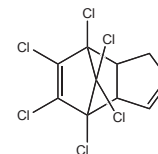


**CAS** 5103-74-2 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>8</sub> **MW** 409.76 **PS** S  
**SG** 1.80 g/cm<sup>3</sup> **MP** 106 °C **BP** 425 °C **FP** 212 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-135N   | 10 mg |
| 100 µg/mL in MeOH | P-135S   | 1 mL  |

## Chlordene

4,5,6,7,8,8-Hexachloro-3a,4,7,7a-tetrahydro-4,7-methanoindene



**CAS** 3734-48-3 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>6</sub> **MW** 338.86  
**PS** S **SG** N/A **MP** 165 - 170 °C **BP** N/A **FP** 100 °C

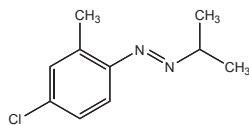
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-136N   | 10 mg |
| 100 µg/mL in MeOH | P-136S   | 1 mL  |



# Pesticide Standards

## Chlordimeform

1-(2-Methyl-4-chlorophenyl)-3,3-dimethylformamidine



**CAS** 6164-98-3 **MF** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub> **MW** 196.7 **PS** S  
**SOL** A, EA **SG** 1.10 g/cm<sup>3</sup> **MP** 32 - 35 °C  
**BP** 300 °C **FP** N/A

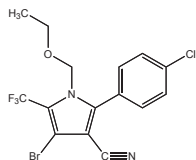
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-333N   | 10 mg |
| 100 µg/mL in MeOH | P-333S   | 1 mL  |

## Chlorfenac

see Fenatrol

## Chlorfenapyr

4-Bromo-2-(4-chlorophenyl)-1-ethoxymethyl-5-trifluoromethylpyrrole-3-carbonitrile



**CAS** 122453-73-0 **MF** C<sub>15</sub>H<sub>11</sub>BrClF<sub>3</sub>N<sub>2</sub>O **MW** 407.61  
**PS** S **SOL** CN, A, DMSO **SG** 1.53 g/cm<sup>3</sup>  
**MP** 100 - 101 °C **BP** 444 °C **FP** 222 °C

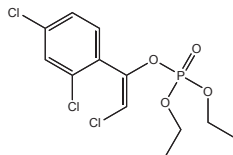
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-807N   | 10 mg |
| 100 µg/mL in MeOH | P-807S   | 1 mL  |

## Chlorfenson

see Ovx

## Chlorfenvinphos

2-Chloro-1-(2,4-dichlorophenyl)vinyl diethylphosphate



**CAS** 470-90-6 **MF** C<sub>12</sub>H<sub>14</sub>Cl<sub>3</sub>O<sub>4</sub>P **MW** 359.58  
**PS** L **SOL** H, D, A **SG** 1.36 g/cm<sup>3</sup> **MP** -20 °C  
**BP** 390 °C **FP** <38 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-139N   | 10 mg |
| 100 µg/mL in MeOH | P-139S   | 1 mL  |

### Property Key

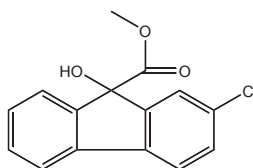
**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

## Chlorfluorecol-methyl ester

Methyl 2-chloro-9-hydroxyfluorene-9-carboxylate



**CAS** 2536-31-4 **MF** C<sub>14</sub>H<sub>9</sub>ClO<sub>3</sub> **MW** 260.68 **PS** S  
**SOL** A, MeOH, IPA **SG** 1.42 g/cm<sup>3</sup> **MP** 134 - 135 °C  
**BP** 426 °C **FP** 212 °C

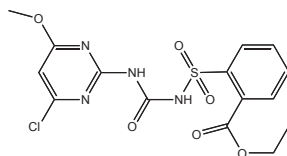
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-401N   | 10 mg |
| 100 µg/mL in MeOH | P-401S   | 1 mL  |

## Chloridazon

see Pyrazon

## Chlorimuron-ethyl

2-((((4-Chloro-6-methoxy-2-pyrimidinyl)amino)carbonyl)amino)sulfonyl)benzoic acid ethyl ester

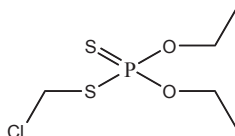


**CAS** 90982-32-4 **MF** C<sub>15</sub>H<sub>15</sub>ClN<sub>4</sub>O<sub>6</sub>S **MW** 414.82  
**PS** S **SG** 1.49 g/cm<sup>3</sup> **MP** 180 - 182 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-284S-CN | 1 mL |

## Chlormephos

S-Chloromethyl O,O-diethyl phosphorothioate

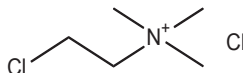


**CAS** 24934-91-6 **MF** C<sub>5</sub>H<sub>12</sub>ClO<sub>2</sub>PS<sub>2</sub> **MW** 234.71  
**PS** L **SG** 1.26 g/cm<sup>3</sup> **MP** N/A **BP** 81-85 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-329N   | 10 mg |
| 100 µg/mL in MeOH | P-329S   | 1 mL  |

## Chlormequat chloride

(2-Chloroethyl)trimethylammonium chloride

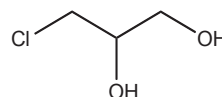


**CAS** 999-81-5 **MF** C<sub>5</sub>H<sub>13</sub>ClN • Cl **MW** 158.09 **PS** S  
**SOL** MeOH, A, EA **SG** 1.14 g/cm<sup>3</sup> **MP** 245 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-338N   | 10 mg |
| 100 µg/mL in MeOH | P-338S   | 1 mL  |

## 3-Chloro-1,2-propanediol

3-Chloro-1,2-propanediol

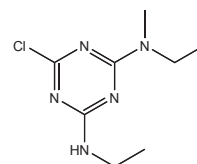


**CAS** 96-24-2 **MF** C<sub>3</sub>H<sub>7</sub>ClO<sub>2</sub> **MW** 110.55 **PS** L  
**SG** 1.32 g/cm<sup>3</sup> **MP** N/A **BP** 216.0 - 219.0 °C  
**FP** 113 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-408N   | 10 mg |
| 100 µg/mL in MeOH | P-408S   | 1 mL  |

## 2-Chloro-4-ethylamino-6-methylethylamino-s-triazine

2-Chloro-4-ethylamino-6-methylethylaminotriazine

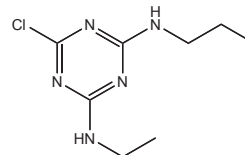


**CAS** N/A **MF** C<sub>8</sub>H<sub>14</sub>ClN<sub>5</sub> **MW** 215.68 **MP** N/A  
**BP** N/A **FP** N/A

| Matrix          | Cat. No.  | Unit  |
|-----------------|-----------|-------|
| Neat            | P-539N    | 10 mg |
| 100 µg/mL in MC | P-539S-MC | 1 mL  |

## 2-Chloro-4-ethylamino-6-propylamino-s-triazine

2-Chloro-4-ethylamino-6-propylamino-1,3,5-triazine

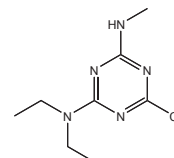


**CAS** N/A **MF** C<sub>8</sub>H<sub>14</sub>ClN<sub>5</sub> **MW** 215.68

| Matrix          | Cat. No.  | Unit  |
|-----------------|-----------|-------|
| Neat            | P-537N    | 10 mg |
| 100 µg/mL in MC | P-537S-MC | 1 mL  |

## 2-Chloro-4-methylamino-6-diethylamino-s-triazine

2-Chloro-4-methylamino-6-diethylaminotriazine



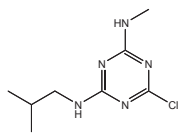
**CAS** 290-87-9 **MF** C<sub>8</sub>H<sub>14</sub>ClN<sub>5</sub> **MW** 215.68  
**MP** N/A **BP** N/A **FP** N/A

| Matrix          | Cat. No.  | Unit  |
|-----------------|-----------|-------|
| Neat            | P-541N    | 10 mg |
| 100 µg/mL in MC | P-541S-MC | 1 mL  |



## 2-Chloro-4-methylamino-6-sec-butylamino-s-triazine

2-Chloro-4-methylamino-6-secbutylaminotriazine

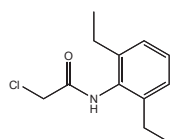


CAS N/A MF C<sub>8</sub>H<sub>14</sub>ClN<sub>5</sub> MW 215.68 MP N/A  
BP N/A FP N/A

| Matrix          | Cat. No.  | Unit  |
|-----------------|-----------|-------|
| Neat            | P-540N    | 10 mg |
| 100 µg/mL in MC | P-540S-MC | 1 mL  |

## 2-Chloro-2',6'-diethylacetanilide

2-Chloro-2',6'-diethylacetanilide

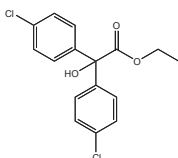


CAS 6967-29-9 MF C<sub>12</sub>H<sub>16</sub>ClNO MW 225.72  
PS S SG 1.13 g/cm<sup>3</sup> MP 128 - 130 °C BP 369 °C  
FP 177 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-620N   | 10 mg |
| 100 µg/mL in MeOH | P-620S   | 1 mL  |

## Chlorobenzilate Δ

Ethyl-4,4'-Dichlorobenzilate

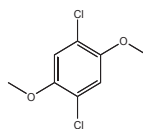


CAS 510-15-6 MF C<sub>16</sub>H<sub>14</sub>Cl<sub>2</sub>O<sub>3</sub> MW 325.19 PS S  
SOL MeOH, D, T SG 1.28 g/cm<sup>3</sup> MP 37 °C  
BP 415 °C FP N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-133N    | 10 mg |
| 100 µg/mL in AcCN | P-133S-CN | 1 mL  |

## Chloroneb

1,4-Dichloro-2,5-dimethoxybenzene

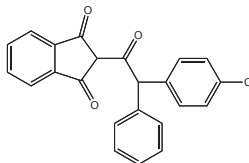


CAS 2675-77-6 MF C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>2</sub> MW 207.06  
PS S SOL D, A SG 1.28 g/cm<sup>3</sup> MP 133 - 135 °C  
BP 268 °C FP 106 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-212N   | 10 mg |
| 100 µg/mL in MeOH | P-212S   | 1 mL  |

## Chlorophacinone

2-[2-(4-Chlorophenyl)-2-phenylacetyl]indan-1,3-dione



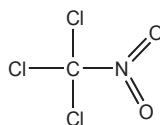
CAS 3691-35-8 MF C<sub>23</sub>H<sub>15</sub>ClO<sub>3</sub> MW 374.83  
PS S SOL MeOH, H, A SG N/A MP 140 - 144 °C  
BP N/A FP N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-314N   | 10 mg |
| 100 µg/mL in MeOH | P-314S   | 1 mL  |

4-Chlorophenyl 2,4,5-trichlorophenyl sulfide  
see Tetrasul  
Chlorophos see Trichlorfon

## Chloropicrin

Trichloronitromethane

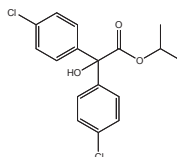


CAS 76-06-2 MF CCl<sub>3</sub>NO<sub>2</sub> MW 164.37 PS L  
SG 1.66 g/cm<sup>3</sup> MP -64 °C BP 112 °C FP N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-398N   | 10 mg |
| 100 µg/mL in MeOH | P-398S   | 1 mL  |

## Chloropropylate

Isopropyl 4,4'-dichlorobenzilate



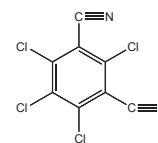
CAS 5836-10-2 MF C<sub>17</sub>H<sub>16</sub>Cl<sub>2</sub>O<sub>3</sub> MW 339.23  
PS S SOL H, MeOH, D SG 1.30 g/cm<sup>3</sup> MP 73 °C  
BP 360 °C FP 231 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-213N   | 10 mg |
| 100 µg/mL in MeOH | P-213S   | 1 mL  |

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a Cold Pack

## Chlorothalonil

Tetrachloroisophthalonitrile

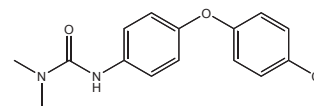


CAS 1897-45-6 MF C<sub>8</sub>Cl<sub>4</sub>N<sub>2</sub> MW 265.91 PS S  
SOL A, DMSO SG 1.71 g/cm<sup>3</sup> MP 250 - 251 °C  
BP 350 °C FP N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-222N   | 10 mg |
| 100 µg/mL in MeOH | P-222S   | 1 mL  |

## Chloroxuron

3-[4-(4-chlorophenoxy)phenyl]-1,1-dimethylurea

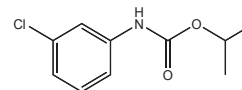


CAS 1982-47-4 MF C<sub>15</sub>H<sub>15</sub>ClN<sub>2</sub>O<sub>2</sub> MW 290.77  
PS S SOL D, MeOH, A SG 1.27 g/cm<sup>3</sup> MP 151 °C  
BP 459 °C FP 232 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-402N   | 10 mg |
| 100 µg/mL in MeOH | P-402S ‡ | 1 mL  |

## Chlorpropham

3-Chlorophenylcarbamic acid 1-methylethyl ester



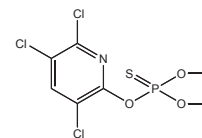
CAS 101-21-3 MF C<sub>10</sub>H<sub>12</sub>ClNO<sub>2</sub> MW 213.66 PS S  
SOL MeOH, IPA SG 1.18 g/cm<sup>3</sup> MP 41 °C  
BP 257 °C FP N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-221N   | 10 mg |
| 100 µg/mL in MeOH | P-221S   | 1 mL  |

Chlorpyrifos see Dursban

## Chlorpyrifos-methyl

O,O-Dimethyl O-3,5,6-trichloro-2-pyridyl-phosphorothioate



CAS 5598-13-0 MF C<sub>7</sub>H<sub>7</sub>Cl<sub>3</sub>NO<sub>3</sub>PS MW 322.53  
PS S SOL A, MeOH, H SG 1.64 g/cm<sup>3</sup> MP 46 °C  
BP N/A FP >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-223N   | 10 mg |
| 100 µg/mL in MeOH | P-223S   | 1 mL  |

Chlorthal Acid

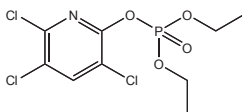
see DCPA Diacid



# Pesticide Standards

## Chlorpyrifos-oxon

Diethyl-3,5,6-trichloro-2-pyridinyl phosphate

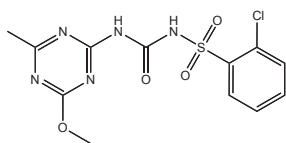


**CAS** 5598-15-2 **MF** C<sub>9</sub>H<sub>11</sub>Cl<sub>3</sub>NO<sub>4</sub>P **MW** 334.53  
**PS** S **SOL** MeOH, A **SG** 1.46 g/cm<sup>3</sup> **MP** 83 - 84 °C  
**BP** 358 °C **FP** 170 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-700N   | 10 mg |
| 100 µg/mL in MeOH | P-700S   | 1 mL  |

## Chlorsulfuron

1-(2-chlorophenylsulfonyl)-3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)urea

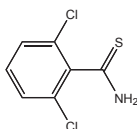


**CAS** 64902-72-3 **MF** C<sub>12</sub>H<sub>12</sub>ClN<sub>5</sub>O<sub>4</sub>S **MW** 357.77  
**PS** S **SOL** MeOH, A, T **SG** 1.48 g/cm<sup>3</sup>  
**MP** 174 - 178 °C **BP** ~192 °C **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-262N    | 10 mg |
| 100 µg/mL in AcCN | P-262S-CN | 1 mL  |

## Chlorthiamid

2,6-Dichlorothiobenzamide

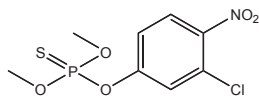


**CAS** 1918-13-4 **MF** C<sub>7</sub>H<sub>5</sub>Cl<sub>2</sub>NS **MW** 206.09  
**PS** S **SG** 1.47 g/cm<sup>3</sup> **MP** 151 - 152 °C **BP** 321 °C  
**FP** 148 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-673N   | 10 mg |
| 100 µg/mL in MeOH | P-673S   | 1 mL  |

## Chlorthion

O-3-Chloro-4-nitrophenyl O,O-dimethyl phosphorothioate

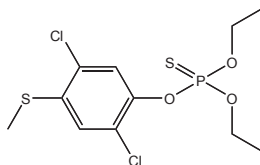


**CAS** 500-28-7 **MF** C<sub>8</sub>H<sub>9</sub>ClNO<sub>3</sub>PS **MW** 297.65  
**PS** S or L **SOL** B, M, E **SG** 1.44 g/cm<sup>3</sup> **MP** 21 °C  
**BP** 367 °C **FP** 176 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| Neat              | P-674S   | 1 mL |
| 100 µg/mL in MeOH | P-674S   | 1 mL |

## Chlorthiophos

O-(Dichloro(methylthio)phenyl) O,O-diethyl phosphorothioate, mixed isomers

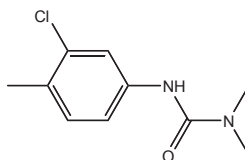


**CAS** 60238-56-4 **MF** C<sub>11</sub>H<sub>15</sub>Cl<sub>2</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 361.25  
**PS** S **SG** 1.46 g/cm<sup>3</sup> **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-545N   | 10 mg |
| 100 µg/mL in MeOH | P-545S   | 1 mL  |

## Chlortoluron

3-(3-Chloro-p-tolyl)-1,1-dimethylurea

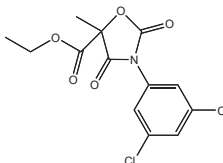


**CAS** 15545-48-9 **MF** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O **MW** 212.68  
**PS** S **SG** 1.22 g/cm<sup>3</sup> **MP** 146 - 148 °C **BP** 368 °C  
**FP** 176 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-434N   | 10 mg |
| 100 µg/mL in MeOH | P-434S   | 1 mL  |

## Chlozolinate

Ethyl-3-(3,5-dichlorophenyl)-5-methyl-2,4-dioxo-5-oxazolidinecarboxylate



**CAS** 84332-86-5 **MF** C<sub>13</sub>H<sub>11</sub>Cl<sub>2</sub>NO<sub>5</sub> **MW** 332.15  
**PS** S **SG** 1.48 g/cm<sup>3</sup> **MP** 110 - 114 °C **BP** 421 °C  
**FP** 208 °C

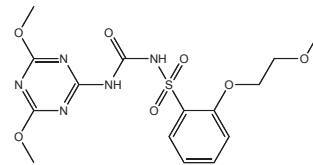
| Matrix            | Cat. No.    | Unit |
|-------------------|-------------|------|
| 100 µg/mL in AcCN | P-683S-CN ‡ | 1 mL |

## Ciafos

see Cyanophos

## Cinosulfuron

1-(4,6-Dimethoxy-1,3,5-triazin-2-yl)-3-(2-(2-methoxyethoxy)phenylsulfonyl)urea

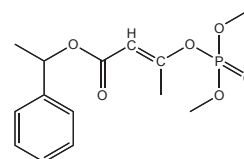


**CAS** 94593-91-6 **MF** C<sub>15</sub>H<sub>19</sub>N<sub>5</sub>O<sub>7</sub>S **MW** 413.41  
**PS** S **SOL** A, T, H **SG** 1.47 g/cm<sup>3</sup> **MP** 144.6 °C  
**BP** N/A **FP** >144 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-823N    | 10 mg |
| 100 µg/mL in AcCN | P-823S-CN | 1 mL  |

## Ciodrin

Dimethyl 2-(a-methylbenzyloxycarbonyl)-1-methylvinylphosphate



**CAS** 7700-17-6 **MF** C<sub>14</sub>H<sub>19</sub>O<sub>6</sub>P **MW** 314.27  
**PS** L **SG** 1.20 g/cm<sup>3</sup> **MP** N/A **BP** 366 °C **FP** 188 °C

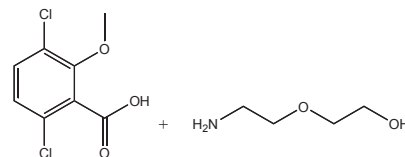
| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-218S   | 1 mL |

## CIPC

see Chlorpropham

## Clarity

3,6-Dichloro-o-anisic acid, 2-(2-aminoethoxy) ethanol salt, tech



**CAS** 104040-79-1 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub>•C<sub>4</sub>H<sub>11</sub>NO<sub>2</sub>  
**MW** 326.18 **PS** L **SG** 1.23 g/cm<sup>3</sup> **MP** N/A  
**BP** 498 °C **FP** 255 °C

| Matrix             | Cat. No. | Unit |
|--------------------|----------|------|
| 100 µg/mL in Water | P-495S-W | 1 mL |

## Property Key

**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

## Solubility Key (SOL)

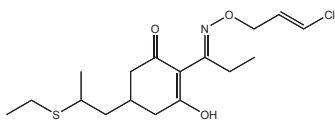
**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



## Clethodim

(E)-2-[1-[[[(3-Chloro-2-propenyl)oxy]imino]propyl]-5-{2-(ethylthio)propyl}-3-hydroxy-2-cyclohexene-1-one



CAS 99129-21-2 MF C<sub>17</sub>H<sub>26</sub>ClNO<sub>3</sub>S MW 359.91  
PS S SOL H, E, A SG 1.38 g/cm<sup>3</sup> MP 81 °C  
BP ~230 °C FP >230 °C

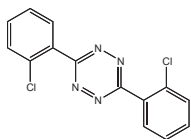
| Matrix            | Cat. No.    | Unit |
|-------------------|-------------|------|
| 100 µg/mL in AcCN | P-602S-CN ‡ | 1 mL |

## Clipper

see Bonzi

## Clofentezine

3,6-bis(2-chlorophenyl)-1,2,4,5-tetrazine

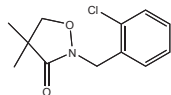


CAS 74115-24-5 MF C<sub>14</sub>H<sub>8</sub>Cl<sub>2</sub>N<sub>4</sub> MW 303.15 PS S  
SOL D, A, EA SG 1.52 g/cm<sup>3</sup> MP 182 - 185 °C  
BP 504 °C FP 290 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-472N   | 10 mg |
| 100 µg/mL in MeOH | P-472S   | 1 mL  |

## Clomazon

2-(2-Chlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one

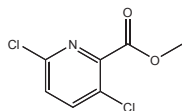


CAS 81777-89-1 MF C<sub>12</sub>H<sub>14</sub>ClNO<sub>2</sub> MW 239.7  
PS L SG 1.19 g/cm<sup>3</sup> MP 25 °C BP 275 °C  
FP 70 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| Neat              | P-286S   | 1 mL |
| 100 µg/mL in MeOH | P-286S   | 1 mL |

## Clopyralid methyl ester

3,6-dichloropyridine-2-carboxylic acid, methyl ester



CAS 1532-24-7 MF C<sub>7</sub>H<sub>5</sub>Cl<sub>2</sub>NO<sub>2</sub> MW 206.03  
PS S SG 1.43 g/cm<sup>3</sup> MP 60 - 61 °C BP 296 °C  
FP 133 °C

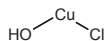
| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-488S   | 1 mL |

## Command

see Clomazon

## Copper oxychloride

Copper oxychloride



No specified formula or molecular weight. Contains 57 % Cu++.

CAS 1332-40-7 MF N/A MW N/A PS S  
SG 0.80 g/cm<sup>3</sup> MP 300 °C BP N/A FP N/A

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-458N   | 10 mg |

## Co-Ral

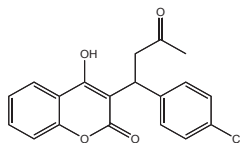
Cotoran

see Coumaphos

see Fluometuron

## Coumachlor

3-(a-Acetyl-4-chlorobenzyl)-4-hydroxycoumarin

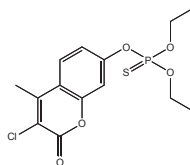


CAS 81-82-3 MF C<sub>19</sub>H<sub>15</sub>ClO<sub>4</sub> MW 342.77  
PS S SG 1.38 g/cm<sup>3</sup> MP 168 - 170 °C BP 543 °C  
FP 282 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-684S   | 1 mL |

## Coumaphos

O-3-Chloro-4-methyl-2-oxo-2H-chromen-7-yl O,O-diethyl phosphorothioate

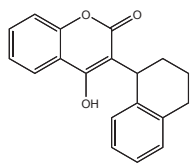


CAS 56-72-4 MF C<sub>14</sub>H<sub>16</sub>ClO<sub>5</sub>PS MW 362.77  
PS S SG 1.47 g/cm<sup>3</sup> MP 95 °C BP N/A FP 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-019N   | 10 mg |
| 100 µg/mL in MeOH | P-019S   | 1 mL  |

## Coumatetralyl

4-Hydroxy-3-(1,2,3,4-tetrahydro-1-naphthyl) coumarin



CAS 5836-29-3 MF C<sub>19</sub>H<sub>16</sub>O<sub>3</sub> MW 292.33 PS S  
SOL D, MeOH, IPA SG N/A MP 172 - 176 °C  
BP N/A FP N/A

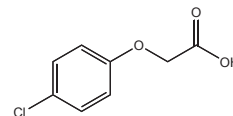
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-313N   | 10 mg |
| 100 µg/mL in MeOH | P-313S   | 1 mL  |

## Counter

see Terbufos

## 4-CPA

4-Chlorophenoxyacetic acid



CAS 122-88-3 MF C<sub>8</sub>H<sub>7</sub>ClO<sub>3</sub> MW 186.6 PS S  
SG 1.37 g/cm<sup>3</sup> MP 157 - 159 °C BP 315 °C  
FP 144 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-373N   | 10 mg |
| 100 µg/mL in MeOH | P-373S   | 1 mL  |

## Crag Herbicide

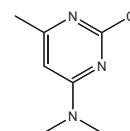
Crimidin

see Disul, sodium salt

see Crimidine

## Crimidine

2-Chloro-4-dimethylamino-6-methylpyrimidine



CAS 535-89-7 MF C<sub>7</sub>H<sub>10</sub>ClN<sub>3</sub> MW 171.63  
PS S SG 1.21 g/cm<sup>3</sup> MP 87 °C BP 291 °C  
FP 130 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-561N   | 10 mg |
| 100 µg/mL in MeOH | P-561S   | 1 mL  |

## Croneton

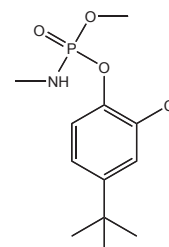
Crotoxyphos

see Ethiofencarb

see Ciodrin

## Crufomate

4-tert-Butyl-2-chlorophenyl methyl methylphosphoramidate



CAS 299-86-5 MF C<sub>12</sub>H<sub>9</sub>ClNO<sub>3</sub>P MW 291.74  
PS L SG 1.18 g/cm<sup>3</sup> MP 60 - 60.5 °C BP 395 °C  
FP 155 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-292N   | 10 mg |
| 100 µg/mL in MeOH | P-292S   | 1 mL  |

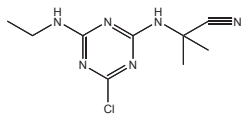




# Pesticide Standards

## Cyanazine

2-(4-Chloro-6-ethylamino-1,3,5-triazin-2-ylamino)-2-methylpropionitrile

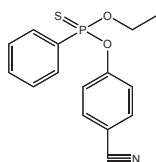


**CAS** 21725-46-2 **MF** C<sub>9</sub>H<sub>13</sub>ClN<sub>6</sub> **MW** 240.69 **PS** S  
**SOL** A, H **SG** 1.29 g/cm<sup>3</sup> **MP** 168 °C **BP** N/A  
**FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-175N   | 10 mg |
| 100 µg/mL in MeOH | P-175S   | 1 mL  |

## Cyanofenphos

4-cyanophenylethylphenyl phosphonothionate

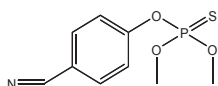


**CAS** 13067-93-1 **MF** C<sub>15</sub>H<sub>14</sub>NO<sub>2</sub>PS **MW** 303.33  
**PS** S **SG** 1.26 g/cm<sup>3</sup> **MP** 83 °C **BP** 424 °C  
**FP** 210 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-584N   | 10 mg |
| 100 µg/mL in MeOH | P-584S   | 1 mL  |

## Cyanophos

O-4-Cyanophenyl O,O-dimethyl phosphorothioate



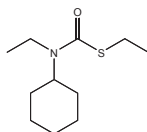
**CAS** 2636-26-2 **MF** C<sub>9</sub>H<sub>10</sub>NO<sub>3</sub>PS **MW** 243.22  
**PS** L **SOL** MeOH, A **SG** 1.25 g/cm<sup>3</sup> **MP** 14 - 15 °C  
**BP** ~119 °C **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-531N   | 10 mg |
| 100 µg/mL in MeOH | P-531S   | 1 mL  |

**Cyanox** see **Cyanophos**

## Cycloate

S-Ethyl cyclohexyl(ethyl)thiocarbamate

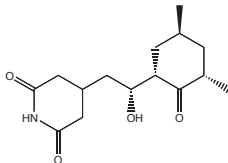


**CAS** 1134-23-2 **MF** C<sub>11</sub>H<sub>21</sub>NOS **MW** 215.36 **PS** L  
**SOL** MeOH, A **SG** 1.02 g/cm<sup>3</sup> **MP** 12 °C **BP** 146 °C  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-248N   | 10 mg |
| 100 µg/mL in MeOH | P-248S   | 1 mL  |

## Cycloheximide

3-[2-(3,5-Dimethyl-2-oxocyclohexyl)-2-hydroxyethyl] glutarimide



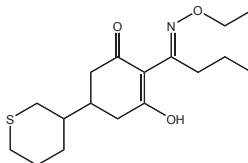
**CAS** 66-81-9 **MF** C<sub>15</sub>H<sub>23</sub>NO<sub>4</sub> **MW** 281.35 **PS** S  
**SOL** A **SG** 1.14 g/cm<sup>3</sup> **MP** 107 - 114 °C **BP** 492 °C  
**FP** 252 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-411N   | 10 mg |
| 100 µg/mL in MeOH | P-411S ‡ | 1 mL  |

**Cycloxydim** see **Cycloxydime**

## Cycloxydime

(±)-2-[1-(ethoxyimino)butyl]-3-hydroxy-5-thian-3-ylcyclohex-2-enone



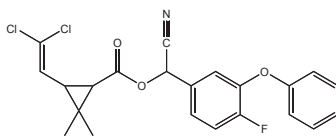
**CAS** 101205-02-1 **MF** C<sub>17</sub>H<sub>27</sub>NO<sub>3</sub>S **MW** 325.51  
**PS** S **SOL** MeOH, D, T **SG** 1.14 g/cm<sup>3</sup> **MP** 41 °C  
**BP** 450 °C **FP** 226 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-735N   | 10 mg |
| 100 µg/mL in MeOH | P-735S   | 1 mL  |

**Cyfoxylate** see **Cyfluthrin**

## Cyfluthrin

3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropane-carboxylic acid, cyano(4-fluoro-3-phenoxyphenyl) methyl ester



**CAS** 68359-37-5 **MF** C<sub>22</sub>H<sub>18</sub>Cl<sub>2</sub>FNO<sub>3</sub> **MW** 434.31  
**PS** S **SOL** D, T, H **SG** 1.28 g/cm<sup>3</sup> **MP** 60 °C  
**BP** N/A **FP** 107 °C

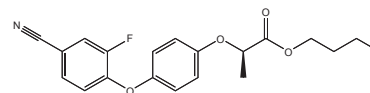
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-354N   | 10 mg |
| 100 µg/mL in MeOH | P-354S ‡ | 1 mL  |

**Cygon** see **Dimethoate**

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**

## Cyhalofop-butyl

(R) -2 - [4 (4 - cyano -2 - fluorobenzaldehyde oxy) phenoxy] - propionic acid

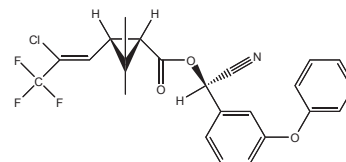


**CAS** 122008-85-9 **MF** C<sub>20</sub>H<sub>20</sub>FNO<sub>4</sub> **MW** 357.38  
**PS** S **SOL** M, AcCN, A **SG** 1.24 g/cm<sup>3</sup>  
**MP** 48-49 °C **BP** 363 °C

| Matrix            | Cat. No.   | Unit |
|-------------------|------------|------|
| Neat              | P-944N-5MG | 5 mg |
| 100 µg/mL in MeOH | P-944S     | 1 mL |

## L-Cyhalothrin

rel-(R)-cyano(3-phenoxyphenyl)methyl (1S,3S)-3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propenyl]-2,2-dimethylcyclopropanecarboxylate

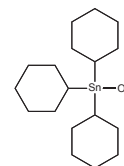


**CAS** 91465-08-6 **MF** C<sub>23</sub>H<sub>19</sub>ClF<sub>3</sub>NO<sub>3</sub> **MW** 449.85  
**PS** L **SOL** MeOH, H, T **SG** 1.34 g/cm<sup>3</sup> **MP** 49.2 °C  
**BP** 187 - 190 °C **FP** 256 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-473N   | 10 mg |
| 100 µg/mL in MeOH | P-473S ‡ | 1 mL  |

## Cyhexatin

Tricyclohexylhydroxystannane



**CAS** 13121-70-5 **MF** C<sub>18</sub>H<sub>34</sub>OSn **MW** 385.21 **PS** S  
**SOL** MeOH, D, T **SG** N/A **MP** 195 - 198 °C  
**BP** 426 °C **FP** 212 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-375N   | 10 mg |
| 100 µg/mL in MeOH | P-375S   | 1 mL  |

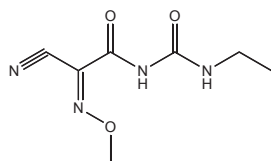
**Cymetrin** see **Simetryn**

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



## Cymoxanil

1-(2-cyano-2-methoxyiminoacetyl)-3-ethylurea

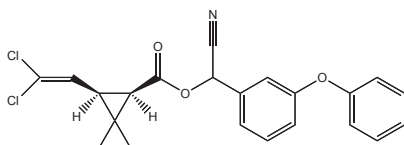


**CAS** 57966-95-7 **MF** C<sub>7</sub>H<sub>10</sub>N<sub>4</sub>O<sub>3</sub> **MW** 198.18 **PS** S  
**SOL** D, A, CN **SG** 1.32 g/cm<sup>3</sup> **MP** 160 °C **BP** N/A  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-493N   | 10 mg |
| 100 µg/mL in MeOH | P-493S ‡ | 1 mL  |

## Cypermethrin

(RS)-alpha-Cyano-3-phenoxybenzyl  
(1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)  
2,2-dimethylcyclopropanecarboxylate



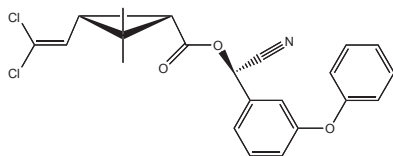
**CAS** 52315-07-8 **MF** C<sub>22</sub>H<sub>19</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 416.3  
**PS** L **SOL** A, H **SG** 1.25 g/cm<sup>3</sup> **MP** 60-80 °C  
**BP** 300 °C **FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-225N   | 10 mg |
| 100 µg/mL in MeOH | P-225S ‡ | 1 mL  |

*cis*-Cypermethrin see *a*-Cypermethrin

## a-Cypermethrin

(R)-Cyano-3-phenoxybenzyl (1S,3S)-rel-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane carboxylate

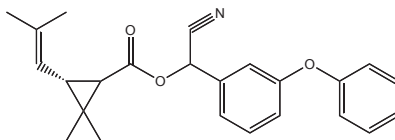


**CAS** 67375-30-8 **MF** C<sub>22</sub>H<sub>19</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 416.3  
**PS** S **SOL** MeOH, A, EA **SG** 1.12 g/cm<sup>3</sup>  
**MP** 80.5 °C **BP** 200 °C **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-548N    | 10 mg |
| 100 µg/mL in AcCN | P-548S-CN | 1 mL  |

## Cyphenothrin

(RS)-alpha-Cyano-3-phenoxybenzyl  
(1R,3RS;1RS,3SR)-2,2-dimethyl-3-(2-methyl-1-prop-1-enyl)cyclopropanecarboxylate

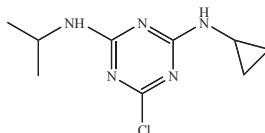


**CAS** 39515-40-7 **MF** C<sub>24</sub>H<sub>25</sub>NO<sub>3</sub> **MW** 375.46  
**PS** L **SOL** MeOH, H **SG** 1.08 g/cm<sup>3</sup> **MP** N/A  
**BP** 154 °C **FP** 130 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-709N   | 10 mg |
| 100 µg/mL in MeOH | P-709S ‡ | 1 mL  |

## Cyprazine

6-Chloro-N<sub>2</sub>-cyclopropyl-N<sub>4</sub>-isopropyl-1,3,5-triazine-2,4-diamine



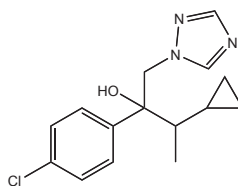
**CAS** 22936-86-3 **MF** C<sub>9</sub>H<sub>14</sub>ClN<sub>5</sub> **MW** 227.69  
**PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 165-167 °C **BP** 399 °C  
**FP** 195 °C

| Matrix              | Cat. No. | Unit  |
|---------------------|----------|-------|
| Neat                | P-420N   | 10 mg |
| 100 µg/mL in MeOH   | P-420S   | 1 mL  |
| 100 µg/mL in Hexane | P-420S-H | 1 mL  |

Cyprex see Dodine

## Cyproconazole

2-(4-chlorophenyl)-3-cyclopropyl-1-(1H-1,2,4-triazol-1-yl)butan-2-ol

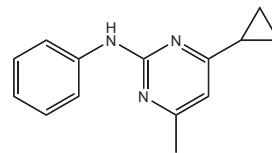


**CAS** 113096-99-4 **MF** C<sub>15</sub>H<sub>18</sub>ClN<sub>3</sub>O **MW** 291.78  
**PS** S **SG** 1.32 g/cm<sup>3</sup> **MP** 107 - 108 °C **BP** 479 °C  
**FP** 244 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| Neat              | P-555S   | 1 mL |
| 100 µg/mL in MeOH | P-555S   | 1 mL |

## Cyprodinil

4-Cyclopropyl-6-methyl-N-phenylpyrimidin-2-amine

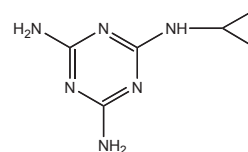


**CAS** 121552-61-2 **MF** C<sub>14</sub>H<sub>15</sub>N<sub>3</sub> **MW** 225.29 **PS** S  
**SOL** A, T, H **SG** 1.21 g/cm<sup>3</sup> **MP** 125 - 127 °C  
**BP** 406 °C **FP** 199 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-720N   | 10 mg |
| 100 µg/mL in MeOH | P-720S   | 1 mL  |

## Cyromazine

N-cyclopropyl-1,3,5-triazine-2,4,6-triamine



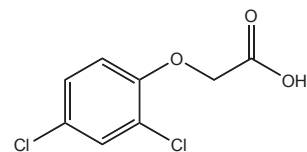
**CAS** 66215-27-8 **MF** C<sub>6</sub>H<sub>10</sub>N<sub>6</sub> **MW** 166.19 **PS** S  
**SOL** MeOH, IPA, A **SG** 1.62 g/cm<sup>3</sup> **MP** 220 - 222 °C  
**BP** 481 °C **FP** 224 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-296N   | 10 mg |
| 100 µg/mL in MeOH | P-296S   | 1 mL  |

**2,3-D** see **2,3-Dichlorophenoxyacetic acid**

## 2,4-D Δ

(2,4-Dichlorophenoxy) acetic acid



**CAS** 94-75-7 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 221.04 **SOL** T  
**SG** 1.51 g/cm<sup>3</sup> **MP** 140 °C **BP** 160 °C **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-020N    | 10 mg |
| 100 µg/mL in MeOH | P-020S    | 1 mL  |
| 100 µg/mL in AcCN | P-020S-CN | 1 mL  |

**2,4-D Acid** see **2,4-D**

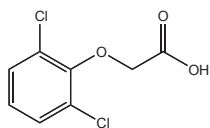
Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.



# Pesticide Standards

## 2,6-D acid $\Delta$

(2,6-Dichlorophenoxy) acetic acid

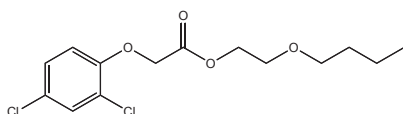


**CAS** 575-90-6 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 221.04  
**PS** S **SG** 1.49 g/cm<sup>3</sup> **MP** 109 - 110 °C **BP** 343 °C  
**FP** 161 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-690N    | 10 mg |
| 100 µg/mL in MeOH | P-690S    | 1 mL  |
| 100 µg/mL in AcCN | P-690S-CN | 1 mL  |

## 2,4-D butoxyethyl ester

2,4-Dichlorophenoxy acid butoxyethyl ester

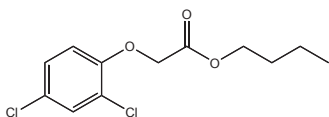


**CAS** 1929-73-3 **MF** C<sub>14</sub>H<sub>18</sub>Cl<sub>2</sub>O<sub>4</sub> **MW** 321.22  
**PS** L **SG** 1.22 g/cm<sup>3</sup> **MP** N/A **BP** 409 °C **FP** 153 °C

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-438N   | 10 mg |

## 2,4-D butyl ester

2,4-Dichlorophenoxy acetic acid butyl ester

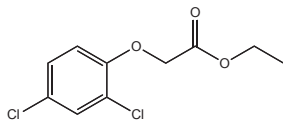


**CAS** 94-80-4 **MF** C<sub>12</sub>H<sub>14</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 277.14 **PS** L  
**SOL** T **SG** 1.24 g/cm<sup>3</sup> **MP** N/A **BP** 146 - 147 °C  
**FP** 132 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-712N   | 10 mg |
| 100 µg/mL in MeOH | P-712S   | 1 mL  |

## 2,4-D Ethyl ester

(2,4-Dichlorophenoxy)acetic acid ethyl ester

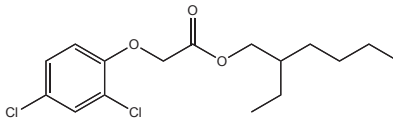


**CAS** 533-23-3 **MF** C<sub>10</sub>H<sub>10</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 249.09  
**PS** L **SOL** T **SG** 1.31 g/cm<sup>3</sup> **MP** N/A **BP** 314 °C  
**FP** 127 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-636N   | 10 mg |
| 100 µg/mL in MeOH | P-636S   | 1 mL  |

## 2,4-D ethylhexyl ester

2-Ethylhexyl-2,4-dichlorophenoxy acetate

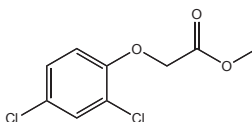


**CAS** 1928-43-4 **MF** C<sub>16</sub>H<sub>22</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 333.25  
**PS** L **SG** 1.15 g/cm<sup>3</sup> **MP** N/A **BP** 173 - 174 °C  
**FP** N/A

| Matrix              | Cat. No. | Unit  |
|---------------------|----------|-------|
| Neat                | P-439N   | 10 mg |
| 100 µg/mL in Hexane | P-439S-H | 1 mL  |

## 2,4-D Methyl ester

2,4-Dichlorophenoxy acid methyl ester

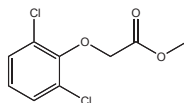


**CAS** 1928-38-7 **MF** C<sub>9</sub>H<sub>8</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 235.07  
**PS** S **SG** 1.15 g/cm<sup>3</sup> **MP** N/A **BP** 141 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-021N   | 10 mg |
| 100 µg/mL in MeOH | P-021S   | 1 mL  |

## 2,6-D methyl ester

(2,6-Dichlorophenoxy) methyl ester



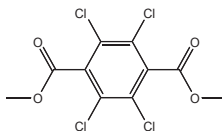
**CAS** N/A **MF** C<sub>9</sub>H<sub>8</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 235.06 **PS** S **SG** N/A  
**MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-691N   | 10 mg |
| 100 µg/mL in MeOH | P-691S   | 1 mL  |

**Daconil** see **Chlorothalonil**

## Dacthal

Dimethyl 2,3,5,6-tetrachloro-1,4-benzenedicarboxylate



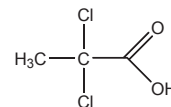
**CAS** 1861-32-1 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>4</sub>O<sub>4</sub> **MW** 331.96  
**PS** S **SG** 1.56 g/cm<sup>3</sup> **MP** 155 - 156 °C  
**BP** ~360-370 °C **FP** 175 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-196N   | 10 mg |
| 100 µg/mL in MeOH | P-196S   | 1 mL  |

**Dacthal diacid** see **DCPA Diacid**  
**Dacthal monoacid** see  
**Monomethyltetrachloroterephthalate**

## Dalapon acid $\Delta$

2,2-Dichloropropionic acid

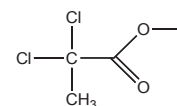


**CAS** 75-99-0 **MF** C<sub>3</sub>H<sub>4</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 142.97 **PS** L  
**SOL** MeOH, A **SG** 1.40 g/cm<sup>3</sup> **MP** 166 °C  
**BP** 202 °C **FP** >110 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-140N    | 10 mg |
| 100 µg/mL in MeOH | P-140S    | 1 mL  |
| 100 µg/mL in AcCN | P-140S-CN | 1 mL  |

## Dalapon methyl ester

2,2-Dichloropropanoic acid methyl ester



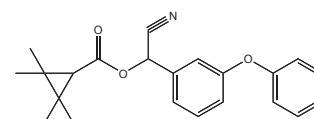
**CAS** 17640-02-7 **MF** C<sub>4</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 157 **PS** L  
**SG** 1.30 g/cm<sup>3</sup> **MP** N/A **BP** 144 °C **FP** 50 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-226N   | 10 mg |
| 100 µg/mL in MeOH | P-226S   | 1 mL  |

**Daminozide** see **Alar (SADH)**

## Danitol

(RS)-alpha-Cyano-3-phenoxybenzyl  
2,2,3,3-tetramethylcyclopropanecarboxylate

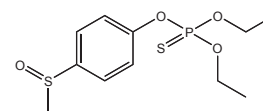


**CAS** 39515-41-8 **MF** C<sub>22</sub>H<sub>23</sub>NO<sub>3</sub> **MW** 349.42  
**PS** S **SG** 1.15 g/cm<sup>3</sup> **MP** 45 - 50 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-263N   | 10 mg |
| 100 µg/mL in MeOH | P-263S   | 1 mL  |

## Dasanit

O,O-diethyl O-4-(methylsulfinyl)phenyl  
phosphorothioate



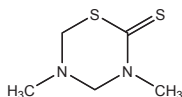
**CAS** 115-90-2 **MF** C<sub>11</sub>H<sub>17</sub>O<sub>4</sub>PS<sub>2</sub> **MW** 308.36  
**PS** L **SG** 1.20 g/cm<sup>3</sup> **MP** N/A **BP** 140 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-235N   | 10 mg |
| 100 µg/mL in MeOH | P-235S   | 1 mL  |



## Dazomet

3,5-Dimethyl-1,3,5-thiadiazinane-2-thione

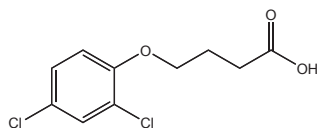


**CAS** 533-74-4 **MF** C<sub>5</sub>H<sub>10</sub>N<sub>2</sub>S<sub>2</sub> **MW** 162.28 **PS** S  
**SOL** A **SG** 1.36 g/cm<sup>3</sup> **MP** 103 - 105 °C **BP** N/A  
**FP** 156 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-469N   | 10 mg |
| 100 µg/mL in MeOH | P-469S   | 1 mL  |

## 2,4-DB acid

4-(2,4-Dichlorophenoxy)butyric acid

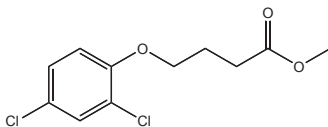


**CAS** 94-82-6 **MF** C<sub>10</sub>H<sub>10</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 249.1 **PS** S  
**SOL** A, T **SG** 1.51 g/cm<sup>3</sup> **MP** 118 - 120 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-141N    | 10 mg |
| 100 µg/mL in MeOH | P-141S    | 1 mL  |
| 100 µg/mL in AcCN | P-141S-CN | 1 mL  |

## 2,4-DB methyl ester

Methyl 4-(2,4-dichlorophenoxy)butyrate



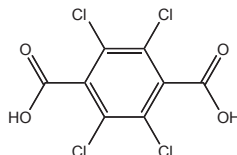
**CAS** 18625-12-2 **MF** C<sub>11</sub>H<sub>12</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 263.12  
**PS** S **SG** 1.27 g/cm<sup>3</sup> **MP** 32.0 - 34.0 °C **BP** 354 °C  
**FP** 143 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-228N   | 10 mg |
| 100 µg/mL in MeOH | P-228S   | 1 mL  |

**DBCP** see *Fumazone*  
**DCAA** see 2,4-Dichlorophenylacetic acid  
**3,4-DCPA** see *Propanil*  
**DCPA** see *Dacthal*

## DCPA Diacid

Tetrachloroterephthalic acid



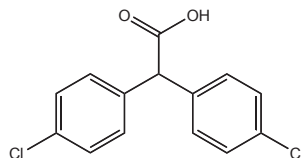
**CAS** 2136-79-0 **MF** C<sub>8</sub>H<sub>2</sub>Cl<sub>4</sub>O<sub>4</sub> **MW** 303.9 **PS** S  
**SOL** T, A **SG** 1.87 g/cm<sup>3</sup> **MP** 343 - 345 °C  
**BP** 425 °C **FP** 211 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-320N    | 10 mg |
| 100 µg/mL in MeOH | P-320S    | 1 mL  |
| 100 µg/mL in AcCN | P-320S-CN | 1 mL  |

**DCPA monoacid** see  
**Monomethyltetrachloroterephthalate**

## p,p'-DDA

bis(4-chlorophenyl)acetic acid

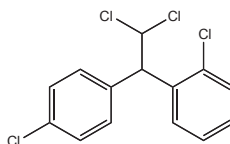


**CAS** 83-05-6 **MF** C<sub>14</sub>H<sub>10</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 281.13  
**PS** S **SG** N/A **MP** 167 - 169 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-444N   | 10 mg |
| 100 µg/mL in MeOH | P-444S   | 1 mL  |

## o,p'-DDD

1-(2-Chlorophenyl)-1-(4-chlorophenyl)-  
2,2-dichloroethane

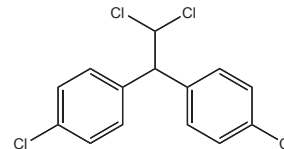


**CAS** 53-19-0 **MF** C<sub>14</sub>H<sub>10</sub>Cl<sub>4</sub> **MW** 320.04 **PS** S  
**SG** 1.37 g/cm<sup>3</sup> **MP** 76 - 78 °C **BP** 399 °C  
**FP** 194 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-024N   | 10 mg |
| 100 µg/mL in MeOH | P-024S   | 1 mL  |

## p,p'-DDD

1,1-Dichloro-2,2-bis(p-chlorophenyl)ethane

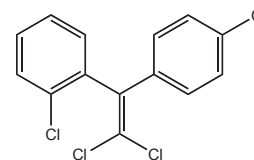


**CAS** 72-54-8 **MF** C<sub>14</sub>H<sub>10</sub>Cl<sub>4</sub> **MW** 320.04 **PS** S  
**SG** 1.38 g/cm<sup>3</sup> **MP** 94.0 - 96.0 °C **BP** 193.0 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-025N   | 10 mg |
| 100 µg/mL in MeOH | P-025S   | 1 mL  |

## o,p'-DDE

1,1-dichloro-2-(o-chlorophenyl)-  
2-(p-chlorophenyl)ethylene

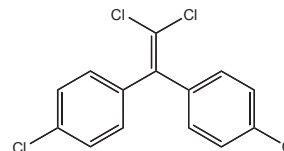


**CAS** 3424-82-6 **MF** C<sub>14</sub>H<sub>8</sub>Cl<sub>4</sub> **MW** 318.02  
**PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 75 - 78 °C **BP** 381 °C  
**FP** 182 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-026N   | 10 mg |
| 100 µg/mL in MeOH | P-026S   | 1 mL  |

## p,p'-DDE

Dichlorodiphenyl-dichloroethylene



**CAS** 72-55-9 **MF** C<sub>14</sub>H<sub>8</sub>Cl<sub>4</sub> **MW** 318.02 **PS** L  
**SG** 0.86 g/cm<sup>3</sup> **MP** 88 - 90 °C **BP** N/A **FP** 104 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-027N   | 10 mg |
| 100 µg/mL in MeOH | P-027S   | 1 mL  |

### Property Key

**CAS** Chemical Abstract  
Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State  
(Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity  
(g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

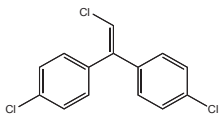
Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.



# Pesticide Standards

## 4,4'-DDMU

1-Chloro-2,2-bis(p-chlorophenyl)ethene

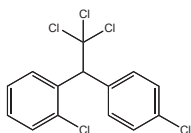


**CAS** 1022-22-6 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>3</sub> **MW** 283.58 **PS** S  
**SG** 1.32 g/cm<sup>3</sup> **MP** 64 - 67 °C **BP** 378 °C **FP** 264 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-424N   | 10 mg |
| 100 µg/mL in MeOH | P-424S   | 1 mL  |

## o,p'-DDT

2,2-Bis(o,p-chlorophenyl)-1,1,1-trichloroethane

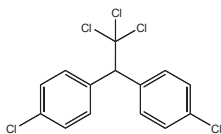


**CAS** 789-02-6 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub> **MW** 354.49 **PS** S  
**SG** 1.45 g/cm<sup>3</sup> **MP** 123 - 124 °C **BP** 410 °C **FP** 199 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-028N   | 10 mg |
| 100 µg/mL in MeOH | P-028S   | 1 mL  |

## p,p'-DDT

1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane

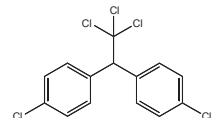


**CAS** 50-29-3 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub> **MW** 354.49 **PS** S  
**SG** 1.45 g/cm<sup>3</sup> **MP** 107 - 109 °C **BP** 260 °C  
**FP** 204 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-029N   | 10 mg |
| 100 µg/mL in MeOH | P-029S   | 1 mL  |

## DDT, Tech

1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane



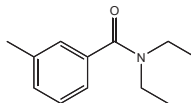
**CAS** 50-29-3 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub> **MW** 354.49 **PS** S  
**SG** 1.45 g/cm<sup>3</sup> **MP** 107 - 109 °C **BP** 260 °C  
**FP** 204 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-346N    | 10 mg |
| 100 µg/mL in MeOH | P-346S    | 1 mL  |
| 100 µg/mL in AcCN | P-346S-CN | 1 mL  |

**DDVP** see *Dichlorvos*  
**Dechlorane** see *Mirex*

## Deet (Off)

N,N-diethyl-3-methylbenzamide

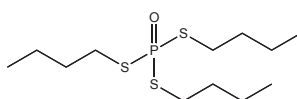


**CAS** N/A **MF** C<sub>12</sub>H<sub>17</sub>NO **MW** 191.3 **PS** S **SG** N/A  
**MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-255N   | 10 mg |
| 100 µg/mL in MeOH | P-255S   | 1 mL  |

## DEF 6

S,S,S-Tributylphosphorotrithioate



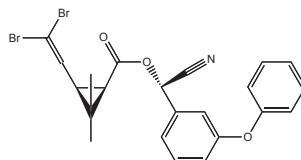
**CAS** 78-48-8 **MF** C<sub>12</sub>H<sub>27</sub>OPS<sub>3</sub> **MW** 314.54  
**PS** L **SG** 1.06 g/cm<sup>3</sup> **MP** <-25 °C **BP** 210 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-150N   | 10 mg |
| 100 µg/mL in MeOH | P-150S   | 1 mL  |

*Delnav* see *Dioxathion*

## Deltamethrin

(S)-alpha-Cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dibromovinyl)-2,2-dimethylcyclopropanecarboxylate



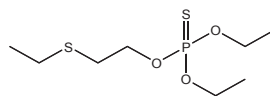
**CAS** 52918-63-5 **MF** C<sub>22</sub>H<sub>19</sub>Br<sub>2</sub>NO<sub>3</sub> **MW** 505.2  
**PS** S **SOL** D, A, IPA **SG** 1.60 g/cm<sup>3</sup>  
**MP** 100 - 102 °C **BP** 300 °C **FP** 278 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-355N   | 10 mg |
| 100 µg/mL in MeOH | P-355S   | 1 mL  |

*Demosan* see *Chloroneb*

## Demeton (mixed isomers)

O-O-Diethyl-O(and S)-2-(ethylthio)ethyl phosphorothioate

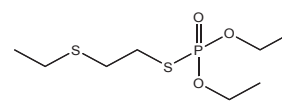


**CAS** 8065-48-3 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 516.72  
**PS** L **SG** 1.13 g/cm<sup>3</sup> **MP** N/A **BP** 128 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-031N   | 10 mg |
| 100 µg/mL in MeOH | P-031S   | 1 mL  |

## Demeton-S

O,O-diethyl S-2-ethylthioethyl phosphorothioate

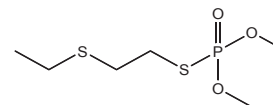


**CAS** 126-75-0 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 258.36  
**PS** L **SG** 1.15 g/cm<sup>3</sup> **MP** N/A **BP** 128 °C **FP** 148 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-271N   | 10 mg |
| 100 µg/mL in MeOH | P-271S   | 1 mL  |

## Demeton-S-methyl

Phosphorothioic acid, S-[2-(ethylthio)ethyl] O,O-dimethyl ester

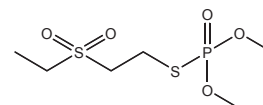


**CAS** 919-86-8 **MF** C<sub>6</sub>H<sub>15</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 230.29  
**PS** L **SG** 1.21 g/cm<sup>3</sup> **MP** N/A **BP** 118 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-482N   | 10 mg |
| 100 µg/mL in MeOH | P-482S   | 1 mL  |

## Demeton-s-methylsulfone

S-2-Ethylsulfonyl ethyl-O,O-dimethyl phosphorothioate



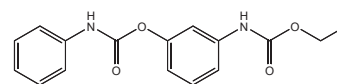
**CAS** 17040-19-6 **MF** C<sub>6</sub>H<sub>15</sub>O<sub>5</sub>PS<sub>2</sub> **MW** 262.29  
**PS** S **SG** 1.32 g/cm<sup>3</sup> **MP** 51 - 52 °C **BP** 393 °C  
**FP** 192 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-554N   | 10 mg |
| 100 µg/mL in MeOH | P-554S   | 1 mL  |

*Desethyl simazine* see *Atrazine-desisopropyl*

## Desmedipham

Ethyl 3-phenylcarbamoyloxyphenylcarbamate



**CAS** 13684-56-5 **MF** C<sub>10</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub> **MW** 300.31 **PS** S  
**SOL** A, MeOH, T **SG** 1.30 g/cm<sup>3</sup> **MP** 118 - 120 °C  
**BP** 393 °C **FP** 191 °C

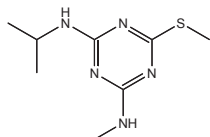
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-376N   | 10 mg |
| 100 µg/mL in MeOH | P-376S   | 1 mL  |





## Desmetryn

N<sub>2</sub>-Isopropyl-N<sub>4</sub>-methyl-6-methylthio-1,3,5-triazine-2,4-diamine



**CAS** 1014-69-3 **MF** C<sub>8</sub>H<sub>15</sub>N<sub>5</sub>S **MW** 213.3 **PS** S  
**SOL** MeOH, D, T **SG** 1.18 g/cm<sup>3</sup> **MP** 84-86 °C  
**BP** 386 °C **FP** 187 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-566N   | 10 mg |
| 100 µg/mL in MeOH | P-566S   | 1 mL  |

## Devrinol™

see *Napropamide*

## Dexon

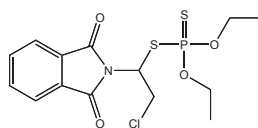
see *Fenaminosulf*

## Dialifos

see *Dialifos*

## Dialifos

S-2-Chloro-1-phthalimidoethyl  
O,O-diethyl phosphorodithioate

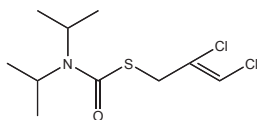


**CAS** 10311-84-9 **MF** C<sub>14</sub>H<sub>17</sub>ClNO<sub>4</sub>PS<sub>2</sub> **MW** 393.85  
**PS** S **SG** 1.43 g/cm<sup>3</sup> **MP** 68 °C **BP** 466 °C  
**FP** 236 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-426N   | 10 mg |
| 100 µg/mL in MeOH | P-426S   | 1 mL  |

## Diallate

S-2,3-Dichloroallyl di-isopropyl(thiocarbamate)



**CAS** 2303-16-4 **MF** C<sub>10</sub>H<sub>17</sub>Cl<sub>2</sub>NOS **MW** 270.24  
**PS** L **SG** 1.19 g/cm<sup>3</sup> **MP** N/A **BP** 290 °C **FP** N/A

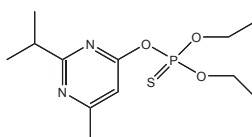
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-142N   | 10 mg |
| 100 µg/mL in MeOH | P-142S   | 1 mL  |

## Diazide®

see *Diazinon*

## Diazinon

O,O-Diethyl O-2-isopropyl-6-methylpyrimidin-4-yl phosphorothioate

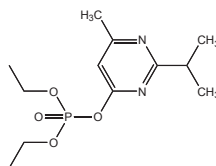


**CAS** 333-41-5 **MF** C<sub>12</sub>H<sub>21</sub>N<sub>2</sub>O<sub>3</sub>PS **MW** 304.35  
**PS** L **SOL** MeOH, H, D **SG** 1.11 g/cm<sup>3</sup> **MP** N/A  
**BP** 85 - 90 °C **FP** 104.4 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-033N   | 10 mg |
| 100 µg/mL in MeOH | P-033S   | 1 mL  |

## Diazinon-O analog

Phosphoric acid, diethyl 6-methyl-2-(1-methylethyl)-4-pyrimidinyl ester



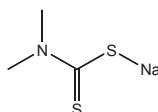
**CAS** 962-58-3 **MF** C<sub>12</sub>H<sub>21</sub>N<sub>2</sub>O<sub>4</sub>P **MW** 228.28  
**PS** S **SG** 1.14 g/cm<sup>3</sup> **MP** 88 - 89 °C **BP** 336 °C  
**FP** 157 °C

| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-640N   | 10 mg |
| 100 µg/mL in Acetone | P-640S-A | 1 mL  |

*Diazoxon* see *Diazinon-O analog*

## Dibam

Dimethylcarbamodithioic acid, sodium salt



**CAS** 128-04-1 **MF** C<sub>3</sub>H<sub>6</sub>NNaS<sub>2</sub> **MW** 143.21  
**PS** S **SG** 1.17 g/cm<sup>3</sup> **MP** 120 - 122 °C **BP** 129 °C  
**FP** 32 °C

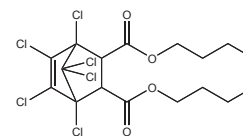
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-487N   | 10 mg |
| 100 µg/mL in MeOH | P-487S   | 1 mL  |

## Dibrom

see *Naled*

## Dibutylchloredate

Dibutyl-1,4,5,6,7,7-hexachlorobicyclo(2.2.1)hept-5-ene-2,3-dicarboxylate

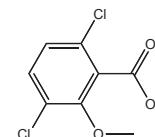


**CAS** 1770-80-5 **MF** C<sub>17</sub>H<sub>20</sub>Cl<sub>6</sub>O<sub>4</sub> **MW** 501.05  
**PS** L **SG** 1.46 g/cm<sup>3</sup> **MP** N/A **BP** 500 °C **FP** 164 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-109N   | 10 mg |
| 100 µg/mL in MeOH | P-109S   | 1 mL  |

## Dicamba

3,6-Dichloro-o-anisic acid

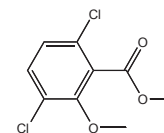


**CAS** 1918-00-9 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 221.04 **PS** S  
**SOL** A, D, T **SG** 1.57 g/cm<sup>3</sup> **MP** 115 °C  
**BP** ~200 °C **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-008N    | 10 mg |
| 100 µg/mL in MeOH | P-008S    | 1 mL  |
| 100 µg/mL in AcCN | P-008S-CN | 1 mL  |

## Dicamba methyl ester

Benzoic acid, 3,6-dichloro-2-methoxy-, methyl ester



**CAS** 6597-78-0 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 235.07 **PS** L  
**SOL** H, D, MeOH **SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-071N   | 10 mg |
| 100 µg/mL in MeOH | P-071S   | 1 mL  |

## Dicaptan

see *Dicaphthon*

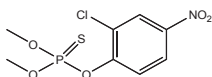
| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



# Pesticide Standards

## Dicaphthon

O-2-Chloro-4-nitrophenyl  
O,O-dimethyl phosphorothioate

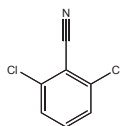


**CAS** 2463-84-5 **MF** C<sub>8</sub>H<sub>9</sub>ClNO<sub>5</sub>PS **MW** 297.66  
**PS S** **SG** 1.50 g/cm<sup>3</sup> **MP** 52 °C **BP** 356 °C  
**FP** 169 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-035N   | 10 mg |
| 100 µg/mL in MeOH | P-035S   | 1 mL  |

## Dichlobenil

2,6-Dichlorobenzonitrile

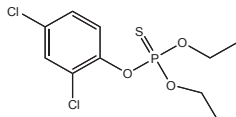


**CAS** 1194-65-6 **MF** C<sub>7</sub>H<sub>3</sub>Cl<sub>2</sub>N **MW** 172.01 **PS S**  
**SOL** D, A, MeOH **SG** 1.55 g/cm<sup>3</sup> **MP** 139 - 146 °C  
**BP** 270 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-275N   | 10 mg |
| 100 µg/mL in MeOH | P-275S   | 1 mL  |

## Dichlofenthion

O-(2,4-Dichlorophenyl)-O,O-diethyl thiophosphate

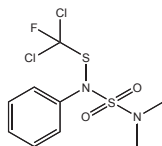


**CAS** 97-17-6 **MF** C<sub>10</sub>H<sub>13</sub>Cl<sub>2</sub>O<sub>3</sub>PS **MW** 315.15 **PS L**  
**SOL** T, A, EA **SG** 1.32 g/cm<sup>3</sup> **MP** N/A **BP** 120 -  
123 °C **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-211N   | 10 mg |
| 100 µg/mL in MeOH | P-211S   | 1 mL  |

## Dichlofluandil

1,1-Dichloro-N-[(dimethylamino)sulfonyl]-  
1-fluoro-N-phenylmethanesulfenamide

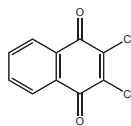


**CAS** 1085-98-9 **MF** C<sub>9</sub>H<sub>11</sub>Cl<sub>2</sub>FN<sub>2</sub>O<sub>2</sub>S<sub>2</sub> **MW** 333.23  
**PS S** **SOL** D, T, IPA **SG** 1.55 g/cm<sup>3</sup> **MP** 105 -  
106 °C **BP** 337 °C **FP** 158 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-474N   | 10 mg |
| 100 µg/mL in MeOH | P-474S   | 1 mL  |

## Dichlone

2,3-Dichloro-1,4-naphthoquinone



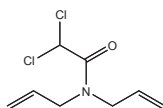
**CAS** 117-80-6 **MF** C<sub>10</sub>H<sub>4</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 227.04 **PS S**  
**SOL** A **SG** 1.54 g/cm<sup>3</sup> **MP** 192 - 193 °C **BP** 275 °C  
**FP** 178 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-253N   | 10 mg |
| 100 µg/mL in MeOH | P-253S   | 1 mL  |

**Dichloran** see **Botran**

## Dichlormid

N,N-Diallyl-2,2-dichloroacetamide

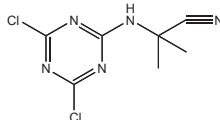


**CAS** 37764-25-3 **MF** C<sub>8</sub>H<sub>11</sub>Cl<sub>2</sub>NO **MW** 208.08  
**PS L** **SOL** A **SG** 1.19 g/cm<sup>3</sup> **MP** 6 °C **BP** 130 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-675N   | 10 mg |
| 100 µg/mL in MeOH | P-675S   | 1 mL  |

## 2-(4,6-Dichloro-1,3,5-triazine-2-ylamino) methyl propionitrile

2-(4,6-Dichloro-1,3,5-triazine-2-ylamino)methyl propionitrile

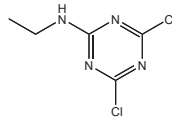


**CAS** N/A **MF** C<sub>7</sub>H<sub>7</sub>Cl<sub>2</sub>N<sub>5</sub> **MW** 232.07 **MP** N/A  
**BP** N/A **FP** N/A

| Matrix          | Cat. No.  | Unit  |
|-----------------|-----------|-------|
| Neat            | P-542N    | 10 mg |
| 100 µg/mL in MC | P-542S-MC | 1 mL  |

## 2,4-Dichloro-6-ethylamino-s-triazine

2,4-Dichloro-6-ethylamino-s-triazine

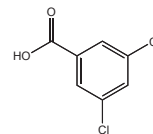


**CAS** N/A **MF** C<sub>5</sub>H<sub>6</sub>Cl<sub>2</sub>N<sub>4</sub> **MW** 193.03 **PS S** **SG** N/A  
**MP** N/A **BP** N/A **FP** N/A

| Matrix          | Cat. No.  | Unit  |
|-----------------|-----------|-------|
| Neat            | P-538N    | 10 mg |
| 100 µg/mL in MC | P-538S-MC | 1 mL  |

## 3,5-Dichlorobenzoic acid Δ

3,5-Dichlorobenzoic acid

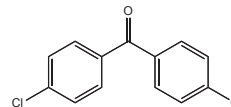


**CAS** 51-36-5 **MF** C<sub>7</sub>H<sub>4</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 191.01 **PS S**  
**SG** 1.52 g/cm<sup>3</sup> **MP** 185 - 187 °C **BP** 349 °C  
**FP** 141 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-242N    | 10 mg |
| 100 µg/mL in MeOH | P-242S    | 1 mL  |
| 100 µg/mL in AcCN | P-242S-CN | 1 mL  |

## 4,4'-Dichlorobenzophenone

4,4'-Dichlorobenzophenone

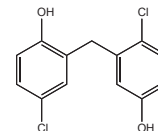


**CAS** 90-98-2 **MF** C<sub>13</sub>H<sub>8</sub>Cl<sub>2</sub>O **MW** 251.11 **PS S**  
**SG** 1.31 g/cm<sup>3</sup> **MP** 144 - 147 °C **BP** 353 °C  
**FP** 156 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-295N   | 10 mg |
| 100 µg/mL in MeOH | P-295S   | 1 mL  |

## Dichlorophen

4,4'-dichloro-2-2'-methylenediphenol

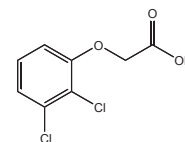


**CAS** 97-23-4 **MF** C<sub>13</sub>H<sub>10</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 269.13 **PS S**  
**SOL** A, IPA, MeOH **SG** 1.23 g/cm<sup>3</sup> **MP** 168 - 172 °C  
**BP** 246 °C **FP** 96 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-232N   | 10 mg |
| 100 µg/mL in MeOH | P-232S   | 1 mL  |

## 2,3-Dichlorophenoxyacetic acid Δ

2,3-Dichlorophenoxyacetic acid



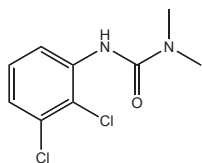
**CAS** 2976-74-1 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 221.04  
**PS S** **SG** 1.49 g/cm<sup>3</sup> **MP** 173 - 175 °C **BP** 348 °C  
**FP** 164 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-470N    | 10 mg |
| 100 µg/mL in MeOH | P-470S    | 1 mL  |
| 100 µg/mL in AcCN | P-470S-CN | 1 mL  |



## 3-(2,3-Dichlorophenyl)-1,1-dimethylurea

3-(2,3-Dichlorophenyl)-1,1-dimethylurea

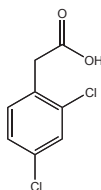


**CAS** 10290-37-6 **MF** C<sub>9</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>2</sub>O **MW** 233.09  
**PS** S **SG** 1.37 g/cm<sup>3</sup> **MP** N/A **BP** 380 °C **FP** 184 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-632N   | 10 mg |
| 100 µg/mL in MeOH | P-632S   | 1 mL  |

## 2,4-Dichlorophenylacetic acid Δ

2,4-Dichlorophenylacetic acid

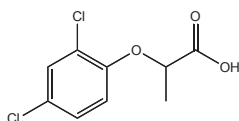


**CAS** 19719-28-9 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 205.04  
**PS** S **SG** 1.46 g/cm<sup>3</sup> **MP** 128 - 133 °C **BP** 325 °C  
**FP** 150 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-244N    | 10 mg |
| 100 µg/mL in MeOH | P-244S    | 1 mL  |
| 100 µg/mL in AcCN | P-244S-CN | 1 mL  |

## Dichlorprop Δ

(RS)-2-(2,4-Dichlorophenoxy)propionic acid



**CAS** 120-36-5 **MF** C<sub>9</sub>H<sub>7</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 235.07 **PS** S  
**SOL** A, IPA, T **SG** 1.42 g/cm<sup>3</sup> **MP** 117.5 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-143N    | 10 mg |
| 100 µg/mL in MeOH | P-143S    | 1 mL  |
| 100 µg/mL in AcCN | P-143S-CN | 1 mL  |

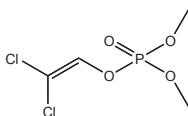
## Dichlorprop, 2-ethylhexyl ester

see 2,4-DP ethyl hexyl

Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.

## Dichlorvos

O,O-Dimethyl-O-(2,2-Dichlorovinyl)phosphate

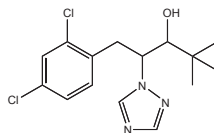


**CAS** 62-73-7 **MF** C<sub>4</sub>H<sub>4</sub>Cl<sub>2</sub>O<sub>4</sub>P **MW** 220.98 **PS** L  
**SOL** MeOH, IPA **SG** 1.42 g/cm<sup>3</sup> **MP** N/A **BP** 74 °C  
**FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-036N   | 10 mg |
| 100 µg/mL in MeOH | P-036S   | 1 mL  |

## Diclobutrazol

E-(R,S)-1-(2,4-Dichlorophenyl)-4,4-Dimethyl-2-(1H-1,2,4-Triazol-1-Yl)Pent-1-Ene-3-Ol

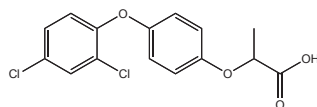


**CAS** 75736-33-3 **MF** C<sub>15</sub>H<sub>19</sub>Cl<sub>2</sub>N<sub>3</sub>O **MW** 328.24  
**PS** S **SOL** MeOH, A **SG** 1.28 g/cm<sup>3</sup>  
**MP** 147 - 149 °C **BP** 484 °C **FP** 247 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-641N    | 10 mg |
| 100 µg/mL in AcCN | P-641S-CN | 1 mL  |

## Diclofop

2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid

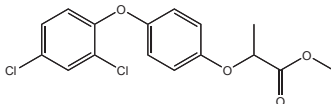


**CAS** 40843-25-2 **MF** C<sub>15</sub>H<sub>12</sub>Cl<sub>2</sub>O<sub>4</sub> **MW** 327.17  
**PS** S **SOL** D, T, A **SG** 1.34 g/cm<sup>3</sup> **MP** 39 - 40 °C  
**BP** 440 °C **FP** 220 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-514N   | 10 mg |
| 100 µg/mL in MeOH | P-514S   | 1 mL  |

## Diclofop methyl

Methyl (RS)-2-[4-(2,4-dichlorophenoxy)phenoxy] propionate



**CAS** 51338-27-3 **MF** C<sub>16</sub>H<sub>14</sub>Cl<sub>2</sub>O<sub>4</sub> **MW** 341.2 **PS** L  
**SOL** D, T, A **SG** 0.79 g/cm<sup>3</sup> **MP** -98 °C **BP** 65 °C  
**FP** 150 °C

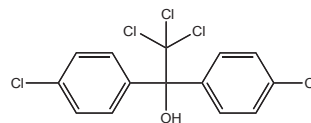
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-303N   | 10 mg |
| 100 µg/mL in MeOH | P-303S   | 1 mL  |

Dicofol

see Kelthane

## o,p'-Dicofol

2,2,2-Trichloro-1-(2-chlorophenyl)-1-(4-chlorophenyl)ethanol

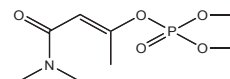


**CAS** 10606-46-9 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub>O **MW** 370.49  
**PS** S **SG** 1.45 g/cm<sup>3</sup> **MP** 112-123 °C **BP** N/A  
**FP** 49 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-606N   | 10 mg |
| 100 µg/mL in MeOH | P-606S   | 1 mL  |

## Dicrotophos

(E)-2-Dimethylcarbamoyl-1-methylvinyl dimethyl phosphate

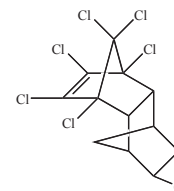


**CAS** 141-66-2 **MF** C<sub>8</sub>H<sub>16</sub>NO<sub>5</sub>P **MW** 237.19  
**PS** L **SG** 1.22 g/cm<sup>3</sup> **MP** 400 °C **BP** N/A **FP** >93 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-178N   | 10 mg |
| 100 µg/mL in MeOH | P-178S   | 1 mL  |

## Dieldrin

endo,exo-1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4:5,8-dimethanonaphthalene



**CAS** 60-57-1 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O **MW** 380.92 **PS** S  
**SG** 1.85 g/cm<sup>3</sup> **MP** 143 - 44 °C **BP** 385 °C **FP** 155 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-037N   | 10 mg |
| 100 µg/mL in MeOH | P-037S   | 1 mL  |

## Property Key

**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

## Solubility Key (SOL)

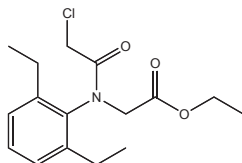
**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water



# Pesticide Standards

## Diethatyl ethyl

Ethyl N-(chloroacetyl)-N-2,6-diethylphenylglycinate



**CAS** 38727-55-8 **MF** C<sub>16</sub>H<sub>22</sub>ClNO<sub>3</sub> **MW** 311.84  
**PS L** **SG** 1.15 g/cm<sup>3</sup> **MP** N/A **BP** 448 °C **FP** 225 °C

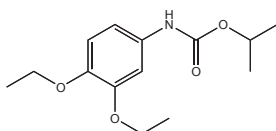
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-599N   | 10 mg |
| 100 µg/mL in MeOH | P-599S   | 1 mL  |

**Diethion**

see **Ethion**

## Diethofencarb

isopropyl 3,4-diethoxycarbanilate

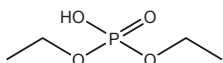


**CAS** 87130-20-9 **MF** C<sub>14</sub>H<sub>21</sub>NO<sub>4</sub> **MW** 267.36 **PS S**  
**SOL** MeOH, H **SG** 1.10 g/cm<sup>3</sup> **MP** 100 °C  
**BP** 326 °C **FP** 151 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-744N   | 10 mg |
| 100 µg/mL in MeOH | P-744S   | 1 mL  |

## Diethyl phosphate (mono- & di-)

Diethyl phosphate (mono- & di-)

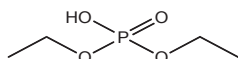


**CAS** 598-02-7 **MF** C<sub>4</sub>H<sub>11</sub>O<sub>4</sub>P **MW** 154.1 **PS L**  
**SG** 1.29 g/cm<sup>3</sup> **MP** 76 °C **BP** 255 °C **FP** 91 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-443N   | 10 mg |
| 100 µg/mL in MeOH | P-443S   | 1 mL  |

## Diethylphosphate

Diethylphosphate

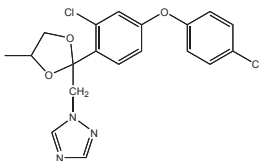


**CAS** 598-02-7 **MF** C<sub>4</sub>H<sub>11</sub>O<sub>4</sub>P **MW** 154.1 **PS L**  
**SG** 1.29 g/cm<sup>3</sup> **MP** -76 °C **BP** 255 °C **FP** 91 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-534N   | 10 mg |
| 100 µg/mL in MeOH | P-534S   | 1 mL  |

## Difenoconazole

3-Chloro-4-[4-methyl-2-(1H-1,2,4-triazol-1-ylmethyl)-1,3-dioxolan-2-yl]phenyl 4-chlorophenyl ether

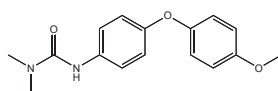


**CAS** 119446-68-3 **MF** C<sub>19</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>3</sub> **MW** 406.26  
**PS S** **SOL** A, T, H **SG** 1.40 g/cm<sup>3</sup> **MP** 82 °C  
**BP** 220 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-447N   | 10 mg |
| 100 µg/mL in MeOH | P-447S   | 1 mL  |

## Difenoxyuron

3-[4-(4-methoxyphenoxy)phenyl]-1,1-dimethylurea

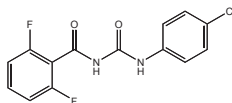


**CAS** 14214-32-5 **MF** C<sub>16</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub> **MW** 286.33  
**PS S** **SOL** D, A, H **SG** 1.19 g/cm<sup>3</sup> **MP** 138 - 139 °C  
**BP** 467 °C **FP** 236 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-604N   | 10 mg |
| 100 µg/mL in MeOH | P-604S   | 1 mL  |

## Diflubenzuron

1-(4-Chlorophenyl)-3-(2,6-difluorobenzoyl)urea

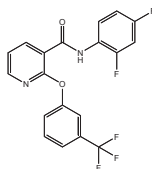


**CAS** 35367-38-5 **MF** C<sub>14</sub>H<sub>9</sub>ClF<sub>2</sub>N<sub>2</sub>O<sub>2</sub> **MW** 310.68  
**PS S** **SOL** D, MeOH, T **SG** 1.56 g/cm<sup>3</sup> **MP** 228 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-377N   | 10 mg |
| 100 µg/mL in MeOH | P-377S   | 1 mL  |

## Diflufenican

2',4'-difluoro-2-(a,a,a-trifluoro-m-tolyloxy)nicotinamide



**CAS** 83164-33-4 **MF** C<sub>19</sub>H<sub>11</sub>F<sub>5</sub>N<sub>2</sub>O<sub>2</sub> **MW** 394.29  
**PS S** **SOL** A **SG** 1.44 g/cm<sup>3</sup> **MP** 160 °C  
**BP** 376 °C **FP** 181 °C

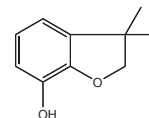
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-722N   | 10 mg |
| 100 µg/mL in MeOH | P-722S   | 1 mL  |

**Diflufenicanil**

see **Diflufenican**

## 2,3-Dihydro-2,2-dimethylbenzofuran-7-ol

2,3-Dihydro-2,2-dimethyl-7-benzofuranol

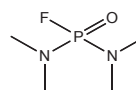


**CAS** 1563-38-8 **MF** C<sub>10</sub>H<sub>12</sub>O<sub>2</sub> **MW** 164.21 **PS S**  
**SG** 1.10 g/cm<sup>3</sup> **MP** 67 - 68 °C **BP** 256 °C **FP** 113 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-628N   | 10 mg |
| 100 µg/mL in MeOH | P-628S   | 1 mL  |

## Dimefox

bis(Dimethylamino)fluorophosphine oxide

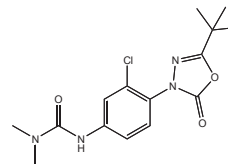


**CAS** 115-26-4 **MF** C<sub>4</sub>H<sub>12</sub>FN<sub>2</sub>OP **MW** 154.12  
**PS L** **SG** 1.15 g/cm<sup>3</sup> **MP** N/A **BP** 86 °C **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-299N   | 10 mg |
| 100 µg/mL in MeOH | P-299S   | 1 mL  |

## Dimefuron

3-[4-(5-tert-Butyl-2,3-dihydro-2-oxo-1,3,4-oxadiazol-3-yl)-3-chlorophenyl]-1,1-dimethylurea

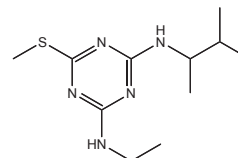


**CAS** 34205-21-5 **MF** C<sub>15</sub>H<sub>19</sub>ClN<sub>4</sub>O<sub>3</sub> **MW** 338.83  
**PS S** **SOL** CN, A **SG** N/A **MP** 193 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-565N   | 10 mg |
| 100 µg/mL in MeOH | P-565S   | 1 mL  |

## Dimepax

N-(1,2-Dimethylpropyl)-N'-ethyl-6-(methylthio)1,3,5-triazine-2,4-diamine



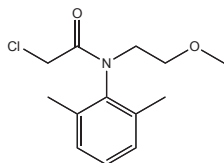
**CAS** 22936-75-0 **MF** C<sub>11</sub>H<sub>21</sub>N<sub>5</sub>S **MW** 255.43  
**PS S** **SG** 1.11 g/cm<sup>3</sup> **MP** 61-67 °C **BP** 413 °C  
**FP** 204 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-643N   | 10 mg |
| 100 µg/mL in MeOH | P-643S   | 1 mL  |



## Dimethachlor

2-Chloro-N-(2-methoxyethyl)aceto-2',6'-xylidide



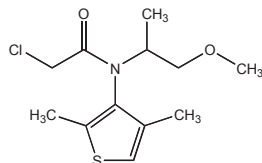
**CAS** 50563-36-5 **MF** C<sub>13</sub>H<sub>18</sub>ClNO<sub>2</sub> **MW** 255.77  
**PS** S **SOL** MeOH, D, IPA **SG** 1.14 g/cm<sup>3</sup> **MP** 47 °C  
**BP** 374 °C **FP** 180 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-642N   | 10 mg |
| 100 µg/mL in MeOH | P-642S   | 1 mL  |

**Dimethametryn** *see Dimepax*

## Dimethenamid

(RS)-2-chloro-N-(2,4-dimethyl-3-thienyl)-N-(2-methoxy-1-methylethyl)acetamide

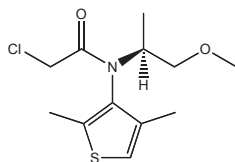


**CAS** 87674-68-8 **MF** C<sub>12</sub>H<sub>18</sub>ClNO<sub>2</sub>S **MW** 275.8  
**PS** L **SOL** TP **SG** 1.20 g/cm<sup>3</sup> **MP** N/A **BP** 383 °C  
**FP** 185 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-747N   | 10 mg |
| 100 µg/mL in MeOH | P-747S   | 1 mL  |

## Dimethenamide-P

(S)-2-Chloro-N-(2,4-dimethyl-2-thienyl)-N-(2-methoxy-1-methylethyl)acetamide



**CAS** 163515-14-8 **MF** C<sub>12</sub>H<sub>18</sub>ClNO<sub>2</sub>S **MW** 275.8  
**PS** L **SOL** TP **SG** 1.20 g/cm<sup>3</sup> **MP** <-50 °C  
**BP** 123 °C **FP** 79 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-934N   | 10 mg |
| 100 µg/mL in MeOH | P-934S   | 1 mL  |

## Property Key

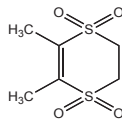
**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

## Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

## Dimethipin

2,3-Dihydro-5,6-dimethyl-1,4-dithiane 1,1,4,4-tetraoxide

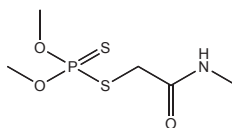


**CAS** 55290-64-7 **MF** C<sub>6</sub>H<sub>10</sub>O<sub>4</sub>S<sub>2</sub> **MW** 210.27 **PS** S  
**SOL** CN, MeOH, T **SG** 1.59 g/cm<sup>3</sup> **MP** 167 - 169 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-483N   | 10 mg |
| 100 µg/mL in MeOH | P-483S   | 1 mL  |

## Dimethoate

2-Dimethoxyphosphorothioylthio-N-methylacetamide

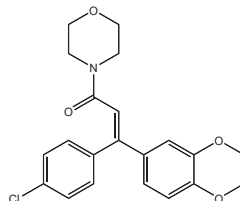


**CAS** 60-51-5 **MF** C<sub>5</sub>H<sub>12</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 229.26 **PS** S  
**SG** 1.31 g/cm<sup>3</sup> **MP** 50 °C **BP** 117 °C **FP** 107 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-039N   | 10 mg |
| 100 µg/mL in MeOH | P-039S   | 1 mL  |

## Dimethomorph

(E,Z)-4-[3-(4-chlorophenyl)-3-(3,4-dimethoxyphenyl)acryloyl]morpholine



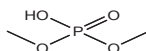
**CAS** 110488-70-5 **MF** C<sub>21</sub>H<sub>22</sub>ClNO<sub>4</sub> **MW** 387.86  
**PS** S **SOL** D, A, T **SG** 1.32 g/cm<sup>3</sup>  
**MP** 125.2 - 149.2 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-713N   | 10 mg |
| 100 µg/mL in MeOH | P-713S   | 1 mL  |

**Dimethoxon** *see Omethoate*

## Dimethyl phosphate

O,O-Dimethyl hydrogen phosphate

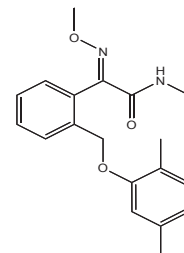


**CAS** 813-78-5 **MF** C<sub>2</sub>H<sub>7</sub>O<sub>4</sub>P **MW** 126.04 **PS** L  
**SG** 1.50 g/cm<sup>3</sup> **MP** -76 °C **BP** 172 - 176 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-442N   | 10 mg |
| 100 µg/mL in MeOH | P-442S   | 1 mL  |

## Dimoxystrobin

(E)-2-(methoxymino)-N-methyl-2-[(2,5-xylyloxy)-o-tolyl]acetamide

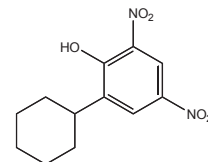


**CAS** 149961-52-4 **MF** C<sub>19</sub>H<sub>22</sub>N<sub>2</sub>O<sub>3</sub> **MW** 326.39  
**PS** S **SOL** MeOH **SG** 1.24 g/cm<sup>3</sup> **MP** 138-140 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-844S-CN | 1 mL |

## Dinex

2-Cyclohexyl-4,6-Dinitrophenol

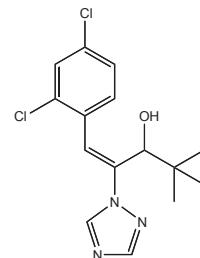


**CAS** 131-89-5 **MF** C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O<sub>5</sub> **MW** 266.25 **PS** S  
**SG** 1.38 g/cm<sup>3</sup> **MP** 104 °C **BP** 321 °C **FP** 130 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-427N   | 10 mg |
| 100 µg/mL in MeOH | P-427S   | 1 mL  |

## Diniconazole

(E)-(RS)-1-(2,4-Dichlorophenyl)-4,4-dimethyl-2-(1H-1,2,4-triazol-1-yl)pent-1-en-3-ol



**CAS** 83657-24-3 **MF** C<sub>15</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O **MW** 326.22  
**PS** S **SOL** MeOH, A, H **SG** 1.32 g/cm<sup>3</sup>  
**MP** 134 - 156 °C **BP** N/A **FP** >150 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-845N    | 10 mg |
| 100 µg/mL in AcCN | P-845S-CN | 1 mL  |

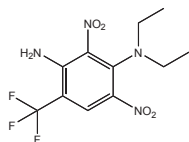




# Pesticide Standards

## Dinitramine

$N_1, N_1$ -Diethyl-2,6-dinitro-4-trifluoromethyl-m-phenylenediamine

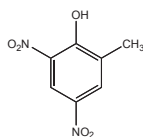


**CAS** 29091-05-2 **MF**  $C_{11}H_{13}F_3N_4O_4$  **MW** 322.24  
**PS** S **SOL** A, H **SG** 1.46 g/cm<sup>3</sup> **MP** 98 - 99 °C  
**BP** 401 °C **FP** 201 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-575N   | 10 mg |
| 100 µg/mL in MeOH | P-575S   | 1 mL  |

## 4,6-Dinitro-o-cresol

2-Methyl-4,6-dinitrophenol

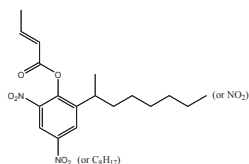


**CAS** 534-52-1 **MF**  $C_7H_6N_2O_5$  **MW** 198.13 **PS** S  
**SG** 1.55 g/cm<sup>3</sup> **MP** 83 - 85 °C **BP** N/A **FP** 149 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-384N   | 10 mg |
| 100 µg/mL in MeOH | P-384S   | 1 mL  |

## Dinocap

2,6-Dinitro-4-octylphenyl crotonates

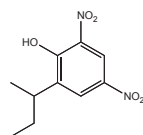


**CAS** 39300-45-3 **MF**  $C_{18}H_{24}N_2O_6$  **MW** 364.39 **PS** L  
**SOL** A, EA, MeOH **SG** 1.10 g/cm<sup>3</sup> **MP** -22 °C  
**BP** 138-140 °C **FP** 174 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-288N   | 10 mg |
| 100 µg/mL in MeOH | P-288S   | 1 mL  |

## Dinoseb

2-sec-Butyl-4,6-dinitrophenol

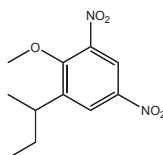


**CAS** 88-85-7 **MF**  $C_{10}H_{12}N_2O_5$  **MW** 240.21 **PS** S  
**SOL** MeOH, IPA **SG** 1.30 g/cm<sup>3</sup> **MP** 40 °C  
**BP** 3184 °C **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-144N   | 10 mg |
| 100 µg/mL in MeOH | P-144S   | 1 mL  |

## Dinoseb methyl ether

2,4-Dinitro-6-sec-butylphenol methyl ether



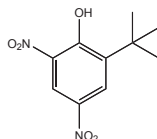
**CAS** 6099-79-2 **MF**  $C_{11}H_{14}N_2O_5$  **MW** 254.24  
**PS** L **SG** N/A **MP** N/A **BP** 368 °C **FP** 157 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-230N   | 10 mg |
| 100 µg/mL in MeOH | P-230S   | 1 mL  |

**Dinoseb methacrylate** *see Binapacryl*

## Dinoterb

2-tert-Butyl-4,6-dinitrophenol

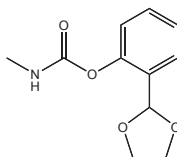


**CAS** 1420-07-1 **MF**  $C_{10}H_{12}N_2O_5$  **MW** 240.21 **PS** S  
**SOL** EA, DMSO, MeOH **SG** 1.35 g/cm<sup>3</sup> **MP** 125.5 - 126.5 °C **BP** 304 °C **FP** 125 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-524N   | 10 mg |
| 100 µg/mL in MeOH | P-524S   | 1 mL  |

## Dioxacarb

2-(1,3-dioxolan-2-yl)phenyl methylcarbamate

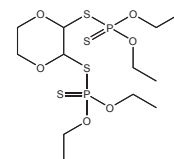


**CAS** 6988-21-2 **MF**  $C_{11}H_{13}NO_4$  **MW** 223.25  
**PS** S **SOL** A **SG** 1.23 g/cm<sup>3</sup> **MP** 114 - 115 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-264N   | 10 mg |
| 100 µg/mL in MeOH | P-264S ‡ | 1 mL  |

## Dioxathion

1,4-Dioxan-2,3-diyl-O,O,O',O'-tetraethyl di(phosphorodithioate)



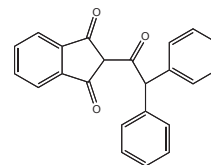
**CAS** 78-34-2 **MF**  $C_{12}H_{26}O_6P_2S_4$  **MW** 456.56  
**PS** L **SG** 1.33 g/cm<sup>3</sup> **MP** 20 °C **BP** 60 - 68 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-219N   | 10 mg |
| 100 µg/mL in MeOH | P-219S   | 1 mL  |

**Dioxydemeton-S-methyl**  
*see Demeton-s-methylsulfone*

## Diphacinone

2-(Diphenylacetyl)-1,3-Diketohydrindene

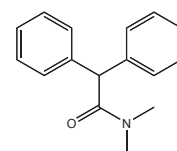


**CAS** 82-66-6 **MF**  $C_{23}H_{16}O_3$  **MW** 340.37 **PS** S  
**SOL** T, A **SG** 1.28 g/cm<sup>3</sup> **MP** 146 °C **BP** ~338 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-315N   | 10 mg |
| 100 µg/mL in MeOH | P-315S ‡ | 1 mL  |

## Diphenamid

N,N-dimethyl-2,2-diphenylacetamide



**CAS** 957-51-7 **MF**  $C_{16}H_{17}NO$  **MW** 239.31 **PS** S  
**SOL** A **SG** 1.17 g/cm<sup>3</sup> **MP** 135 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-173N   | 10 mg |
| 100 µg/mL in MeOH | P-173S   | 1 mL  |

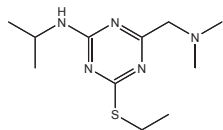
| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



## Dipropetryn

6-Ethylthio-N<sub>2</sub>,N<sub>4</sub>-di-isopropyl-1,3,5-triazine-2,4-diamine

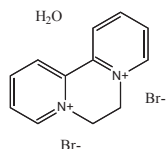


**CAS** 4147-51-7 **MF** C<sub>11</sub>H<sub>21</sub>N<sub>5</sub>S **MW** 255.38 **PS** S  
**SOL** D, A, MeOH **SG** 1.11 g/cm<sup>3</sup> **MP** 104 - 106 °C  
**BP** 403 °C **FP** 203 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-580N   | 10 mg |
| 100 µg/mL in MeOH | P-580S   | 1 mL  |

## Diquat dibromide monohydrate

Diquat dibromide monohydrate

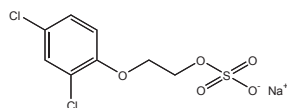


**CAS** 6385-62-2 **MF** C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>•2Br•H<sub>2</sub>O **MW** 362.06  
**PS** S **SG** 1.61 g/cm<sup>3</sup> **MP** 335 - 340 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-231N   | 10 mg |
| 100 µg/mL in MeOH | P-231S   | 1 mL  |

## Disul, sodium salt

Sodium 2,4-dichlorophenoxyethyl sulfate

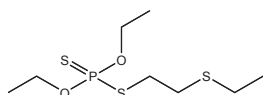


**CAS** 136-78-7 **MF** C<sub>8</sub>H<sub>7</sub>Cl<sub>2</sub>O<sub>5</sub>•Na **MW** 309.1  
**PS** S **SG** 1.70 g/cm<sup>3</sup> **MP** 245 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-513N   | 10 mg |
| 100 µg/mL in MeOH | P-513S   | 1 mL  |

## Disulfoton

O,O-Diethyl S-2-ethylthioethyl phosphorodithioate

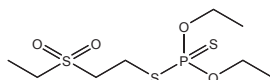


**CAS** 298-04-4 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>2</sub>PS<sub>3</sub> **MW** 274.41 **PS** L  
**SOL** H, D, T **SG** 1.14 g/cm<sup>3</sup> **MP** <-25 °C  
**BP** 128 °C **FP** 133 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-042N   | 10 mg |
| 100 µg/mL in MeOH | P-042S   | 1 mL  |

## Disulfoton sulfone

O,O-Diethyl S-2-ethylsulfonylethyl phosphorodithioate

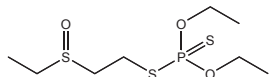


**CAS** 2497-06-5 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>4</sub>PS<sub>3</sub> **MW** 306.41 **PS** L  
**SOL** H, D, T **SG** 1.27 g/cm<sup>3</sup> **MP** N/A **BP** 423 °C  
**FP** 210 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-582N   | 10 mg |
| 100 µg/mL in MeOH | P-582S   | 1 mL  |

## Disulfoton sulfoxide

O,O-Diethyl S-2-ethylsulfinyethyl phosphorodithioate



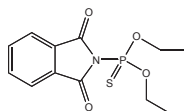
**CAS** 2497-07-6 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>3</sub>PS<sub>3</sub> **MW** 290.41 **PS** L  
**SOL** H, D, T **SG** 1.27 g/cm<sup>3</sup> **MP** N/A **BP** 409 °C  
**FP** 201 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-593N   | 10 mg |
| 100 µg/mL in MeOH | P-593S   | 1 mL  |

**Disyston** see **Disulfoton**

## Ditalimfos

O,O-Diethyl phthalimidophosphonothioate

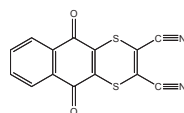


**CAS** 5131-24-8 **MF** C<sub>12</sub>H<sub>14</sub>NO<sub>4</sub>PS **MW** 299.28  
**PS** S **SG** 1.38 g/cm<sup>3</sup> **MP** 89 - 91 °C **BP** 400 °C  
**FP** 196 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-546N   | 10 mg |
| 100 µg/mL in MeOH | P-546S   | 1 mL  |

## Dithianon

5,10-Dihydro-5,10-dioxonaphtho[2,3-b]-1,4-dithi-in-2,3-dicarbonitrile

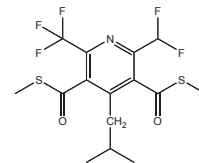


**CAS** 3347-22-6 **MF** C<sub>14</sub>H<sub>4</sub>N<sub>2</sub>O<sub>2</sub>S<sub>2</sub> **MW** 296.33  
**PS** S **SG** 1.58 g/cm<sup>3</sup> **MP** 215 °C **BP** N/A  
**FP** >300 °C

| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-725N   | 10 mg |
| 100 µg/mL in Acetone | P-725S-A | 1 mL  |

## Dithiopyr

S,S'-Dimethyl-2-(difluoromethyl)-4-(2-methylpropyl)-6-(trifluoromethyl)-3,5-pyridinedicarbothioate



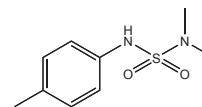
**CAS** 97886-45-8 **MF** C<sub>15</sub>H<sub>16</sub>F<sub>5</sub>NO<sub>2</sub>S<sub>2</sub> **MW** 401.44  
**PS** S **SOL** W **SG** 1.33 g/cm<sup>3</sup> **MP** 65 °C **BP** 460 °C  
**FP** 232 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-741N   | 10 mg |
| 100 µg/mL in MeOH | P-741S   | 1 mL  |

**Diuron** see **Amitrole (ATA)**  
**Diuron** see **Karmex**  
**2,3-Diuron** see  
**3-(2,3-Dichlorophenyl)-1,1-dimethylurea**

## DMST

N,N-Dimethyl-N'-tolylsulfonyldiamide



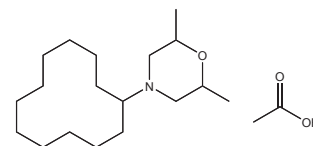
**CAS** 66840-71-9 **MF** C<sub>9</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 214.29  
**PS** S **SG** 1.26 g/cm<sup>3</sup> **MP** 110 °C **BP** 320 °C  
**FP** 147 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-572S   | 1 mL |

**DNBP** see **Dinoseb**  
**DNOC** see **4,6-Dinitro-o-cresol**  
**DNTBP** see **Dinoterb**

## Dodemorph acetate

N-Cyclododecyl-2,6-dimethylmorpholinium acetate



**CAS** 31717-87-0 **MF** C<sub>18</sub>H<sub>35</sub>NO•C<sub>2</sub>H<sub>4</sub>O<sub>2</sub> **MW** 341.53  
**PS** L **SOL** EA, A **SG** 0.93 g/cm<sup>3</sup> **MP** N/A  
**BP** 372 °C **FP** 110 °C

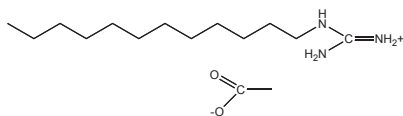
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-385N   | 10 mg |
| 100 µg/mL in MeOH | P-385S   | 1 mL  |



# Pesticide Standards

## Dodine

1-Dodecylguanidinium acetate



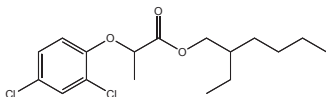
**CAS** 2439-10-3 **MF** C<sub>13</sub>H<sub>29</sub>N<sub>3</sub>•C<sub>2</sub>H<sub>4</sub>O<sub>2</sub> **MW** 287.51  
**PS** S **SOL** MeOH, IPA **SG** N/A **MP** 132 - 136 °C  
**BP** 353 °C **FP** 167 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-386N   | 10 mg |
| 100 µg/mL in MeOH | P-386S   | 1 mL  |

**2,4-DP** see *Dichlorprop*

## 2,4-DP ethyl hexyl

2-Ethylhexyl 2-(2,4-dichlorophenoxy)propionate

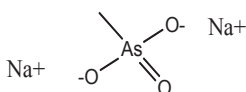


**CAS** 79270-78-3 **MF** C<sub>17</sub>H<sub>24</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 347.28  
**PS** L **SOL** T, A, IPA **SG** 1.13 g/cm<sup>3</sup> **MP** N/A  
**BP** 406 °C **FP** 136 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-429N   | 10 mg |
| 100 µg/mL in MeOH | P-429S   | 1 mL  |

## DSMA

Disodium methane arsonate hexahydrate

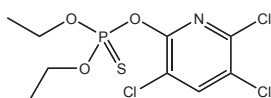


**CAS** 144-21-8 **MF** CH<sub>3</sub>AsNa<sub>2</sub>O<sub>3</sub> **MW** 183.94  
**PS** S **SOL** MeOH **SG** 1.15 g/cm<sup>3</sup> **MP** 135 °C  
**BP** 165 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-598N   | 10 mg |
| 100 µg/mL in MeOH | P-598S   | 1 mL  |

## Dursban

O,O-Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate



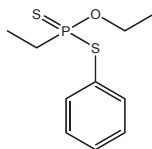
**CAS** 2921-88-2 **MF** C<sub>9</sub>H<sub>11</sub>Cl<sub>3</sub>NO<sub>3</sub>PS **MW** 350.59  
**PS** S **SG** 1.44 g/cm<sup>3</sup> **MP** 42 °C **BP** >400 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-094N   | 10 mg |
| 100 µg/mL in MeOH | P-094S   | 1 mL  |

**Dybar** see *Fenuron*

## Dyfonate

O-Ethyl S-phenyl (RS)-ethylphosphonodithioate



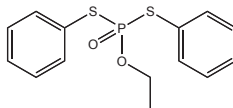
**CAS** 944-22-9 **MF** C<sub>10</sub>H<sub>15</sub>OPS<sub>2</sub> **MW** 246.33 **PS** L  
**SG** 1.16 g/cm<sup>3</sup> **MP** 30 °C **BP** 130 °C **FP** 179 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-087N   | 10 mg |
| 100 µg/mL in MeOH | P-087S   | 1 mL  |

**Dymid** see *Diphenamid*  
**Dynam** see *Oxasulfuron*  
**Dyrene** see *Anilazine*

## Edifenphos

O-ethyl S,S-diphenyl phosphorothioate



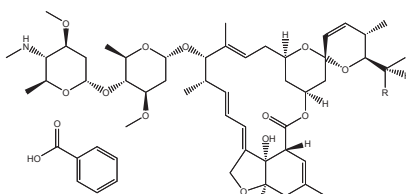
**CAS** 17109-49-8 **MF** C<sub>14</sub>H<sub>15</sub>O<sub>2</sub>PS<sub>2</sub> **MW** 310.38  
**PS** L **SOL** D, T, IPA **SG** 1.27 g/cm<sup>3</sup> **MP** N/A  
**BP** 430 °C **FP** 214 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-368N   | 10 mg |
| 100 µg/mL in MeOH | P-368S   | 1 mL  |

**Ebufos** see *Cadusafos*  
**Ekatin** see *Thiometon*

## Emamectin-benzoate

(4''R)-4''-deoxy-4''-(methylamino)avermectin  
B1 benzoate (1:1)

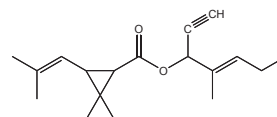


**CAS** 155569-91-8 **MF** C<sub>48</sub>H<sub>73</sub>NO<sub>13</sub>•C<sub>7</sub>H<sub>6</sub>O<sub>2</sub>  
**MW** 994.21

| Matrix            | Cat. No.   | Unit |
|-------------------|------------|------|
| Neat              | P-996N-5MG | 5 mg |
| 100 µg/mL in MeOH | P-996S     | 1 mL |

## Empenthrin

(E)-(RS)-1-Ethynyl-2-methylpent-2-enyl  
(1R,3RS;1R,3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate



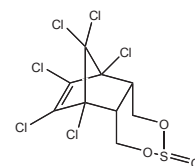
**CAS** 54406-48-3 **MF** C<sub>18</sub>H<sub>26</sub>O<sub>2</sub> **MW** 274.4  
**PS** L **SG** 0.93 g/cm<sup>3</sup> **MP** N/A **BP** 296 °C **FP** N/A

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-708N   | 10 mg |

**alpha-Endosulfan** see *Endosulfan I*  
**beta-Endosulfan** see *Endosulfan II*

## Endosulfan I

endo-1,4,5,6,7,7-Hexachloro-5-norbornene-2,3-dimethanol, cyclic sulfite

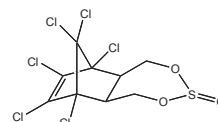


**CAS** 959-98-8 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>6</sub>O<sub>3</sub>S **MW** 406.92 **PS** S  
**SOL** D, T, EA **SG** 1.94 g/cm<sup>3</sup> **MP** 109.2 °C  
**BP** 450 °C **FP** 226 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-091N   | 10 mg |
| 100 µg/mL in MeOH | P-091S   | 1 mL  |

## Endosulfan II

3-alpha,5a-alpha,6-beta,9-beta,9a-alpha-  
(1,4,5,6,7,7-Hexachloro-8,9,10-trinorborn-5-ene-2,3-ylenebismethylene) sulfite



**CAS** 33213-65-9 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>6</sub>O<sub>3</sub>S **MW** 406.91  
**PS** S **SOL** D, T, EA **SG** 1.94 g/cm<sup>3</sup> **MP** 213 °C  
**BP** 450 °C **FP** 226 °C

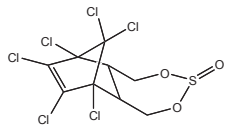
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-092N   | 10 mg |
| 100 µg/mL in MeOH | P-092S   | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



## Endosulfan, mixed isomers

(1,4,5,6,7,7-Hexachloro-8,9,10-trinorbpn-5-en-2,3-ylenebismethylene)sulfite

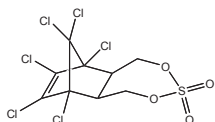


**CAS** 115-29-7 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>6</sub>O<sub>3</sub>S **MW** 406.92 **PS** S **SOL** D, T, EA **SG** 1.80 g/cm<sup>3</sup> **MP** 106 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-435N   | 10 mg |
| 100 µg/mL in MeOH | P-435S   | 1 mL  |

## Endosulfan sulfate

Hexachloro-hexahydro-methano-benzodioxathiepin-dioxide

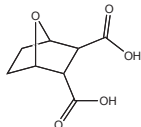


**CAS** 1031-07-8 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>6</sub>O<sub>4</sub>S **MW** 422.92 **PS** S **SOL** D, H, T **SG** 1.94 g/cm<sup>3</sup> **MP** 180 °C **BP** 481 °C **FP** 244 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-145N   | 10 mg |
| 100 µg/mL in MeOH | P-145S   | 1 mL  |

## Endothall Δ

7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid

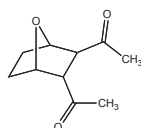


**CAS** 145-73-3 **MF** C<sub>8</sub>H<sub>10</sub>O<sub>5</sub> **MW** 186.16 **PS** S **SOL** MeOH, A, IPA **SG** 1.43 g/cm<sup>3</sup> **MP** 144 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-183N   | 10 mg |
| 100 µg/mL in MeOH | P-183S   | 1 mL  |

## Endothall dimethyl ester

7-Oxabicyclo [2.2.1] heptane-2,3-dicarboxylic acid, methyl ester

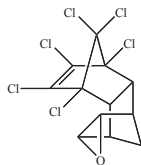


**CAS** N/A **MF** C<sub>10</sub>H<sub>14</sub>O<sub>3</sub> **MW** 182.22 **PS** S **SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-603N   | 10 mg |
| 100 µg/mL in MeOH | P-603S   | 1 mL  |

## Endrin

Hexachloroepoxyoctahydro-endo,endo-dimethanonaphthalene

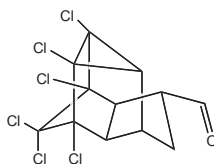


**CAS** 72-20-8 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O **MW** 380.91 **PS** S **SOL** H, A **SG** 1.70 g/cm<sup>3</sup> **MP** ~200 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-045N   | 10 mg |
| 100 µg/mL in MeOH | P-045S   | 1 mL  |

## Endrin aldehyde

(1alpha,2beta,2abeta,4beta,4abeta,5beta,6abeta,6b beta,7R\*)-2,2a,3,3,4,7-Hexachlorodecahydro-1,2,4-methenocyclopenta(cd)pentylene-5-carboxaldehyde

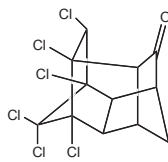


**CAS** 7421-93-4 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O **MW** 380.91 **PS** S **SOL** H, A **SG** N/A **MP** 152 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-046N   | 10 mg |
| 100 µg/mL in MeOH | P-046S   | 1 mL  |

## Endrin ketone

Hexachloro-decahydro-metheno-3H-cyclopenta(a) pentylene-3-one



**CAS** 53494-70-5 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O **MW** 380.91 **PS** L **SOL** H, A **SG** 0.78 g/cm<sup>3</sup> **MP** -48 °C **BP** 81 - 82 °C **FP** 2 °C

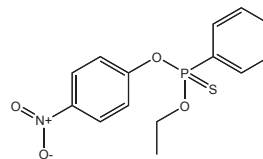
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-146N   | 10 mg |
| 100 µg/mL in MeOH | P-146S   | 1 mL  |

**Enide** see **Diphenamid**  
**Enilconazole** see **Imazalil**  
**ENT 8184** see **MGK-264**  
**Entex** see **Fenthion**

Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.

## EPN

O-Ethyl O-4-nitrophenyl phenylphosphonothioate



**CAS** 2104-64-5 **MF** C<sub>14</sub>H<sub>14</sub>NO<sub>4</sub>PS **MW** 323.32 **PS** S **SG** 1.27 g/cm<sup>3</sup> **MP** 35 °C **BP** 215 °C **FP** N/A

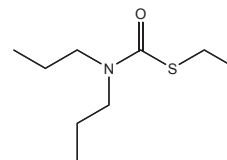
| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-220N   | 10 mg |
| 100 µg/mL in Acetone | P-220S-A | 1 mL  |

## Eptam

see **EPTC**

## EPTC

S-Ethyl Di-N,N-propylthiocarbamate



**CAS** 759-94-4 **MF** C<sub>9</sub>H<sub>19</sub>NOS **MW** 189.32 **PS** L **SOL** A, IPA **SG** 0.95 g/cm<sup>3</sup> **MP** N/A **BP** 127 °C **FP** 116 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-238N   | 10 mg |
| 100 µg/mL in MeOH | P-238S   | 1 mL  |

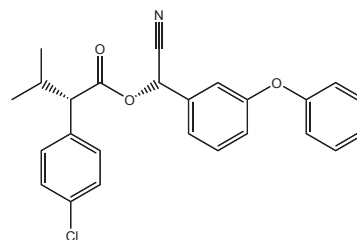
## Eradex

see **Dursban**

**1,2-Ethanediylbiscarbamodithioic acid, zinc complex** see **Zineb**

## Esfenvalerate

4-Chloro-α-(1-methylethyl) benzeneacetic acid, (S-(R\*,R\*))-cyano(3-phenoxyphenyl)methyl ester



**CAS** 66230-04-4 **MF** C<sub>25</sub>H<sub>22</sub>ClNO<sub>3</sub> **MW** 419.9 **PS** S **SOL** A, EA, DMSO **SG** 1.21 g/cm<sup>3</sup> **MP** 59 - 60 °C **BP** 540 °C **FP** 280 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-525N   | 10 mg |
| 100 µg/mL in MeOH | P-525S ‡ | 1 mL  |

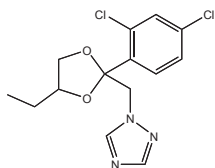
‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



# Pesticide Standards

## Etaconazole

1-(2-(2,4-Dichlorophenyl)-4-ethyl-1,3-dioxolan-2-yl)methyl-1H-1,2,4-triazole

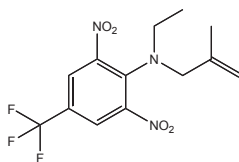


**CAS** 60207-93-4 **MF** C<sub>14</sub>H<sub>15</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>2</sub> **MW** 328.19  
**PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 84 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-644N   | 10 mg |
| 100 µg/mL in MeOH | P-644S   | 1 mL  |

## Ethalfuralin

N-Ethyl-alpha,alpha,alpha-trifluoro-N-(2-methylallyl)-2,6-dinitro-p-toluidine

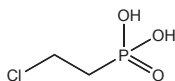


**CAS** 55283-68-6 **MF** C<sub>13</sub>H<sub>14</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub> **MW** 333.3  
**PS** S **SG** 1.34 g/cm<sup>3</sup> **MP** 55 - 56 °C  
**BP** 367 °C **FP** 177 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-269N   | 10 mg |
| 100 µg/mL in MeOH | P-269S   | 1 mL  |

## Ethephon

(2-Chloroethyl)phosphonic acid

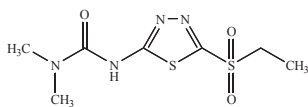


**CAS** 16672-87-0 **MF** C<sub>2</sub>H<sub>5</sub>ClO<sub>3</sub>P **MW** 144.49 **PS** S  
**SOL** MeOH, A, IPA **SG** 1.41 g/cm<sup>3</sup> **MP** 75 °C  
**BP** ~260 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-239N   | 10 mg |
| 100 µg/mL in MeOH | P-239S   | 1 mL  |

## Ethidimuron

1-(5-Ethylsulfonyl-1,3,4-thiadiazol-2-yl)-1,3-dimethylurea

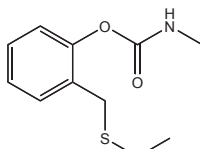


**CAS** 30043-49-3 **MF** C<sub>7</sub>H<sub>12</sub>N<sub>4</sub>O<sub>3</sub>S<sub>2</sub> **MW** 264.35  
**PS** S **SOL** D, T, H **SG** 1.44 g/cm<sup>3</sup> **MP** 156 °C  
**BP** N/A **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-364N   | 10 mg |
| 100 µg/mL in MeOH | P-364S   | 1 mL  |

## Ethiofencarb

alpha-Ethylthio-o-tolyl methylcarbamate

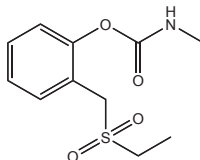


**CAS** 29973-13-5 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub>S **MW** 225.31  
**PS** S **SOL** D, T, IPA **SG** 1.13 g/cm<sup>3</sup> **MP** 33 - 34 °C  
**BP** 327 °C **FP** 152 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-448N   | 10 mg |
| 100 µg/mL in MeOH | P-448S   | 1 mL  |

## Ethiofencarb sulfone

2-((Ethylsulfonyl)methyl)phenol methylcarbamate

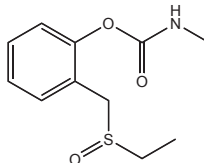


**CAS** 53380-23-7 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>3</sub>S **MW** 257.31  
**PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** 126 - 129 °C **BP** 449 °C  
**FP** 226 °C

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-824S-CN | 1 mL |

## Ethiofencarb sulfoxide

2-((ethylsulfinyl)methyl)phenolmethylcarbamate

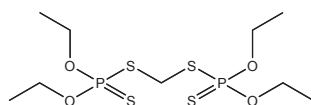


**CAS** 53380-22-6 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>3</sub>S **MW** 241.31  
**PS** N/A **SOL** N/A **SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-825S-CN | 1 mL |

## Ethion

O,O,O',O'-Tetraethyl S,S'methylene bis(phosphorodithioate)

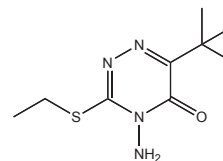


**CAS** 563-12-2 **MF** C<sub>9</sub>H<sub>20</sub>O<sub>4</sub>P<sub>2</sub>S<sub>4</sub> **MW** 384.48  
**PS** L **SOL** MeOH, A **SG** 1.22 g/cm<sup>3</sup> **MP** N/A  
**BP** 364 - 165 °C **FP** 176 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-048N   | 10 mg |
| 100 µg/mL in MeOH | P-048S   | 1 mL  |

## Ethiozin

4-Amino-6-(1,1-dimethylethyl)-3-(ethylthio)-1,2,4-triazine-5(4H)-one

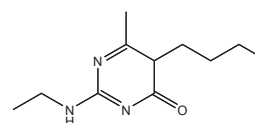


**CAS** 64529-56-2 **MF** C<sub>9</sub>H<sub>16</sub>N<sub>4</sub>OS **MW** 228.35  
**PS** L **SG** 1.27 g/cm<sup>3</sup> **MP** N/A **BP** 328 °C **FP** 152 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-660N   | 10 mg |
| 100 µg/mL in MeOH | P-660S   | 1 mL  |

## Ethirimol

5-Butyl-2-ethylamino-6-methylpyrimidin-4-ol

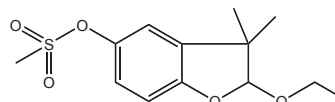


**CAS** 23947-60-6 **MF** C<sub>11</sub>H<sub>19</sub>N<sub>3</sub>O **MW** 209.33  
**PS** S **SOL** A **SG** 1.10 g/cm<sup>3</sup> **MP** 159 - 160 °C  
**BP** 306 °C **FP** 139 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-645N   | 10 mg |
| 100 µg/mL in MeOH | P-645S   | 1 mL  |

## Ethofumesate

(±)-2-Ethoxy-2,3-dihydro-3,3-dimethylbenzofuran-5-yl methanesulfonate

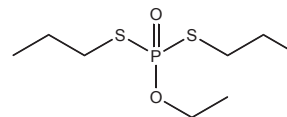


**CAS** 26225-79-6 **MF** C<sub>13</sub>H<sub>18</sub>O<sub>3</sub>S **MW** 286.35 **PS** S  
**SOL** D, A, EA **SG** 1.27 g/cm<sup>3</sup> **MP** 70-72 °C  
**BP** 409 °C **FP** 201 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-387N   | 10 mg |
| 100 µg/mL in MeOH | P-387S   | 1 mL  |

## Ethoprop

O-Ethyl S,S-dipropyl phosphorodithioate



**CAS** 13194-48-4 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>2</sub>PS<sub>2</sub> **MW** 242.34  
**PS** L **SOL** A, EA **SG** 1.09 g/cm<sup>3</sup> **MP** N/A **BP** 89 °C  
**FP** 140 °C

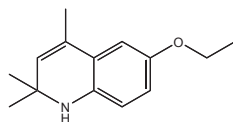
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-129N   | 10 mg |
| 100 µg/mL in MeOH | P-129S   | 1 mL  |





## Ethoxyquin

1,2-Dihydro-6-ethoxy-2,2,4-trimethyl quinoline

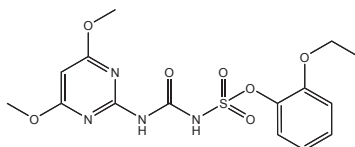


**CAS** 91-53-2 **MF** C<sub>14</sub>H<sub>19</sub>NO **MW** 217.34 **PS** L  
**SOL** IS **SG** 1.03 g/cm<sup>3</sup> **MP** N/A **BP** 123 - 125 °C  
**FP** 107 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-388N   | 10 mg |
| 100 µg/mL in MeOH | P-388S   | 1 mL  |

## Ethoxysulfuron

1-(4,6-Dimethoxypyrimidin-2-yl)-  
3-(2-ethoxyphenoxy)sulfonylurea

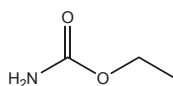


**CAS** 126801-58-9 **MF** C<sub>15</sub>H<sub>18</sub>N<sub>4</sub>O<sub>7</sub>S **MW** 398.39  
**PS** S **SOL** DMSO, D, A **SG** 1.44 g/cm<sup>3</sup> **MP** 145 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-847N    | 10 mg |
| 100 µg/mL in AcCN | P-847S-CN | 1 mL  |

## Ethyl carbamate

Carbamic acid, ethyl ester

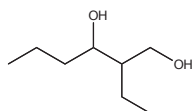


**CAS** 51-79-6 **MF** C<sub>3</sub>H<sub>7</sub>NO<sub>2</sub> **MW** 89.11 **PS** S  
**SG** 0.99 g/cm<sup>3</sup> **MP** 48-50 °C **BP** 182 - 184 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-419N   | 10 mg |
| 100 µg/mL in MeOH | P-419S   | 1 mL  |

## Ethyl hexanediol (mixed isomers)

Ethyl hexanediol (mixed isomers)



**CAS** 94-96-2 **MF** C<sub>8</sub>H<sub>18</sub>O<sub>2</sub> **MW** 146.26 **PS** L  
**SG** 0.93 g/cm<sup>3</sup> **MP** -40 °C **BP** 244.2 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-389N   | 10 mg |
| 100 µg/mL in MeOH | P-389S   | 1 mL  |

**Ethyl parathion** see **Parathion**  
**Ethylan** see **Perthane**

## Ethylene thiourea

Ethylene thiourea

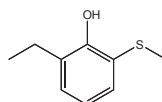


**CAS** 96-45-7 **MF** C<sub>3</sub>H<sub>6</sub>N<sub>2</sub>S **MW** 102.16 **PS** S  
**SG** 1.42 g/cm<sup>3</sup> **MP** 195 - 204 °C **BP** N/A **FP** 252 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-588N   | 10 mg |
| 100 µg/mL in MeOH | P-588S   | 1 mL  |

## 2-Ethylthiomethyl phenol

2-Ethylthiomethyl phenol



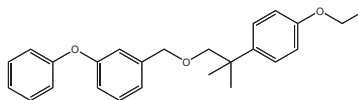
**CAS** N/A **MF** C<sub>9</sub>H<sub>12</sub>OS **MW** 168.26

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-423S   | 1 mL |

**Etoc** see **Prallethrin**

## Etofenprox

2-(4-ethoxyphenyl)-2-methylpropyl  
3-phenoxybenzyl ether



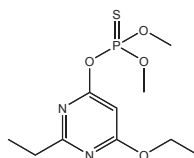
**CAS** 80844-07-1 **MF** C<sub>25</sub>H<sub>28</sub>O<sub>3</sub> **MW** 376.49 **PS** S  
**SOL** D, A, T **SG** 1.07 g/cm<sup>3</sup> **MP** 37 °C **BP** 482 °C  
**FP** 165 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-848N    | 10 mg |
| 100 µg/mL in AcCN | P-848S-CN | 1 mL  |

**Etridiazole** see **Terrazole**

## Etrifos

O-6-Ethoxy-2-ethylpyrimidin-4-yl  
O,O-dimethyl phosphorothioate



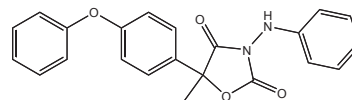
**CAS** 38260-54-7 **MF** C<sub>10</sub>H<sub>17</sub>N<sub>2</sub>O<sub>4</sub>PS **MW** 292.29  
**PS** L **SOL** MeOH, H, A **SG** 1.20 g/cm<sup>3</sup> **MP** N/A  
**BP** N/A **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-480N   | 10 mg |
| 100 µg/mL in MeOH | P-480S   | 1 mL  |

**Euparen** see **Dichlofluanid**  
**Facet** see **Quinclorac**  
**Famophos** see **Famphur**

## Famoxadon

3-anilino-5-methyl-5-(4-phenoxyphenyl)-  
1,3-oxazolidine-2,4-dione

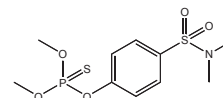


**CAS** 131807-57-3 **MF** C<sub>22</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub> **MW** 374.39  
**PS** S **SG** 1.31 g/cm<sup>3</sup> **MP** 142 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-849S-CN | 1 mL |

## Famphur

O-4-Dimethylsulfamoylphenyl  
O,O-dimethyl phosphorothioate



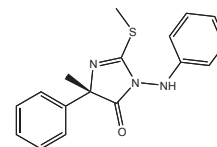
**CAS** 52-85-7 **MF** C<sub>10</sub>H<sub>16</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 325.36 **PS** S  
**SOL** D, T, A **SG** 0.95 g/cm<sup>3</sup> **MP** 52.5 - 53.5 °C  
**BP** N/A **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-147N   | 10 mg |
| 100 µg/mL in MeOH | P-147S   | 1 mL  |

**Faneron** see **Bromofenoxim**  
**Far-Go** see **Triallate**  
**Fenac** see **Fenatrol**

## Fenamidone

(S)-1-Anilino-4-methyl-2-methylthio-4-phenyl-  
2-imidazolin-5-one

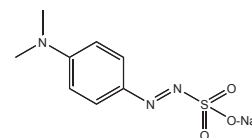


**CAS** 161326-34-7 **MF** C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>OS **MW** 311.4  
**PS** S **SOL** D, A, CN **SG** 1.21 g/cm<sup>3</sup>  
**MP** 199 - 200 °C **BP** 443 °C **FP** 222 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-850N    | 10 mg |
| 100 µg/mL in AcCN | P-850S-CN | 1 mL  |

## Fenamiosulf

Sodium 4-dimethylaminobenzenediazosulfonate



**CAS** 140-56-7 **MF** C<sub>8</sub>H<sub>10</sub>N<sub>3</sub>O<sub>3</sub>Na **MW** 251.26  
**PS** S **SOL** D, A, EA **SG** 0.93 g/cm<sup>3</sup> **MP** 200 °C  
**BP** 138 °C **FP** N/A

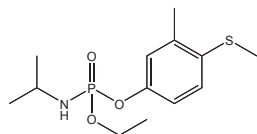
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-058N   | 10 mg |
| 100 µg/mL in MeOH | P-058S   | 1 mL  |



# Pesticide Standards

## Fenamiphos

Ethyl 4-methylthio-m-tolyl isopropylphosphoramidate

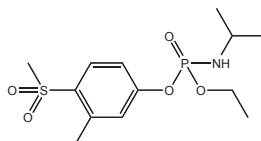


**CAS** 22224-92-6 **MF** C<sub>13</sub>H<sub>22</sub>NO<sub>3</sub>PS **MW** 303.36  
**PS** S **SOL** D, T, IPA **SG** 1.19 g/cm<sup>3</sup> **MP** 49 °C  
**BP** N/A **FP** 200 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-114N   | 10 mg |
| 100 µg/mL in MeOH | P-114S   | 1 mL  |

## Fenamiphos sulfone

O-Ethyl-O-(3-methyl-4-methylsulfonylphenyl) isopropylamidophosphate

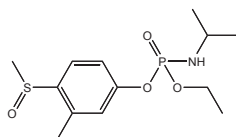


**CAS** 31972-44-8 **MF** C<sub>13</sub>H<sub>22</sub>NO<sub>5</sub>PS **MW** 335.36  
**PS** S **SOL** D, T **SG** 1.21 g/cm<sup>3</sup> **MP** N/A **BP** 457 °C  
**FP** >80 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-623N   | 10 mg |
| 100 µg/mL in MeOH | P-623S   | 1 mL  |

## Fenamiphos sulfoxide

N-Isopropylamidophosphoric acid ethyl 4-(methylsulfinyl)-3-methylphenyl ester

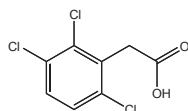


**CAS** 31972-43-7 **MF** C<sub>13</sub>H<sub>22</sub>NO<sub>4</sub>PS **MW** 319.36  
**PS** S **SOL** D, T **SG** 1.22 g/cm<sup>3</sup> **MP** N/A **BP** 436 °C  
**FP** 218 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-622N   | 10 mg |
| 100 µg/mL in MeOH | P-622S   | 1 mL  |

## Fenatrol

2,3,6-Trichlorophenylacetic acid

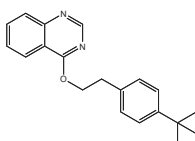


**CAS** 85-34-7 **MF** C<sub>8</sub>H<sub>5</sub>Cl<sub>3</sub>O<sub>2</sub> **MW** 239.48 **PS** S  
**SG** N/A **MP** 151 - 156 °C **BP** 354 °C **FP** 168 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-319N   | 10 mg |
| 100 µg/mL in MeOH | P-319S   | 1 mL  |

## Fenazaquin

4-tert-Butylphenethyl quinazolin-4-yl ether

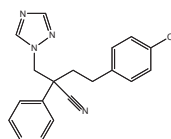


**CAS** 120928-09-8 **MF** C<sub>20</sub>H<sub>22</sub>N<sub>2</sub>O **MW** 306.4

| Matrix              | Cat. No.   | Unit |
|---------------------|------------|------|
| 100 µg/mL in Hexane | P-787S-H ‡ | 1 mL |

## Fenbuconazole

4-(4-Chlorophenyl)-2-phenyl-2-(1H-1,2,4-triazol-1-ylmethyl)butyronitrile

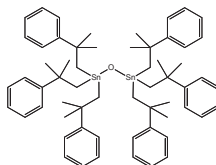


**CAS** 114369-43-6 **MF** C<sub>19</sub>H<sub>17</sub>ClN<sub>4</sub> **MW** 336.85  
**PS** S **SG** 1.20 g/cm<sup>3</sup> **MP** 124 - 126 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-662S   | 1 mL |

## Fenbutatin oxide

Hexakis(2-methyl-2-phenylpropyl)distannoxane



**CAS** 13356-08-6 **MF** C<sub>60</sub>H<sub>78</sub>OSn<sub>2</sub> **MW** 1052.68  
**PS** S **SG** 1.30 g/cm<sup>3</sup> **MP** 142-145 °C **BP** 850 °C  
**FP** 468 °C

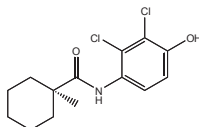
| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-481N   | 10 mg |
| 100 µg/mL in Acetone | P-481S-A | 1 mL  |

## Fenchlorphos

see *Ronnel*

## Fenhexamid

N-(2,3-Dichloro-4-hydroxyphenyl)-1-methylcyclohexanecarboxamide



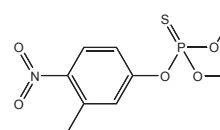
**CAS** 126833-17-8 **MF** C<sub>14</sub>H<sub>17</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 302.2  
**PS** S **SOL** IPA, D, CN **SG** 1.34 g/cm<sup>3</sup> **MP** 153 °C  
**BP** N/A **FP** 295 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-783N   | 10 mg |
| 100 µg/mL in MeOH | P-783S   | 1 mL  |

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**

## Fenitrothion

O,O-dimethyl O-4-nitro-m-tolyl phosphorothioate



**CAS** 122-14-5 **MF** C<sub>9</sub>H<sub>12</sub>NO<sub>5</sub>PS **MW** 277.24 **PS** L  
**SOL** H, D, T **SG** 1.33 g/cm<sup>3</sup> **MP** 3.4 °C **BP** 145 °C  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-259N   | 10 mg |
| 100 µg/mL in MeOH | P-259S   | 1 mL  |

## Fenobucarb

see *Baycarb*

## Fenoprop

see *Silvex*

## Fenoprop 2-ethylhexyl ester

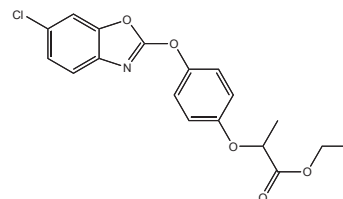
see *Silvex 2-ethylhexyl ester*

## Fenoprop methyl ester

see *Silvex methyl ester*

## Fenoxaprop-ethyl

Ethyl 2-[4-[(6-chloro-1,3-benzoxazol-2-yl)oxy]phenoxy]propanoate

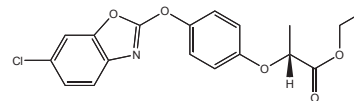


**CAS** 66441-23-4 **MF** C<sub>18</sub>H<sub>16</sub>ClNO<sub>5</sub> **MW** 361.8  
**PS** S **SOL** A, T, EA **SG** 1.30 g/cm<sup>3</sup> **MP** 84 - 85 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-365N   | 10 mg |
| 100 µg/mL in MeOH | P-365S   | 1 mL  |

## Fenoxaprop-p-ethyl

(+)-Ethyl-2-[4-[(6-chloro-2-benzoxazolyl)oxy]phenoxy]propanoate



**CAS** 71283-80-2 **MF** C<sub>18</sub>H<sub>16</sub>ClNO<sub>5</sub> **MW** 361.78  
**PS** S **SOL** T, A, EA **SG** 1.31 g/cm<sup>3</sup> **MP** 80 - 84 °C  
**BP** 478 °C **FP** 242 °C

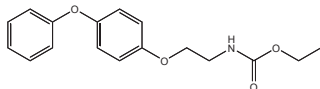
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-694N   | 10 mg |
| 100 µg/mL in MeOH | P-694S   | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



## Fenoxycarb

Ethyl 2-(4-phenoxyphenoxy)ethylcarbamate



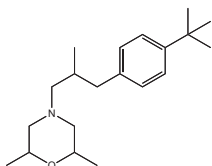
**CAS** 79127-80-3 **MF** C<sub>17</sub>H<sub>19</sub>NO<sub>4</sub> **MW** 301.37  
**PS** S **SOL** A, T, H **SG** 1.15 g/cm<sup>3</sup> **MP** 53 °C  
**BP** 547 °C **FP** 230 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-686N   | 10 mg |
| 100 µg/mL in MeOH | P-686S   | 1 mL  |

**Fenpropathrin** *see Danitol*

## Fenpropimorph

cis-4-[3-(4-tert-Butylphenyl)-2-methylpropyl]-2,6-dimethylmorpholine

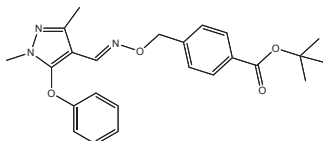


**CAS** 67564-91-4 **MF** C<sub>20</sub>H<sub>33</sub>NO **MW** 303.54 **PS** L  
**SOL** T, A, EA **SG** 0.93 g/cm<sup>3</sup> **MP** N/A **BP** 393 °C  
**FP** 116 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-705N   | 10 mg |
| 100 µg/mL in MeOH | P-705S   | 1 mL  |

## Fenpyroximate

tert-Butyl(E)-alpha-(1,3-dimethyl-5-phenoxy-pyrazol-4-ylmethyleneamino-oxy)-p-toluate

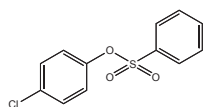


**CAS** 111812-58-9 **MF** C<sub>24</sub>H<sub>27</sub>N<sub>3</sub>O<sub>4</sub> **MW** 421.49  
**PS** S **SOL** T, EA, A **SG** 1.14 g/cm<sup>3</sup> **MP** 102 °C  
**BP** 546 °C **FP** 284 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-724N   | 10 mg |
| 100 µg/mL in MeOH | P-724S ‡ | 1 mL  |

## Fenson

4-Chlorophenyl benzenesulfonate

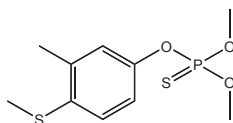


**CAS** 80-38-6 **MF** C<sub>12</sub>H<sub>9</sub>ClO<sub>3</sub>S **MW** 268.72  
**PS** S **SG** 1.38 g/cm<sup>3</sup> **MP** 136 - 137 °C **BP** 407 °C  
**FP** 200 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-551N   | 10 mg |
| 100 µg/mL in MeOH | P-551S   | 1 mL  |

## Fenthion

O,O-Dimethyl O-4-methylthio-m-tolyl phosphorothioate

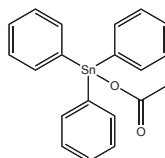


**CAS** 55-38-9 **MF** C<sub>10</sub>H<sub>15</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 278.33 **PS** L  
**SOL** D, T, IPA **SG** 1.25 g/cm<sup>3</sup> **MP** 7.5 °C **BP** 87 °C  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-148N   | 10 mg |
| 100 µg/mL in MeOH | P-148S   | 1 mL  |

## Fentin Acetate

Acetoxytriphenylstannane

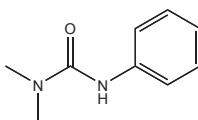


**CAS** 900-95-8 **MF** C<sub>20</sub>H<sub>18</sub>O<sub>2</sub>Sn **MW** 409.07 **PS** S  
**SOL** D, T, EA **SG** 1.55 g/cm<sup>3</sup> **MP** N/A **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-680N   | 10 mg |
| 100 µg/mL in MeOH | P-680S   | 1 mL  |

## Fenuron

1,1-Dimethyl-3-phenylurea

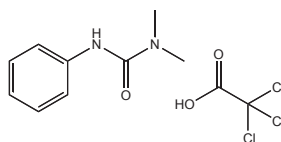


**CAS** 101-42-8 **MF** C<sub>9</sub>H<sub>12</sub>N<sub>2</sub>O **MW** 164.2 **PS** S  
**SOL** H, A **SG** 1.10 g/cm<sup>3</sup> **MP** 133 - 134 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-004N   | 10 mg |
| 100 µg/mL in MeOH | P-004S   | 1 mL  |

## Fenuron-TCA

1,1-Dimethyl-3-phenyluronium trichloroacetate

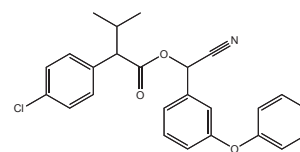


**CAS** 4482-55-7 **MF** C<sub>9</sub>H<sub>12</sub>N<sub>2</sub>O•C<sub>2</sub>HCl<sub>3</sub>O<sub>2</sub>  
**MW** 327.59 **PS** S **SOL** H, A **SG** N/A **MP** 65 - 68 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-006N   | 10 mg |
| 100 µg/mL in MeOH | P-006S   | 1 mL  |

## Fenvalerate

(RS)-alpha-Cyano-3-phenoxybenzyl (RS)-2-(4-chlorophenyl)-3-methylbutyrate

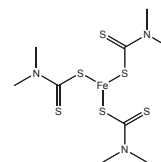


**CAS** 51630-58-1 **MF** C<sub>25</sub>H<sub>22</sub>ClNO<sub>3</sub> **MW** 419.9  
**PS** S **SOL** MeOH, H **SG** 1.18 g/cm<sup>3</sup> **MP** 45 °C  
**BP** N/A **FP** 256 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-194N   | 10 mg |
| 100 µg/mL in MeOH | P-194S ‡ | 1 mL  |

## Ferbam

Iron (III) dimethyldithiocarbamate



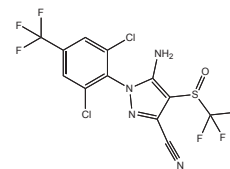
**CAS** 14484-64-1 **MF** C<sub>9</sub>H<sub>18</sub>N<sub>3</sub>S<sub>6</sub>Fe **MW** 416.5  
**PS** S **SOL** CN, A **SG** 0.60 g/cm<sup>3</sup> **MP** 180 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-110N   | 10 mg |
| 100 µg/mL in MeOH | P-110S   | 1 mL  |

**Ficam** *see Bendiocarb*

## Fipronil

(±)-5-Amino-1-(2,6-dichloro-α,α,α-trifluoro-p-tolyl)-4-trifluoromethylsulfinyl pyrazole-3-carbonitrile



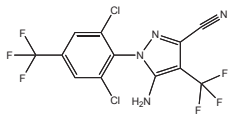
**CAS** 120068-37-3 **MF** C<sub>12</sub>H<sub>4</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>4</sub>OS **MW** 437.16  
**PS** S **SOL** A, D, T **SG** 1.87 g/cm<sup>3</sup> **MP** 196 - 202 °C  
**BP** 510 °C **FP** 262 °C

| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-738N   | 10 mg |
| 100 µg/mL in MeOH    | P-738S   | 1 mL  |
| 100 µg/mL in Acetone | P-738S-A | 1 mL  |



# Pesticide Standards

## Fipronil Desulfinyl

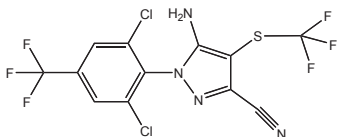


CAS N/A MF  $C_{12}H_4Cl_2F_6N_4$  MW 389.08

| Matrix               | Cat. No. | Unit |
|----------------------|----------|------|
| 100 µg/mL in Acetone | P-782S-A | 1 mL |

## Fipronil Sulfide

5-Amino-1-(2,6-dichloro-4-trifluoromethylphenyl)-4-(trifluoromethyl)thiopyrazole-3-carbonitrile

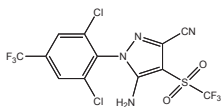


CAS 120067-83-6 MF  $C_{12}H_4Cl_2F_6N_4S$  MW 421.15  
PS S SG 1.76 g/cm<sup>3</sup> MP 184 - 185 °C BP 393 °C  
FP 192 °C

| Matrix               | Cat. No.   | Unit |
|----------------------|------------|------|
| Neat                 | P-781N-5MG | 5 mg |
| 100 µg/mL in Acetone | P-781S-A   | 1 mL |

## Fipronil Sulfone

5-Amino-1-(2,6-dichloro-4-(trifluoromethyl)phenyl)-4-((trifluoromethyl)sulfonyl)-1H-pyrazole-3-carbonitrile

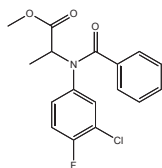


CAS 120068-36-2 MF  $C_{12}H_4Cl_2F_6N_4O_2S$   
MW 453.15 PS S SG 1.85 g/cm<sup>3</sup> MP 207 - 208 °C  
BP 532 °C FP 275 °C

| Matrix               | Cat. No.   | Unit |
|----------------------|------------|------|
| 100 µg/mL in Acetone | P-780S-A ‡ | 1 mL |

## Flamprop-methyl

Methyl N-benzoyl-N-(3-chloro-4-fluorophenyl)-DL-alaninate

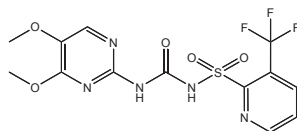


CAS 52756-25-9 MF  $C_{17}H_{15}ClFNO_3$  MW 335.76  
PS S SOL A, H SG 1.31 g/cm<sup>3</sup> MP 85 °C  
BP 460 °C FP 232 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-366N   | 10 mg |
| 100 µg/mL in MeOH | P-366S   | 1 mL  |

## Flazasulfuron

1-(4,6-dimethoxypyrimidin-2-yl)-3-(3-trifluoromethyl-2-pyridyl)sulfonyl

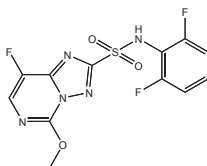


CAS 104040-78-0 MF  $C_{13}H_{12}F_3N_5O_5S$  MW 407.3  
PS S SG 1.55 g/cm<sup>3</sup> MP 166 - 170 °C BP N/A  
FP N/A

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-826S-CN | 1 mL |

## Florasulam

2',6'-8-Trifluoro-5-methoxy[1,2,4]triazolo [1,5-c]pyrimidine-2-sulfonanilide

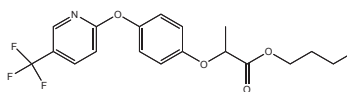


CAS 145701-23-1 MF  $C_{12}H_8F_3N_5O_3S$  MW 359.29  
PS S SG 1.76 g/cm<sup>3</sup> MP ~195 °C BP N/A FP N/A

| Matrix           | Cat. No.       | Unit |
|------------------|----------------|------|
| 10 µg/mL in AcCN | P-827S-CN-0.1X | 1 mL |

## Fluazifop-butyl

Butyl 2-(4-((5-(trifluoromethyl)-2-pyridyl)oxy)phenoxy)propionate

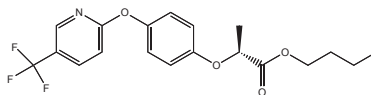


CAS 69806-50-4 MF  $C_{19}H_{20}F_3NO_4$  MW 383.36  
PS L SOL MeOH, H, D SG 1.21 g/cm<sup>3</sup> MP 13 °C  
BP 165 °C FP N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-310N   | 10 mg |
| 100 µg/mL in MeOH | P-310S   | 1 mL  |

## Fluazifop-p-butyl

Propanoic acid, 2-(4-((5-(trifluoromethyl)-2-pyridinyl)oxy)phenoxy)-, butyl ester, (R)-

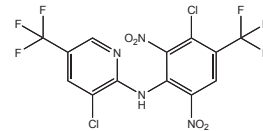


CAS 79241-46-6 MF  $C_{19}H_{20}F_3NO_4$  MW 383.36  
PS L SOL MeOH, H, D SG 1.22 g/cm<sup>3</sup> MP 5 °C  
BP 164 °C FP 218 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-601N   | 10 mg |
| 100 µg/mL in MeOH | P-601S   | 1 mL  |

## Fluazinam

3-Chloro-N-(3-chloro-5-trifluoromethyl-2-pyridyl)-a,a,a-trifluoro-2,6-dinitro-p-toluidine

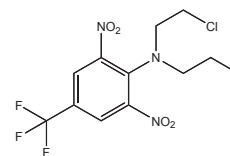


CAS 79622-59-6 MF  $C_{13}H_4Cl_2F_6N_4O_4$  MW 465.09  
PS S SOL A, EA, D SG 1.81 g/cm<sup>3</sup> MP 119 °C  
BP N/A FP N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-586N   | 10 mg |
| 100 µg/mL in MeOH | P-586S   | 1 mL  |

## Fluchloralim

N-(2-Chloroethyl)-2,6-dinitro-N-propyl-4-(trifluoromethyl)aniline

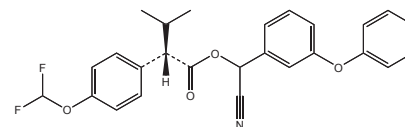


CAS 33245-39-5 MF  $C_{12}H_{13}ClF_3N_3O_4$  MW 355.7  
PS S SOL A SG 1.45 g/cm<sup>3</sup> MP 42 - 46 °C  
BP 392 °C FP 191 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-270N   | 10 mg |
| 100 µg/mL in MeOH | P-270S   | 1 mL  |

## Flucythrinate

Benzeneacetic acid, 4-(difluoromethoxy)-a-(1-methylethyl)-, cyano(3-phenoxyphenyl)methyl ester

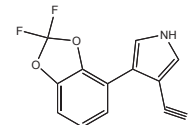


CAS 70124-77-5 MF  $C_{26}H_{23}F_2NO_4$  MW 451.46  
PS L SG 1.19 g/cm<sup>3</sup> MP N/A BP 108 °C FP 45 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-378S   | 1 mL |

## Fludioxonil

4-(2,2-difluoro-1,3-benzodioxol-4-yl)pyrrole-3-carbonitrile



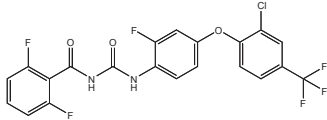
CAS 131341-86-1 MF  $C_{12}H_8F_2N_2O_2$  MW 248.19  
PS S SOL A, T, H SG 1.55 g/cm<sup>3</sup> MP 108 °C  
BP 420 °C FP 208 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-698N   | 10 mg |
| 100 µg/mL in MeOH | P-698S   | 1 mL  |



## Flufenoxuron

N-[[[4-[2-chloro-4-(trifluoromethyl)phenoxy]-2-fluorophenyl]amino]carbonyl]-2,6-difluorobenzamide

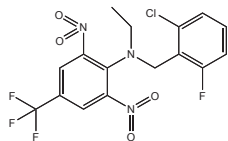


**CAS** 101463-69-8 **MF** C<sub>21</sub>H<sub>11</sub>ClF<sub>6</sub>N<sub>2</sub>O<sub>3</sub> **MW** 488.77  
**PS S** **SOL** A, D, H **SG** 1.57 g/cm<sup>3</sup> **MP** 169 - 172 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-687N   | 10 mg |
| 100 µg/mL in MeOH | P-687S   | 1 mL  |

## Flumetralin

2-Chloro-N-(2,6-dinitro-4-(trifluoromethyl)phenyl)-N-ethyl-6-fluorobenzenemethanamine

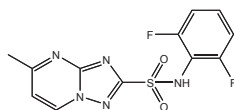


**CAS** 62924-70-3 **MF** C<sub>16</sub>H<sub>12</sub>ClF<sub>4</sub>N<sub>3</sub>O<sub>4</sub> **MW** 421.73  
**PS S** **SG** 1.54 g/cm<sup>3</sup> **MP** 102 °C **BP** N/A  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-491N   | 10 mg |
| 100 µg/mL in MeOH | P-491S   | 1 mL  |

## Flumetsulam

N-(2,6-difluorophenyl)-5-methyl[1,2,4]triazolo[1,5-a]pyrimidine-2-sulfonamide

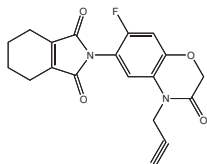


**CAS** 98967-40-9 **MF** C<sub>12</sub>H<sub>9</sub>F<sub>2</sub>N<sub>5</sub>O<sub>2</sub>S **MW** 325.32  
**PS S** **SOL** MeOH, A **SG** 1.66 g/cm<sup>3</sup>  
**MP** 251 - 253 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-659N   | 10 mg |
| 100 µg/mL in MeOH | P-659S   | 1 mL  |

## Flumioxazin

7-Fluoro-6-(3,4,5,6-tetrahydropthalimido)-4-(2-propynyl)-1,4-benzoxazin-3(2H)-one

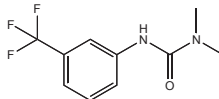


**CAS** 103361-09-7 **MF** C<sub>19</sub>H<sub>15</sub>FN<sub>2</sub>O<sub>4</sub> **MW** 354.33  
**PS S** **SG** 1.48 g/cm<sup>3</sup> **MP** 203 °C **BP** 644 °C  
**FP** 343 °C

| Matrix         | Cat. No. | Unit  |
|----------------|----------|-------|
| Neat           | P-992N   | 10 mg |
| 100 µg/mL in D | P-992S-D | 1 mL  |

## Fluometuron

1,1-Dimethyl-3-(alpha,alpha,alpha-trifluoro-m-tolyl)urea

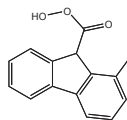


**CAS** 2164-17-2 **MF** C<sub>10</sub>H<sub>11</sub>F<sub>3</sub>N<sub>2</sub>O **MW** 232.2  
**PS S** **SOL** H, MeOH, A **SG** 1.39 g/cm<sup>3</sup> **MP** 163 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-014N   | 10 mg |
| 100 µg/mL in MeOH | P-014S   | 1 mL  |

## Flurenol methyl ester

Methyl 9-hydroxy-9H-fluorene-9-carboxylate

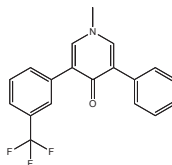


**CAS** 1216-44-0 **MF** C<sub>15</sub>H<sub>12</sub>O<sub>3</sub> **MW** 240.25 **PS S**  
**SG** 1.32 g/cm<sup>3</sup> **MP** 71 °C **BP** 336 °C **FP** 124 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-412N   | 10 mg |
| 100 µg/mL in MeOH | P-412S   | 1 mL  |

## Fluridone

1-methyl-3-phenyl-5-[3-(trifluoromethyl)phenyl]-4(1H)-pyridinone

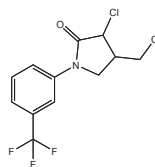


**CAS** 59756-60-4 **MF** C<sub>15</sub>H<sub>14</sub>F<sub>3</sub>NO **MW** 329.32  
**PS S** **SG** 1.27 g/cm<sup>3</sup> **MP** 154 - 155 °C **BP** 444 °C  
**FP** 223 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-193N   | 10 mg |
| 100 µg/mL in MeOH | P-193S   | 1 mL  |

## Flurochloridon

3-Chloro-4-(chloromethyl)-1-[3-(trifluoromethyl)phenyl]-2-pyrrolidinone

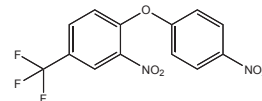


**CAS** 61213-25-0 **MF** C<sub>12</sub>H<sub>10</sub>Cl<sub>2</sub>F<sub>3</sub>NO **MW** 312.13  
**PS S** **SOL** A **SG** 1.46 g/cm<sup>3</sup> **MP** 55 - 73 °C  
**BP** 454 °C **FP** 228 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-647N   | 10 mg |
| 100 µg/mL in MeOH | P-647S   | 1 mL  |

## Flurodifen

2,4'-Dinitro-4-(trifluoromethyl)diphenyl ether

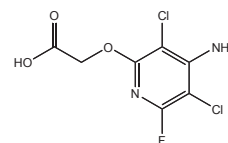


**CAS** 15457-05-3 **MF** C<sub>13</sub>H<sub>7</sub>F<sub>3</sub>N<sub>2</sub>O<sub>5</sub> **MW** 328.2  
**PS S** **SG** 1.51 g/cm<sup>3</sup> **MP** 94 °C **BP** 371 °C  
**FP** 178 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-676N   | 10 mg |
| 100 µg/mL in MeOH | P-676S   | 1 mL  |

## Fluroxypyr

((4-Amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid

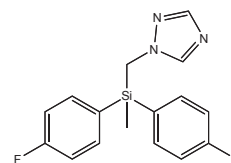


**CAS** 69377-81-7 **MF** C<sub>7</sub>H<sub>5</sub>Cl<sub>2</sub>FN<sub>2</sub>O<sub>3</sub> **MW** 255.03  
**PS S** **SG** 1.72 g/cm<sup>3</sup> **MP** 232 °C **BP** 399 °C  
**FP** 195 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-521S   | 1 mL |

## Flusilazole

1-((Bis(4-fluorophenyl)methylsilyl)methyl)-1H-1,2,4-triazole



**CAS** 85509-19-9 **MF** C<sub>16</sub>H<sub>15</sub>F<sub>2</sub>N<sub>3</sub>Si **MW** 315.43  
**PS S** **SG** 1.17 g/cm<sup>3</sup> **MP** 51 - 53 °C **BP** 392 °C  
**FP** 191 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-578N   | 10 mg |
| 100 µg/mL in MeOH | P-578S   | 1 mL  |

### Property Key

**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

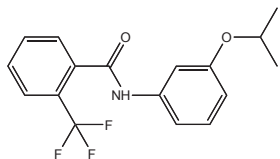




# Pesticide Standards

## Flutolanil

a,a,a,-Trifluoro-3'-isopropoxy-o-toluanilide

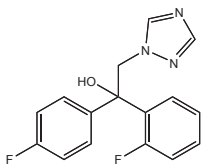


**CAS** 66332-96-5 **MF** C<sub>17</sub>H<sub>16</sub>F<sub>3</sub>NO<sub>2</sub> **MW** 323.31  
**PS S SOL** A, D, CN **SG** 1.25 g/cm<sup>3</sup>  
**MP** 104 - 105 °C **BP** 339 °C **FP** 159 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-587N   | 10 mg |
| 100 µg/mL in MeOH | P-587S   | 1 mL  |

## Flutriafol

(RS)-2,4'-difluoro-a-(1H-1,2,4-triazol-1-ylmethyl) benzhydryl alcohol



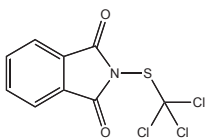
**CAS** 76674-21-0 **MF** C<sub>16</sub>H<sub>13</sub>F<sub>2</sub>N<sub>3</sub>O **MW** 301.29  
**PS S SOL** A, D, MeOH **SG** 1.41 g/cm<sup>3</sup> **MP** 130 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-699N   | 10 mg |
| 100 µg/mL in MeOH | P-699S   | 1 mL  |

**Focus** see *Cycloxydime*  
**Folbex** see *Chlorobenzilate*  
**Folex** see *Merphos*  
**Folicur** see *Tebuconazole*  
**Folosan** see *Pentachloronitrobenzene*

## Folpet

N-(Trichloromethylthio)phthalimide



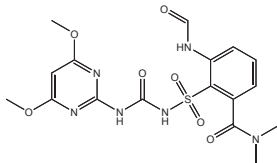
**CAS** 133-07-3 **MF** C<sub>9</sub>H<sub>4</sub>Cl<sub>3</sub>NO<sub>2</sub>S **MW** 296.56  
**PS S SOL** T, MeOH **SG** 1.72 g/cm<sup>3</sup> **MP** 178 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-258N   | 10 mg |
| 100 µg/mL in MeOH | P-258S   | 1 mL  |

**Fonofos** see *Dyfonate*

## Foramsulfuron

2-[3-(4,6-Dimethoxy-2-pyrimidinyl)ureidosulfonyl]-4-(formamido)-N,N-dimethylbenzamide

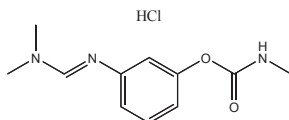


**CAS** 173159-57-4 **MF** C<sub>17</sub>H<sub>20</sub>N<sub>6</sub>O<sub>7</sub>S **MW** 452.44  
**PS S SOL** A, MeOH, CN **SG** 1.47 g/cm<sup>3</sup>  
**MP** 126 - 127 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-852N    | 10 mg |
| 100 µg/mL in AcCN | P-852S-CN | 1 mL  |

## Formetanate HCl

3-Dimethylaminomethylneaminophenyl methylcarbamate hydrochloride

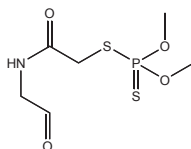


**CAS** 23422-53-9 **MF** C<sub>11</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub>•HCl **MW** 257.72  
**PS S SG** 1.19 g/cm<sup>3</sup> **MP** 190 - 202 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-431N   | 10 mg |
| 100 µg/mL in MeOH | P-431S   | 1 mL  |

## Formothion

S-[2-(Formylmethylamino)-2-oxoethyl] O,O-dimethyl dithiophosphate



**CAS** 2540-82-1 **MF** C<sub>6</sub>H<sub>12</sub>NO<sub>4</sub>PS<sub>2</sub> **MW** 257.27  
**PS L SOL** MeOH, A, H **SG** 1.36 g/cm<sup>3</sup> **MP** 25 °C  
**BP** 318 °C **FP** 146 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-149N    | 10 mg |
| 100 µg/mL in AcCN | P-149S-CN | 1 mL  |

## Property Key

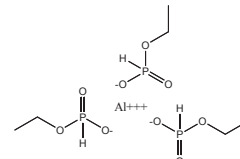
**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

## Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

## Fosetyl aluminum

Aluminum tris(O-ethylphosphonate)

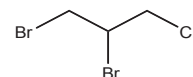


**CAS** N/A **MF** C<sub>6</sub>H<sub>18</sub>AlO<sub>9</sub>P<sub>3</sub> **MW** 354.13 **PS S SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-532N   | 10 mg |
| 100 µg/mL in MeOH | P-532S   | 1 mL  |

## Fumazone

3-Chloro-1,2-Dibromopropane



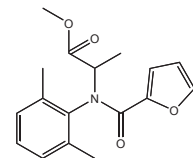
**CAS** 96-12-8 **MF** C<sub>3</sub>H<sub>5</sub>Br<sub>2</sub>Cl **MW** 236.33 **PS L SG** 2.05 g/cm<sup>3</sup> **MP** 6 °C **BP** 195 °C **FP** 90 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-341N   | 10 mg |
| 100 µg/mL in MeOH | P-341S   | 1 mL  |

**Fundazol** see *Benomyl*  
**Furadan** see *Carbofuran*

## Furalaxyl

methyl N-(2-furoyl)-N-(2,6-xylyl)-DL-alaninate

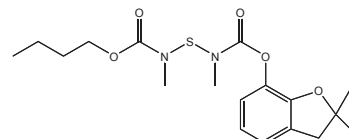


**CAS** 57646-30-7 **MF** C<sub>17</sub>H<sub>19</sub>NO<sub>4</sub> **MW** 301.34 **PS S SOL** D, A, MeOH **SG** 1.18 g/cm<sup>3</sup> **MP** 70 °C  
**BP** 420 °C **FP** 208 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-605N   | 10 mg |
| 100 µg/mL in MeOH | P-605S   | 1 mL  |

## Furathiocarb

2,3-Dihydro-2,2-dimethyl-7-benzofuryl 2,4-dimethyl-6-oxa-5-oxo-3-thia-2,4-diazadecanoate



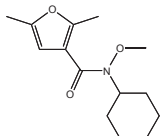
**CAS** 65907-30-4 **MF** C<sub>18</sub>H<sub>26</sub>N<sub>2</sub>O<sub>5</sub>S **MW** 382.48  
**PS S SG** 1.15 g/cm<sup>3</sup> **MP** 42.6 - 45.7 °C  
**BP** 160 °C **FP** N/A

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-569S   | 1 mL |



## Furmecyclox

N-Cyclohexyl-N-methoxy-2,5-dimethyl-3-furancarboxamide



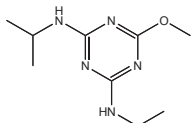
**CAS** 60568-05-0 **MF** C<sub>14</sub>H<sub>21</sub>NO<sub>3</sub> **MW** 251.32  
**PS S** **SG** 1.10 g/cm<sup>3</sup> **MP** 33 °C **BP** 402 °C  
**FP** 197 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-607S   | 1 mL |

**Fusilade** see **Fluazifop-butyl**  
**Gardoprim** see **Terbuthylazine**  
**Garlon** see **Triclopyr**  
**Garrathion** see **Carbophenothion**

## Gesatamine

N-ethyl-6-methoxy-N?-(1-methylethyl)-1,3,5-triazine-2,4-diamine



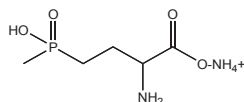
**CAS** 1610-17-9 **MF** C<sub>9</sub>H<sub>11</sub>N<sub>5</sub>O **MW** 211.26  
**PS S** **SG** 1.16 g/cm<sup>3</sup> **MP** 92 - 94 °C **BP** 352 °C  
**FP** 167 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-189N   | 10 mg |
| 100 µg/mL in MeOH | P-189S   | 1 mL  |

**Gesatop** see **Simazine**

## Glufosinate, ammonium salt

2-Amino-4-(hydroxymethylphosphinyl)butanoic acid monoammonium salt



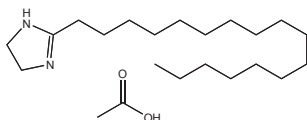
**CAS** 77182-82-2 **MF** C<sub>5</sub>H<sub>15</sub>N<sub>2</sub>O<sub>4</sub>P **MW** 195.16  
**PS S** **SOL** A, T, EA **SG** 1.40 g/cm<sup>3</sup> **MP** 210 °C  
**BP** 519 °C **FP** 268 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-475N   | 10 mg |
| 100 µg/mL in MeOH | P-475S   | 1 mL  |

**Glycophene** see **Iprodione**

## Glyodin

2-Heptadecyl-2-imidazoline acetate

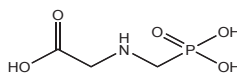


**CAS** 556-22-9 **MF** C<sub>22</sub>H<sub>44</sub>N<sub>2</sub>O<sub>2</sub> **MW** 368.22  
**PS S** **SG** 1.04 g/cm<sup>3</sup> **MP** 62-68 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-528N   | 10 mg |
| 100 µg/mL in MeOH | P-528S ‡ | 1 mL  |

## Glyphosate

N-(Phosphonomethyl)glycine



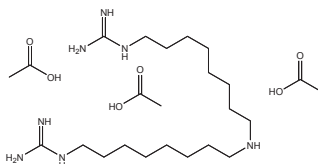
**CAS** 1071-83-6 **MF** C<sub>3</sub>H<sub>8</sub>NO<sub>5</sub>P **MW** 169.07  
**PS S** **SG** 1.68 g/cm<sup>3</sup> **MP** 230 °C **BP** 466 °C  
**FP** 234 °C

| Matrix                        | Cat. No. | Unit  |
|-------------------------------|----------|-------|
| Neat                          | P-015N   | 10 mg |
| 100 µg/mL in H <sub>2</sub> O | P-015S-W | 1 mL  |

**Gratil** see **Amidosulfuron**

## Guazatine acetate

Mixture of acetates of guanidated di and triamines and oligomeric amines



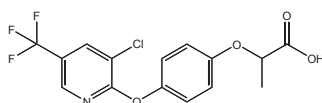
**CAS** 115044-19-4 **MF** C<sub>24</sub>H<sub>53</sub>N<sub>7</sub>O<sub>6</sub> **MW** 535.72  
**PS S** **SG** 1.09 g/cm<sup>3</sup> **MP** 204 °C **BP** 558 °C  
**FP** 292 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-612S   | 1 mL |

**Guthion** see **Azinphos-methyl**

## Haloxypop

2-[4-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoic acid

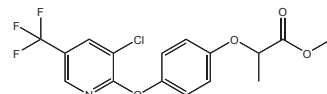


**CAS** 69806-34-4 **MF** C<sub>15</sub>H<sub>11</sub>ClF<sub>3</sub>NO<sub>4</sub> **MW** 361.7  
**PS S** **SOL** MeOH, A, IPA **SG** 1.44 g/cm<sup>3</sup>  
**MP** 107 - 108 °C **BP** 420 °C **FP** 208 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-496N    | 10 mg |
| 100 µg/mL in MeOH | P-496S    | 1 mL  |
| 100 µg/mL in AcCN | P-496S-CN | 1 mL  |

## Haloxypop-methyl

Methyl-2-[4-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoic acid



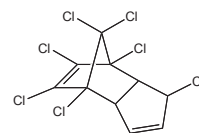
**CAS** 69806-40-2 **MF** C<sub>16</sub>H<sub>13</sub>ClF<sub>3</sub>NO<sub>4</sub> **MW** 357.73  
**PS L** **SOL** MeOH, A, IPA **SG** 1.09 g/cm<sup>3</sup>  
**MP** 176 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-497N   | 10 mg |
| 100 µg/mL in MeOH | P-497S   | 1 mL  |

**Harmony** see **Thifensulfuron methyl**  
**Harvade** see **Dimethipin**  
**a-HCH** see **a-BHC**  
**b-HCH** see **b-BHC**  
**d-HCH** see **d-BHC**  
**g-HCH** see **Lindane**  
**HCH, tech** see **BHC Tech**  
**HEOD** see **Dieldrin**

## Heptachlor

1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methanoindene

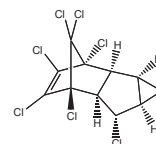


**CAS** 76-44-8 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>7</sub> **MW** 373.32  
**SG** 1.66 g/cm<sup>3</sup> **MP** 95 °C **BP** ~145 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-053N   | 10 mg |
| 100 µg/mL in MeOH | P-053S   | 1 mL  |

## Heptachlor epoxide (Isomer A)

1,4,5,6,7,8,8-Heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro-4,7-methanoindan



**CAS** 28044-83-9 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>7</sub>O **MW** 389.31 **PS S**  
**SG** 1.91 g/cm<sup>3</sup> **MP** 164 °C **BP** 426 °C **FP** N/A

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-294S   | 1 mL |

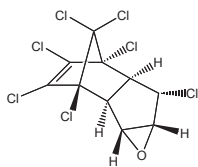
‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



# Pesticide Standards

## Heptachlor epoxide (Isomer B)

2,5-Methano-2H-indeno[1,2-b]oxirene,2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aR,1bS,2R,5S,5aR,6S,6aR)-rel-

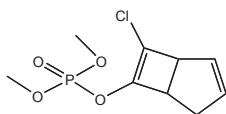


**CAS** 1024-57-3 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>7</sub>O **MW** 389.31 **PS** S **SG** 1.10 g/cm<sup>3</sup> **MP** 157.0 - 161.0 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-054N   | 10 mg |
| 100 µg/mL in MeOH | P-054S   | 1 mL  |

## Heptenophos

7-Chlorobicyclo[3.2.0]hepta-2,6-dien-6-yl dimethyl phosphate

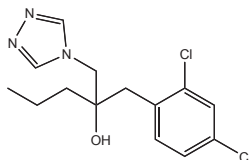


**CAS** 23560-59-0 **MF** C<sub>9</sub>H<sub>12</sub>ClO<sub>2</sub>P **MW** 250.62 **PS** L **SOL** MeOH, A, H **SG** 1.28 g/cm<sup>3</sup> **MP** N/A **BP** 64 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-547N   | 10 mg |
| 100 µg/mL in MeOH | P-547S   | 1 mL  |

## Hexaconazole

(RS)-2-(2,4-dichlorophenyl)-1-(1H-1,2,4-triazol-1-yl) hexan-2-ol



**CAS** 79983-71-4 **MF** C<sub>14</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O **MW** 314.21 **PS** S **SOL** MeOH, H, D **SG** 1.29 g/cm<sup>3</sup> **MP** 110 - 112 °C **BP** N/A **FP** N/A

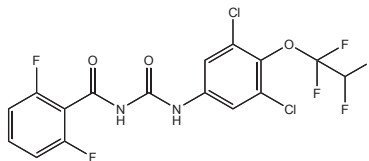
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-500N   | 10 mg |
| 100 µg/mL in MeOH | P-500S   | 1 mL  |

**Hexadrin**

see **Endrin**

## Hexaflumuron

N-[[[3,5-dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl]amino]carbonyl]-2,6-difluorobenzamide

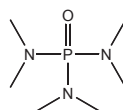


**CAS** 86479-06-3 **MF** C<sub>16</sub>H<sub>8</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>2</sub>O<sub>3</sub> **MW** 461.14 **PS** S **SOL** A, EA, CN **SG** 1.61 g/cm<sup>3</sup> **MP** 203 - 204 °C **BP** 540 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-697N   | 10 mg |
| 100 µg/mL in MeOH | P-697S   | 1 mL  |

## Hexamethylphosphoramide

Hexamethylphosphoramide

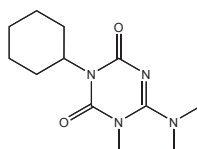


**CAS** 680-31-9 **MF** C<sub>6</sub>H<sub>18</sub>N<sub>3</sub>OP **MW** 179.2 **PS** L **SG** 1.03 g/cm<sup>3</sup> **MP** 7 °C **BP** 230 - 232 °C **FP** 144 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-205N   | 10 mg |
| 100 µg/mL in MeOH | P-205S   | 1 mL  |

## Hexazinone

3-Cyclohexyl-6-dimethylamino-1-methyl-1,3,5-triazine-2,4(1H,3H)-dione

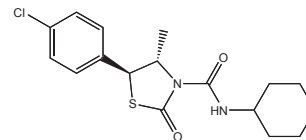


**CAS** 51235-04-2 **MF** C<sub>12</sub>H<sub>20</sub>N<sub>4</sub>O<sub>2</sub> **MW** 252.31 **PS** S **SOL** MeOH, A, T **SG** 1.25 g/cm<sup>3</sup> **MP** 114 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-123N   | 10 mg |
| 100 µg/mL in MeOH | P-123S   | 1 mL  |

## Hexythiazox

trans-5-(4-Chlorophenyl)-N-cyclohexyl-4-methyl-2-oxo-3-thiazolidinecarboxamide



**CAS** 78587-05-0 **MF** C<sub>17</sub>H<sub>21</sub>ClN<sub>2</sub>O<sub>2</sub>S **MW** 352.88 **PS** S **SOL** MeOH, A, CN **SG** 1.31 g/cm<sup>3</sup> **MP** 108 - 109 °C **BP** N/A **FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-658N   | 10 mg |
| 100 µg/mL in MeOH | P-658S   | 1 mL  |

**Hinochloa**

see **Mefenacet**

**HMPA**

see **Hexamethylphosphoramide**

**Hoe-grass**

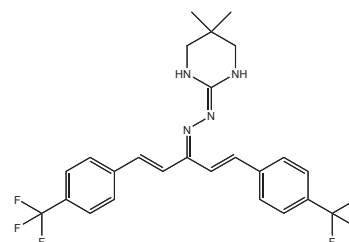
see **Diclofop**

**Hostaquick**

see **Heptenophos**

## Hydramethylnon

Tetrahydro-5,5-dimethyl-2(1H)-pyrimidinone [3-[4-(trifluoromethyl)phenyl]-1-[2-[4-(trifluoromethyl)phenyl]ethenyl]-2-propenylidene]hydrazone

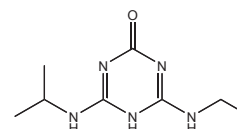


**CAS** 67485-29-4 **MF** C<sub>25</sub>H<sub>24</sub>F<sub>6</sub>N<sub>4</sub> **MW** 494.48 **PS** S **SOL** A, MeOH, IPA **SG** 1.44 g/cm<sup>3</sup> **MP** 185 - 190 °C **BP** N/A **FP** >93 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-403N   | 10 mg |
| 100 µg/mL in MeOH | P-403S   | 1 mL  |

## 2-Hydroxyatrazine

4-ethylamino-2-hydroxy-6-isopropylamino-s-triazine



**CAS** 2163-68-0 **MF** C<sub>8</sub>H<sub>15</sub>N<sub>5</sub>O **MW** 197.24 **PS** S **SOL** EA, DMSO, MeOH **SG** 1.30 g/cm<sup>3</sup> **MP** N/A **BP** 274 °C **FP** 120 °C

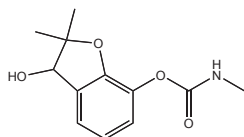
| Matrix                     | Cat. No.  | Unit  |
|----------------------------|-----------|-------|
| Neat                       | P-326N    | 10 mg |
| 100 µg/mL in MeOH:A (98:2) | P-326S    | 1 mL  |
| 100 µg/mL in MC            | P-326S-MC | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



## 3-Hydroxycarbofuran

2,3-Dihydro-2,2-dimethyl-3,7-benzofurandiol-7-methyl carbamate

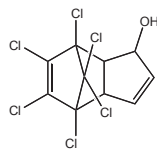


**CAS** 16655-82-6 **MF** C<sub>12</sub>H<sub>15</sub>NO<sub>4</sub> **MW** 237.25 **PS** S  
**SG** 1.24 g/cm<sup>3</sup> **MP** 140 - 148 °C **BP** 345 °C **FP** N/A

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-186S   | 1 mL |

## 1-Hydroxychloridene

(1a,3a,4b,7b,7a)-4,5,6,7,8-Hexachloro-3a,4,7,7a-tetrahydro-4,7-Methano-1H-inden-1-ol

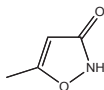


**CAS** 24009-05-0 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>6</sub>O **MW** 354.87 **PS** S  
**SG** 1.28 g/cm<sup>3</sup> **MP** N/A **BP** 518 °C **FP** 267 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-151S   | 1 mL |

## Hymexazol

3-Hydroxy-5-methylisoxazole



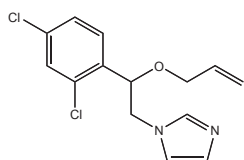
**CAS** 10004-44-1 **MF** C<sub>4</sub>H<sub>5</sub>NO<sub>2</sub> **MW** 99.09 **PS** S  
**SOL** MeCl<sub>2</sub>, A **SG** 1.18 g/cm<sup>3</sup> **MP** 86 - 87 °C  
**BP** 228 °C **FP** 92 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-571S   | 1 mL |

**IBP** see *Iprobenfos*  
**Icon** see *L-Cyhalothrin*  
**Igran** see *Prebane*

## Imazalil

(±)-1-(β-allyloxy-2,4-dichlorophenylethyl)imidazole

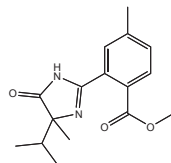


**CAS** 35554-44-0 **MF** C<sub>14</sub>H<sub>14</sub>Cl<sub>2</sub>N<sub>2</sub>O **MW** 297.18  
**PS** S **SOL** MeOH, D, T **SG** 1.35 g/cm<sup>3</sup> **MP** 53 °C  
**BP** ~347 °C **FP** 192 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-332N   | 10 mg |
| 100 µg/mL in MeOH | P-332S   | 1 mL  |

## Imazamethabenz methyl

m(or p)-Toluic acid, 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-, methyl ester

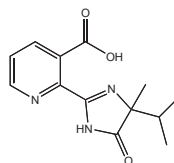


**CAS** 81405-85-8 **MF** C<sub>16</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub> **MW** 288.34 **PS** S  
**SOL** MeOH, A, T **SG** 0.30 g/cm<sup>3</sup> **MP** 113 - 122 °C  
**BP** 670 °C **FP** 359 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-414N   | 10 mg |
| 100 µg/mL in MeOH | P-414S   | 1 mL  |

## Imazapyr Δ

2-(4-Isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)nicotinic acid

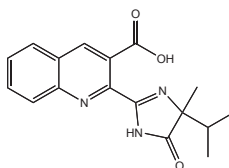


**CAS** 81334-34-1 **MF** C<sub>15</sub>H<sub>15</sub>N<sub>3</sub>O<sub>3</sub> **MW** 261.28 **PS** S  
**SOL** MeOH, D, A **SG** 1.28 g/cm<sup>3</sup> **MP** 169 - 173 °C  
**BP** 447 °C **FP** 224 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-589N    | 10 mg |
| 100 µg/mL in MeOH | P-589S    | 1 mL  |
| 100 µg/mL in AcCN | P-589S-CN | 1 mL  |

## Imazaquin

(RS)-2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)quinolin-3-carboxylic acid



**CAS** 81335-37-7 **MF** C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>O<sub>3</sub> **MW** 311.34 **PS** S  
**SOL** DMSO, D, T **SG** 1.35 g/cm<sup>3</sup> **MP** 219 - 222 °C  
**BP** 476 °C **FP** 242 °C

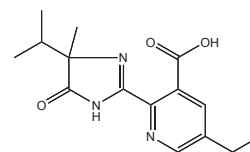
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-283N   | 10 mg |
| 100 µg/mL in MeOH | P-283S ‡ | 1 mL  |

Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**

## Imazethapyr

2-(4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl)-5-ethyl-3-pyridinecarboxylic acid

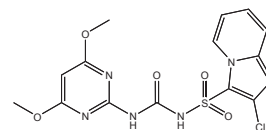


**CAS** 81335-77-5 **MF** C<sub>15</sub>H<sub>19</sub>N<sub>3</sub>O<sub>3</sub> **MW** 289.33  
**PS** S **SG** 1.10 g/cm<sup>3</sup> **MP** 170 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-285S   | 1 mL |

## Imazosulfuron

2-chloro-N-(((4,6-dimethoxy-2-pyrimidinyl)amino)carbonyl)imidazo(1,2-a)pyridine-3-sulfonamide

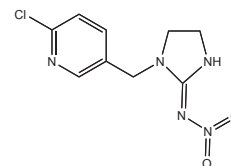


**CAS** 122548-33-8 **MF** C<sub>14</sub>H<sub>13</sub>ClN<sub>6</sub>O<sub>5</sub>S **MW** 412.81

| Matrix           | Cat. No.         | Unit |
|------------------|------------------|------|
| 10 µg/mL in AcCN | P-853S-CN-0.1X ‡ | 1 mL |

## Imidacloprid

1-(6-Chloro-3-pyridinylmethyl)-N-nitro-2-imidazolidinimine

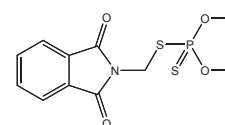


**CAS** 138261-41-3 **MF** C<sub>9</sub>H<sub>10</sub>ClN<sub>3</sub>O<sub>2</sub> **MW** 255.66  
**PS** S **SOL** D, IPA, T **SG** 1.54 g/cm<sup>3</sup> **MP** 144 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-596N   | 10 mg |
| 100 µg/mL in MeOH | P-596S   | 1 mL  |

## Imidan

N-(Mercaptomethyl)phthalimide S-(O,O-dimethylphosphorodithioate)



**CAS** 732-11-6 **MF** C<sub>11</sub>H<sub>12</sub>NO<sub>4</sub>PS<sub>2</sub> **MW** 317.32  
**PS** S **SG** 1.04 g/cm<sup>3</sup> **MP** 72.0 - 73.0 °C **BP** 227 °C  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-055N   | 10 mg |
| 100 µg/mL in MeOH | P-055S   | 1 mL  |

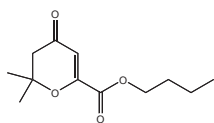
**2-Imidazolidinethione** see *Ethylene thiourea*



# Pesticide Standards

## Indalone

2,2-Dimethyl-6-carbobotyoxo-2,3-dihydro-4-pyrone



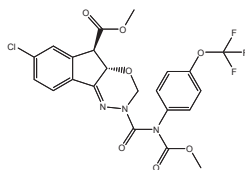
**CAS** 532-34-3 **MF** C<sub>12</sub>H<sub>18</sub>O<sub>4</sub> **MW** 226.27 **PS** L  
**SG** 1.06 g/cm<sup>3</sup> **MP** N/A **BP** 256 - 270 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-648N   | 10 mg |
| 100 µg/mL in MeOH | P-648S   | 1 mL  |

**Indar** *see Fenbuconazole*

## Indoxacarb

Methy-(S)-N-[7-chloro-2,3,4a,5-tetrahydro-4a-(methoxycarbonyl)indeno[1,2-e]-[1,3,4]oxadiazin-2-ylcarbonyl]-4'-(trifluoromethoxy)carbanilate

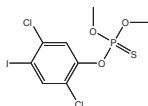


**CAS** 144171-61-9 **MF** C<sub>22</sub>H<sub>17</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>7</sub> **MW** 527.83  
**PS** S **SOL** A, CN, MeOH **SG** 1.44 g/cm<sup>3</sup>  
**MP** 88.1 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-829N    | 10 mg |
| 100 µg/mL in AcCN | P-829S-CN | 1 mL  |

## Iodofenphos

O-2,5-Dichloro-4-iodophenyl  
O,O-dimethyl phosphorothioate

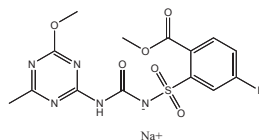


**CAS** 18181-70-9 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>IO<sub>3</sub>PS **MW** 413 **PS** S  
**SG** 1.87 g/cm<sup>3</sup> **MP** 75 °C **BP** 376 °C **FP** 181 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-379N   | 10 mg |
| 100 µg/mL in MeOH | P-379S   | 1 mL  |

## Iodosulfuron-methyl-sodium

Methyl-4-iodo-2-[3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-ureidosulfonyl]benzoate sodium salt

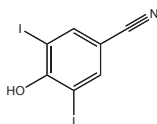


**CAS** 144550-36-7 **MF** C<sub>14</sub>H<sub>14</sub>IN<sub>5</sub>O<sub>6</sub>SNa **MW** 529.27  
**PS** S **SOL** CN, EA, MeOH **SG** 1.76 g/cm<sup>3</sup>  
**MP** 148 - 155 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-830N    | 10 mg |
| 100 µg/mL in AcCN | P-830S-CN | 1 mL  |

## Ioxynil

4-Hydroxy-3,5-di-iodobenzonitrile



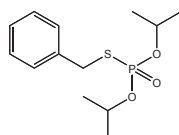
**CAS** 1689-83-4 **MF** C<sub>7</sub>H<sub>3</sub>I<sub>2</sub>NO **MW** 370.91 **PS** S  
**SOL** A, MeOH **SG** 2.71 g/cm<sup>3</sup> **MP** 212 -213 °C  
**BP** 283 °C **FP** 125 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-522N   | 10 mg |
| 100 µg/mL in MeOH | P-522S   | 1 mL  |

**IPC** *see Propham*

## Iprobenfos

S-Benzyl O,O-di-isopropyl phosphorothioate

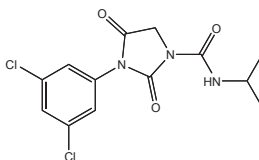


**CAS** 26087-47-8 **MF** C<sub>13</sub>H<sub>21</sub>O<sub>3</sub>PS **MW** 288.37 **PS** L  
**SOL** MeOH, H, D **SG** 1.12 g/cm<sup>3</sup> **MP** N/A  
**BP** 354 °C **FP** 168 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-609N   | 10 mg |
| 100 µg/mL in MeOH | P-609S   | 1 mL  |

## Iprodione

3-(3,5-Dichlorophenyl)-N-isopropyl-2,4-dioxoimidazolidine-1-carboxamide

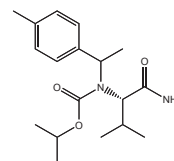


**CAS** 36734-19-7 **MF** C<sub>13</sub>H<sub>13</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>3</sub> **MW** 330.17  
**PS** S **SG** 1.00 g/cm<sup>3</sup> **MP** 130.0 - 134.0 °C **BP** N/A  
**FP** N/A

| Matrix               | Cat. No.  | Unit  |
|----------------------|-----------|-------|
| Neat                 | P-016N    | 10 mg |
| 100 µg/mL in AcCN    | P-016S-CN | 1 mL  |
| 100 µg/mL in Acetone | P-016S-A  | 1 mL  |

## Iprovalicarb

Isopropyl-2-methyl-1-[(1-p-tolylethyl)carbamoyl]-(S)-propylcarbamate

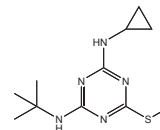


**CAS** 140923-17-7 **MF** C<sub>18</sub>H<sub>28</sub>N<sub>2</sub>O<sub>3</sub> **MW** 320.43  
**PS** S **SOL** D, A, IPA **SG** 1.04 g/cm<sup>3</sup> **MP** N/A  
**BP** 498 °C **FP** 255 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-831N    | 10 mg |
| 100 µg/mL in AcCN | P-831S-CN | 1 mL  |

## Irgarol

N-Cyclopropyl-N'-1,1-dimethylethyl-6-methylthio-1,3,5-triazine-2, 4-diamine

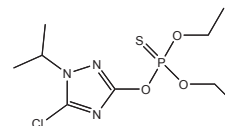


**CAS** 28159-98-0 **MF** C<sub>11</sub>H<sub>19</sub>N<sub>5</sub>S **MW** 253.37  
**PS** S **SG** 1.20 g/cm<sup>3</sup> **MP** 148 - 149 °C **BP** 428 °C  
**FP** 213 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-746N   | 10 mg |
| 100 µg/mL in MeOH | P-746S   | 1 mL  |

## Isazophos

O-5-Chloro-1-isopropyl-1H-1,2,4-triazol-3-yl  
O,O-diethyl phosphorothioate

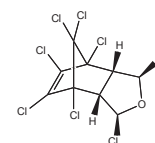


**CAS** 42509-80-8 **MF** C<sub>9</sub>H<sub>11</sub>ClN<sub>3</sub>O<sub>3</sub>PS **MW** 313.74  
**PS** L **SOL** MeOH, H **SG** 1.03 g/cm<sup>3</sup> **MP** N/A  
**BP** 100 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-449N   | 10 mg |
| 100 µg/mL in MeOH | P-449S   | 1 mL  |

## Isobenzan

1,3,4,5,6,7,8,8-Octachloro-1,3,3a,4,7,7a-hexahydro-4,7-methanoisobenzofuran



**CAS** 297-78-9 **MF** C<sub>9</sub>H<sub>4</sub>Cl<sub>8</sub>O **MW** 411.75 **PS** S  
**SG** 1.90 g/cm<sup>3</sup> **MP** 121 °C **BP** 421 °C **FP** 156 °C

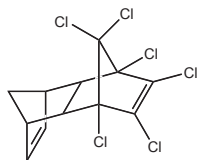
| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-323S   | 1 mL |





## Isodrin

(1R,4S,5R,8S)-1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene

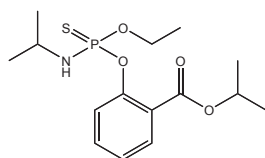


**CAS** 465-73-6 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub> **MW** 364.91 **PS** S **SG** 1.73 g/cm<sup>3</sup> **MP** 239 - 241 °C **BP** 385 °C **FP** 186 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-471N   | 10 mg |
| 100 µg/mL in MeOH | P-471S   | 1 mL  |

## Isufenphos

O-ethyl O-2-isopropoxycarbonylphenyl isopropylphosphoramidothioate

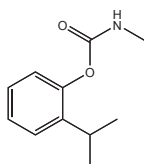


**CAS** 25311-71-1 **MF** C<sub>15</sub>H<sub>24</sub>NO<sub>4</sub>PS **MW** 345.4 **PS** L **SOL** D **SG** 1.13 g/cm<sup>3</sup> **MP** < 20 °C **BP** 120 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-018N   | 10 mg |
| 100 µg/mL in MeOH | P-018S   | 1 mL  |

## Isoprocarb

o-Cumenyl methylcarbamate

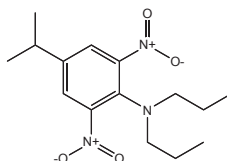


**CAS** 2631-40-5 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub> **MW** 193.25 **PS** S **SOL** D, A, MeOH **SG** 1.04 g/cm<sup>3</sup> **MP** 88 - 93 °C **BP** 265 °C **FP** 114 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-317N   | 10 mg |
| 100 µg/mL in MeOH | P-317S   | 1 mL  |

## Isopropalin

4-Isopropyl-2,6-dinitro-N,N-dipropylaniline

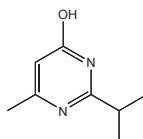


**CAS** 33820-53-0 **MF** C<sub>15</sub>H<sub>23</sub>N<sub>3</sub>O<sub>4</sub> **MW** 309.36 **PS** L **SOL** MeOH, H, A **SG** 1.16 g/cm<sup>3</sup> **MP** N/A **BP** 398 °C **FP** 195 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-100N   | 10 mg |
| 100 µg/mL in MeOH | P-100S   | 1 mL  |

## 2-Isopropyl-6-methyl-4-pyrimidinol

2-Isopropyl-6-methyl-4-pyrimidinol

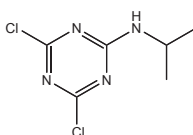


**CAS** 2814-20-2 **MF** C<sub>8</sub>H<sub>12</sub>N<sub>2</sub>O **MW** 152.19 **PS** S **SG** 1.11 g/cm<sup>3</sup> **MP** 172 - 175 °C **BP** 230 °C **FP** 93 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-631N   | 10 mg |
| 100 µg/mL in MeOH | P-631S   | 1 mL  |

## 2-Isopropylamino-4,6-dichloro-s-triazine

2-Isopropylamino-4,6-dichloro-s-triazine

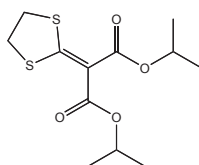


**CAS** N/A **MF** C<sub>6</sub>H<sub>6</sub>Cl<sub>2</sub>N<sub>4</sub> **MW** 207.06 **PS** S **SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-635N   | 10 mg |
| 100 µg/mL in MeOH | P-635S   | 1 mL  |

## Isoprothiolane

di-Isopropyl 1,3-dithiolan-2-ylidenemalonate

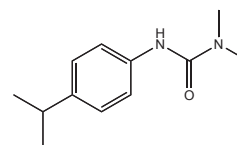


**CAS** 50512-35-1 **MF** C<sub>12</sub>H<sub>18</sub>O<sub>4</sub>S<sub>2</sub> **MW** 290.4 **PS** S **SOL** A, CN, MeOH **SG** 1.23 g/cm<sup>3</sup> **MP** 54 °C **BP** 353 °C **FP** 159 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-661N   | 10 mg |
| 100 µg/mL in MeOH | P-661S   | 1 mL  |

## Isoproturon

3-(4-Isopropylphenyl)-1,1-dimethylurea

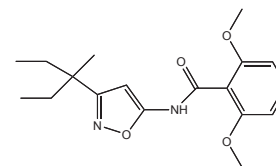


**CAS** 34123-59-6 **MF** C<sub>12</sub>H<sub>18</sub>N<sub>2</sub>O **MW** 206.28 **PS** S **SOL** MeOH, D, A **SG** 1.16 g/cm<sup>3</sup> **MP** 158 °C **BP** N/A **FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-302N   | 10 mg |
| 100 µg/mL in MeOH | P-302S   | 1 mL  |

## Isoxaben

N-[3-(1-ethyl-1-methylpropyl)isoxazol-5-yl]-2,6-dimethoxybenzamide

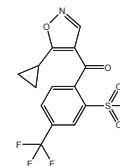


**CAS** 82558-50-7 **MF** C<sub>18</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub> **MW** 332.39 **PS** S **SOL** MeOH, D, EA **SG** 0.58 g/cm<sup>3</sup> **MP** 176-179 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-533N   | 10 mg |
| 100 µg/mL in MeOH | P-533S   | 1 mL  |

## Isoxaflutole

5-cyclopropyl-1,2-oxazol-4-yl a,a,a-trifluoro-2-mesyl-p-tolyl ketone



**CAS** 141112-29-0 **MF** C<sub>15</sub>H<sub>12</sub>F<sub>3</sub>NO<sub>4</sub>S **MW** 359.32 **PS** S **SOL** D, A, EA **SG** 1.59 g/cm<sup>3</sup> **MP** 140 °C **BP** N/A **FP** >130 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-832N    | 10 mg |
| 100 µg/mL in AcCN | P-832S-CN | 1 mL  |

## Jodfenphos

see Iodofenphos

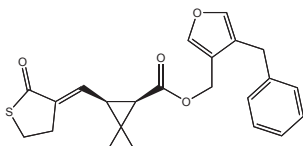
| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



# Pesticide Standards

## Kadethrine

5-Benzyl-3-furylmethyl (E)-(1R,3S)-2,2-dimethyl-3-(2-oxo-thiolan-3-ylidenemethyl) cyclopropanecarboxylate



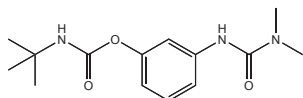
**CAS** 58769-20-3 **MF** C<sub>23</sub>H<sub>24</sub>O<sub>4</sub>S **MW** 396.5 **PS** L **SG** 1.28 g/cm<sup>3</sup> **MP** 31 °C **BP** 526 °C **FP** 272 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-367N   | 10 mg |
| 100 µg/mL in MeOH | P-367S   | 1 mL  |

**Karate** see *L-Cyhalothrin*

## Karbutilate

3-(3,3-Dimethylureido)phenyl tert-butylcarbamate

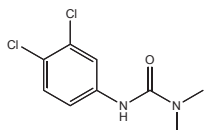


**CAS** 4849-32-5 **MF** C<sub>14</sub>H<sub>21</sub>N<sub>3</sub>O<sub>3</sub> **MW** 279.33 **PS** S **SOL** DMSO, A, IPA **SG** 1.15 g/cm<sup>3</sup> **MP** 176 - 176.5 °C **BP** 435 °C **FP** 217 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-337N   | 10 mg |
| 100 µg/mL in MeOH | P-337S   | 1 mL  |

## Karmex

3-(3,4-Dichlorophenyl)-1,1-dimethylurea

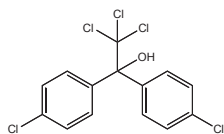


**CAS** 330-54-1 **MF** C<sub>9</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>2</sub>O **MW** 233.09 **PS** S **SG** 1.37 g/cm<sup>3</sup> **MP** 158 - 159 °C **BP** 180 - 190 °C **FP** 187 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-227N   | 10 mg |
| 100 µg/mL in MeOH | P-227S   | 1 mL  |

## Kelthane

2,2,2-Trichloro-1,1-bis(4-chlorophenyl)ethanol

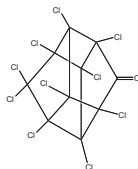


**CAS** 115-32-2 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub>O **MW** 370.49 **PS** S **SG** 1.45 g/cm<sup>3</sup> **MP** 78 - 79 °C **BP** 193 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-057N   | 10 mg |
| 100 µg/mL in MeOH | P-057S   | 1 mL  |

## Kepona

Decachlorotetracyclodecanone



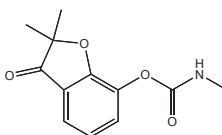
**CAS** 143-50-0 **MF** C<sub>10</sub>Cl<sub>10</sub>O **MW** 490.63 **PS** S **SG** N/A **MP** 350 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-152N   | 10 mg |
| 100 µg/mL in MeOH | P-152S   | 1 mL  |

**Kerb** see *Pronamide*

## 3-Ketocarbofuran

2,2-Dimethyl-7-(methylcarbamoyloxy)-2,3-dihydrobenzofuran-3-one



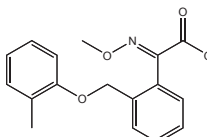
**CAS** 16709-30-1 **MF** C<sub>12</sub>H<sub>13</sub>NO<sub>4</sub> **MW** 235.24 **PS** S **SG** 1.23 g/cm<sup>3</sup> **MP** 175 - 185 °C **BP** 362 °C **FP** 179 °C

| Matrix               | Cat. No. | Unit |
|----------------------|----------|------|
| 100 µg/mL in Acetone | P-298S-A | 1 mL |

**delta-Ketoendrin** see *Endrin ketone*  
**Kilval** see *Vamidothion*  
**Kitazin** see *Iprobenfos*

## Kresoxim-methyl

Methyl-methoxyimino- $\alpha$ -(o-tolyoxy)-o-tolylacetate



**CAS** 143390-89-0 **MF** C<sub>18</sub>H<sub>19</sub>NO<sub>4</sub> **MW** 313.35 **PS** S **SOL** D, A, EA **SG** 1.10 g/cm<sup>3</sup> **MP** 99 °C **BP** 429 °C **FP** 171 °C

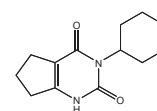
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-740N   | 10 mg |
| 100 µg/mL in MeOH | P-740S   | 1 mL  |

**Lannate** see *Methomyl*  
**Lanray** see *Orbencarb*  
**Lasso** see *Alachlor*

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |

## Lenacil

3-Cyclohexyl-5,6-trimethyleneuracil



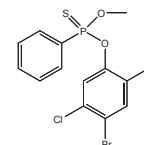
**CAS** 2164-08-1 **MF** C<sub>13</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub> **MW** 234.29 **PS** S **SOL** D, MeOH, A **SG** 1.32 g/cm<sup>3</sup> **MP** 316 - 326 °C **BP** 411 °C **FP** 202 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-649N   | 10 mg |
| 100 µg/mL in MeOH | P-649S   | 1 mL  |

**Lentagran** see *Pyridate*

## Leptophos

O-4-Bromo-2,5-dichlorophenyl O-methyl phenylphosphonothioate



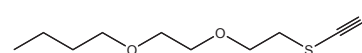
**CAS** 21609-90-5 **MF** C<sub>13</sub>H<sub>10</sub>BrCl<sub>2</sub>O<sub>2</sub>PS **MW** 412.07 **PS** S **SOL** A **SG** 1.53 **MP** 70 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-206N   | 10 mg |
| 100 µg/mL in MeOH | P-206S   | 1 mL  |

**Lesan** see *Fenaminosulf*  
**Lethane** see *Lethane 384*

## Lethane 384

2-(2-Butoxyethoxy)ethyl thiocyanate



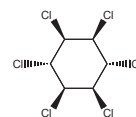
**CAS** 112-56-1 **MF** C<sub>6</sub>H<sub>17</sub>NO<sub>3</sub>S **MW** 203.33 **PS** L **SG** 0.915-0.930 **MP** N/A **BP** 120-125 °C **FP** 125 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-506N   | 10 mg |
| 100 µg/mL in MeOH | P-506S   | 1 mL  |

**Liberty** see *Glufosinate, ammonium salt*

## Lindane

1,2,3,4,5,6-Hexachlorocyclohexane



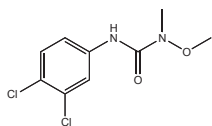
**CAS** 58-89-9 **MF** C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> **MW** 290.83 **PS** S **SOL** A, EA, MeOH **SG** 1.88 g/cm<sup>3</sup> **MP** 113 - 115 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-059N   | 10 mg |
| 100 µg/mL in MeOH | P-059S   | 1 mL  |



## Linuron

3-(3,4-Dichlorophenyl)-1-methoxy-1-methylurea



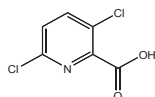
**CAS** 330-55-2 **MF** C<sub>9</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub> **MW** 249.11 **PS** S  
**SOL** A **SG** 1.49 g/cm<sup>3</sup> **MP** 93 - 94 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-022N   | 10 mg |
| 100 µg/mL in MeOH | P-022S   | 1 mL  |

**Lirinox** see **2,4-D butyl ester**  
**Lironion** see **Difenoxuron**  
**Lonacol** see **Zineb**  
**Londax** see **Bensulfuron-methyl**

## Lontrel

3,6-Dichloropyridine-2-carboxylic acid

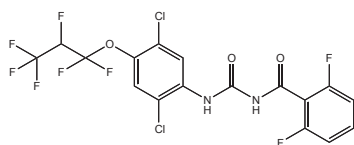


**CAS** 1702-17-6 **MF** C<sub>6</sub>H<sub>3</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 192  
**PS** S **SG** 1.61 g/cm<sup>3</sup> **MP** 151 - 153 °C **BP** 324 °C  
**FP** 150 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-224N   | 10 mg |
| 100 µg/mL in MeOH | P-224S   | 1 mL  |

## Lufenuron

(RS)-1-[2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)phenyl]-3-(2,6-difluorobenzoyl)urea



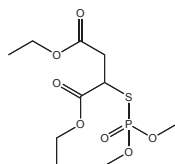
**CAS** 103055-07-8 **MF** C<sub>17</sub>H<sub>8</sub>Cl<sub>2</sub>F<sub>8</sub>N<sub>2</sub>O<sub>3</sub>  
**MW** 511.15 **SOL** A, T, H

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-704N   | 10 mg |
| 100 µg/mL in MeOH | P-704S   | 1 mL  |

**Machette** see **Butachlor**

## Malaoxon

Malathion-O-analog

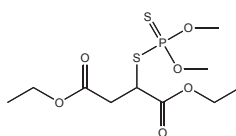


**CAS** 1634-78-2 **MF** C<sub>10</sub>H<sub>19</sub>O<sub>7</sub>PS **MW** 314.1  
**PS** L **SG** 1.24 g/cm<sup>3</sup> **MP** 114 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-529N   | 10 mg |
| 100 µg/mL in MeOH | P-529S   | 1 mL  |

## Malathion

Diethyl[(dimethoxyphosphinothioyl)thio]butanedioate

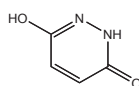


**CAS** 121-75-5 **MF** C<sub>10</sub>H<sub>19</sub>O<sub>6</sub>PS<sub>2</sub> **MW** 330.36  
**PS** L **SOL** MeOH, IPA **SG** 1.23 g/cm<sup>3</sup> **MP** 2.8 °C  
**BP** ~140 °C **FP** 163 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-060N   | 10 mg |
| 100 µg/mL in MeOH | P-060S ‡ | 1 mL  |

## Maleic hydrazide

3,6-Dihydroxypyridazine



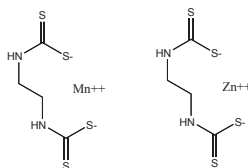
**CAS** 123-33-1 **MF** C<sub>4</sub>H<sub>4</sub>N<sub>2</sub>O<sub>2</sub> **MW** 112.09 **PS** S  
**SOL** MeOH, H, T **SG** 1.61 g/cm<sup>3</sup> **MP** 300 °C  
**BP** N/A **FP** 150 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-380N   | 10 mg |
| 100 µg/mL in MeOH | P-380S   | 1 mL  |

**Maloran** see **Chlorbromuron**

## Mancozeb

Manganese zinc ethylenebisdithiocarbamate

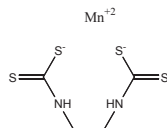


**CAS** 8018-01-7 **MF** C<sub>4</sub>H<sub>6</sub>MnN<sub>2</sub>S<sub>4</sub>/C<sub>4</sub>H<sub>6</sub>N<sub>2</sub>S<sub>4</sub>Zn **MW** 265.31/275.76 **PS** S **SG** 1.99 g/cm<sup>3</sup>  
**MP** 192 - 194 °C **BP** 308 °C **FP** 138 °C

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-322N   | 10 mg |

## Maneb

[1,2-ethanediy]bis[carbamidithioato](2-)]manganese



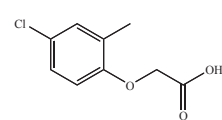
**CAS** 12427-38-2 **MF** C<sub>4</sub>H<sub>6</sub>MnN<sub>2</sub>S<sub>4</sub> **MW** 265.31  
**PS** S **SG** 1.92 g/cm<sup>3</sup> **MP** ~192 °C **BP** N/A **FP** N/A

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-282N   | 10 mg |

**Manzeb** see **Mancozeb**  
**Marathon** see **Imidacloprid**  
**Mataven** see **Flamprop-methyl**  
**Mavrik** see **Tau-Fluvalinate**  
**MBC** see **Carbendazim**

## MCPA acid Δ

4-Chloro-o-tolyloxyacetic acid

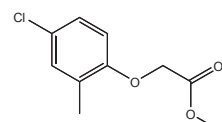


**CAS** 94-74-6 **MF** C<sub>9</sub>H<sub>9</sub>ClO<sub>3</sub> **MW** 200.62 **PS** S  
**SOL** MeOH, A, D **SG** 1.41 g/cm<sup>3</sup> **MP** 114 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-153N    | 10 mg |
| 100 µg/mL in MeOH | P-153S    | 1 mL  |
| 100 µg/mL in AcCN | P-153S-CN | 1 mL  |

## MCPA methyl ester

Methyl 4-chloro-2-methylphenoxyacetate

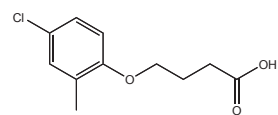


**CAS** 2436-73-9 **MF** C<sub>10</sub>H<sub>11</sub>ClO<sub>3</sub> **MW** 214.65  
**PS** L, S **SG** 1.20 g/cm<sup>3</sup> **MP** 39 - 40 °C **BP** 284 °C  
**FP** 115 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-038N   | 10 mg |
| 100 µg/mL in MeOH | P-038S   | 1 mL  |

## MCPB - acid Δ

4-(4-Chloro-o-tolyloxy)butyric acid

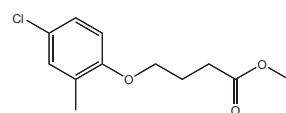


**CAS** 94-81-5 **MF** C<sub>11</sub>H<sub>13</sub>ClO<sub>3</sub> **MW** 228.67 **PS** S  
**SOL** A, D, T **SG** 1.23 g/cm<sup>3</sup> **MP** 100 °C **BP** 393 °C  
**FP** 192 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-370N   | 10 mg |
| 100 µg/mL in MeOH | P-370S   | 1 mL  |

## MCPB methyl ester

Methyl 4-(4-chloro-2-methylphenoxy)butyrate



**CAS** 57153-18-1 **MF** C<sub>12</sub>H<sub>15</sub>ClO<sub>3</sub> **MW** 242.7 **PS** L  
**SG** 1.15 g/cm<sup>3</sup> **MP** N/A **BP** 340 °C **FP** 135 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-371N   | 10 mg |
| 100 µg/mL in MeOH | P-371S   | 1 mL  |

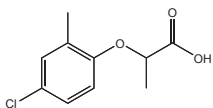
Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.



# Pesticide Standards

## MCPP acid $\Delta$

2-(4-Chloro-2-methylphenoxy)propanoic acid

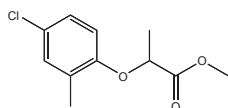


**CAS** 7085-19-0 **MF** C<sub>10</sub>H<sub>11</sub>ClO<sub>3</sub> **MW** 214.65 **PS** S  
**SG** 1.26 g/cm<sup>3</sup> **MP** 93 - 94 °C **BP** 332 °C **FP** 100 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-154N    | 10 mg |
| 100 µg/mL in MeOH | P-154S    | 1 mL  |
| 100 µg/mL in AcCN | P-154S-CN | 1 mL  |

## MCPP methyl ester

Methyl 2-(4-chloro-2-methylphenoxy)propanoate



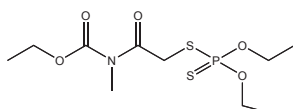
**CAS** 23844-56-6 **MF** C<sub>11</sub>H<sub>13</sub>ClO<sub>3</sub> **MW** 228.67 **PS** L  
**SG** 1.21 g/cm<sup>3</sup> **MP** N/A **BP** 294 °C **FP** 115 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-040N   | 10 mg |
| 100 µg/mL in MeOH | P-040S   | 1 mL  |

**MEB** see **Maneb**

## Mecarbam

S-(N-Ethoxycarbonyl-N-methylcarbamoylmethyl)  
O,O-diethyl phosphorodithioate



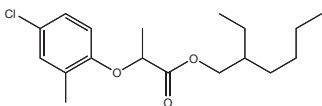
**CAS** 2595-54-2 **MF** C<sub>10</sub>H<sub>20</sub>NO<sub>5</sub>PS<sub>2</sub> **MW** 329.38  
**PS** L **SOL** MeOH, IPA **SG** 1.26 g/cm<sup>3</sup> **MP** N/A  
**BP** 421 °C **FP** 209 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-318N   | 10 mg |
| 100 µg/mL in MeOH | P-318S   | 1 mL  |

**Mechlorprop** see **MCPP acid**

## Mecoprop, 2-Ethylhexyl ester

2-(4-chloro-2-methylphenoxy)propanoic acid,  
ethylhexyl ester

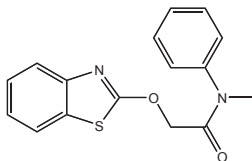


**CAS** N/A **MF** C<sub>18</sub>H<sub>27</sub>ClO<sub>3</sub> **MW** 326.86 **PS** S  
**SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-502N   | 10 mg |
| 100 µg/mL in MeOH | P-502S   | 1 mL  |

## Mefenacet

2-(2-Benzothiazolyloxy)-N-methyl-  
N-phenylacetamide



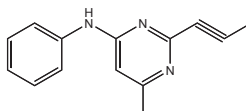
**CAS** 73250-68-7 **MF** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 298.38  
**PS** S **SOL** D, T, IPA **SG** 1.32 g/cm<sup>3</sup> **MP** 134 -  
135 °C **BP** 441 °C **FP** 220 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-745N   | 10 mg |
| 100 µg/mL in MeOH | P-745S   | 1 mL  |

**Meltatox** see **Dodemorph acetate**  
**Meothrin** see **Danitol**  
**MEP** see **Fenitrothion**

## Mepanipyrim

N-(4-methyl-6-prop-1-ynylpyrimidin-2-yl)aniline

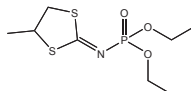


**CAS** 110235-47-7 **MF** C<sub>14</sub>H<sub>13</sub>N<sub>3</sub> **MW** 223.27 **PS** S  
**SOL** D, A, CN **SG** 1.16 g/cm<sup>3</sup> **MP** 125 - 126 °C  
**BP** 418 °C **FP** 207 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-855N    | 10 mg |
| 100 µg/mL in AcCN | P-855S-CN | 1 mL  |

## Mephosfolan

Diethyl-4-methyl-1,3-dithiolan-  
2-ylidenephosphoramidate



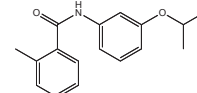
**CAS** 950-10-7 **MF** C<sub>8</sub>H<sub>16</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 269.32  
**PS** L **SOL** A **SG** 1.38 g/cm<sup>3</sup> **MP** N/A **BP** 346 °C  
**FP** 163 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-718N   | 10 mg |
| 100 µg/mL in MeOH | P-718S   | 1 mL  |

$\Delta$  Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.

## Mepronil

3'-Isopropoxy-o-toluanilide



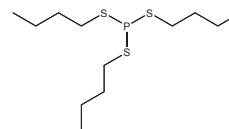
**CAS** 55814-41-0 **MF** C<sub>17</sub>H<sub>19</sub>NO<sub>2</sub> **MW** 269.37 **PS** S  
**SOL** D, A, MeOH **SG** 1.11 g/cm<sup>3</sup> **MP** 92 °C  
**BP** 340 °C **FP** 160 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-736N   | 10 mg |
| 100 µg/mL in MeOH | P-736S   | 1 mL  |

**Mercaptodimethur** see **Methiocarb**  
**Mercaptophos** see **Fenthion**  
**Merit** see **Imidacloprid**

## Morphos

Tributylphosphorotriithioite



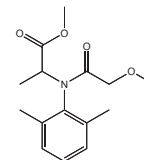
**CAS** 150-50-5 **MF** C<sub>12</sub>H<sub>27</sub>PS<sub>3</sub> **MW** 298.51 **PS** L  
**SG** 0.99 g/cm<sup>3</sup> **MP** N/A **BP** 80 °C **FP** 184 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-124N   | 10 mg |
| 100 µg/mL in MeOH | P-124S   | 1 mL  |

**Metacil** see **Aminocarb**

## Metalaxyl

N-(2,6-Dimethylphenyl)-N-(methoxyacetyl)-  
alanine methyl ester



**CAS** 57837-19-1 **MF** C<sub>15</sub>H<sub>21</sub>NO<sub>4</sub> **MW** 279.33 **PS** S  
**SOL** A, T, H **SG** 1.20 g/cm<sup>3</sup> **MP** 63 - 72 °C  
**BP** 296 °C **FP** 100 °C

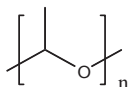
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-120N   | 10 mg |
| 100 µg/mL in MeOH | P-120S   | 1 mL  |

| Property Key |                                  | Solubility Key (SOL) |                     |
|--------------|----------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                 | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)   | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility (g/cm <sup>3</sup> )  | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity                 | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)               | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)               | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                 | <b>MC</b>            | Methyl cellosolve   |
|              |                                  | <b>T</b>             | Toluene             |
|              |                                  | <b>TP</b>            | Isooctane           |
|              |                                  | <b>W</b>             | Water               |



## Metaldehyde Δ

Acetaldehyde homopolymer

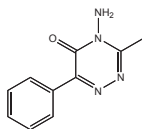


**CAS** 9002-91-9 **MF** (C<sub>2</sub>H<sub>4</sub>O)<sub>n</sub> **MW** (44.05)<sub>n</sub> **PS** S  
**SOL** MeOH, T **SG** 1.27 g/cm<sup>3</sup> **MP** 246 °C **BP** N/A  
**FP** 71 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-600N    | 10 mg |
| 100 µg/mL in MeOH | P-600S    | 1 mL  |
| 100 µg/mL in AcCN | P-600S-CN | 1 mL  |

## Metamitron

4-Amino-4,5-dihydro-3-methyl-6-phenyl-  
1,2,4-triazin-5-one

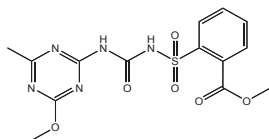


**CAS** 41394-05-2 **MF** C<sub>10</sub>H<sub>10</sub>N<sub>4</sub>O **MW** 202.21 **PS** S  
**SOL** D, MeOH, IPA **SG** 1.34 g/cm<sup>3</sup> **MP** 166 - 167 °C  
**BP** 336 °C **FP** 157 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-252N   | 10 mg |
| 100 µg/mL in MeOH | P-252S   | 1 mL  |

## Metasulfuron-methyl

2-[[[(4-Methoxy-6-methyl-1,3,5-triazin-2-yl)amino]  
carbonyl]amino]sulfonyl]benzoic acid methyl ester

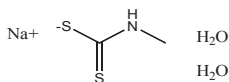


**CAS** 74223-64-6 **MF** C<sub>14</sub>H<sub>15</sub>N<sub>5</sub>O<sub>2</sub>S **MW** 381.37  
**PS** S **SOL** D, A, EA, T **SG** 1.46 g/cm<sup>3</sup> **MP** 158 °C  
**BP** 647 °C **FP** 345 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-463N   | 10 mg |
| 100 µg/mL in MeOH | P-463S   | 1 mL  |

## Metam-sodium dihydrate

Sodium N-methyldithiocarbamate



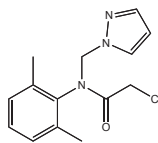
**CAS** 6734-80-1 **MF** C<sub>2</sub>H<sub>5</sub>NS<sub>2</sub>·Na·2H<sub>2</sub>O **MW** 165.21  
**PS** S **SOL** A **SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-381N   | 10 mg |
| 100 µg/mL in MeOH | P-381S   | 1 mL  |

**Metasystox I** see **Demeton-S-methyl**  
**MetaSystox-R** see **Oxydemeton-methyl**

## Metazachlor

2-chloro-N-(pyrazol-1-ylmethyl)acet-2',6'-xylylide

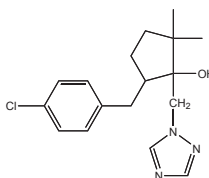


**CAS** 67129-08-2 **MF** C<sub>14</sub>H<sub>16</sub>ClN<sub>3</sub>O **MW** 277.75  
**PS** S **SOL** A **SG** 1.19 g/cm<sup>3</sup> **MP** 71 - 81 °C  
**BP** 439 °C **FP** 219 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-249N   | 10 mg |
| 100 µg/mL in MeOH | P-249S   | 1 mL  |

## Metconazole

(1R,5R:1R,5SR)-5-(4-chlorobenzyl)-  
2,2-dimethyl-1-(1H-1,2,4-triazol-1-ylmethyl)  
cyclopentanol

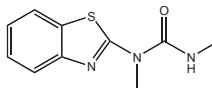


**CAS** 125116-23-6 **MF** C<sub>17</sub>H<sub>22</sub>ClN<sub>3</sub>O **MW** 319.83

| Matrix           | Cat. No.       | Unit |
|------------------|----------------|------|
| 10 µg/mL in AcCN | P-856S-CN-0.1X | 1 mL |

## Methabenzthiazuron

1-(1,3-Benzothiazol-2-yl)-1,3-dimethylurea

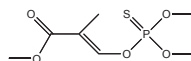


**CAS** 18691-97-9 **MF** C<sub>10</sub>H<sub>11</sub>N<sub>3</sub>OS **MW** 221.28  
**PS** S **SOL** D, A, T **SG** 1.33 g/cm<sup>3</sup> **MP** 119-121 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-563N   | 10 mg |
| 100 µg/mL in MeOH | P-563S   | 1 mL  |

## Methacrifos

Methyl-(E)-3-(dimethoxyphosphinothioxy)-2-  
methylacrylate



**CAS** 62610-77-9 **MF** C<sub>7</sub>H<sub>13</sub>O<sub>5</sub>PS **MW** 240.21 **PS** L  
**SOL** MeOH, H, D **SG** 1.25 g/cm<sup>3</sup> **MP** 90 °C  
**BP** 258 °C **FP** 110 °C

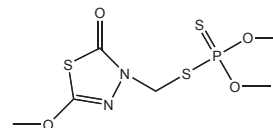
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-556N   | 10 mg |
| 100 µg/mL in MeOH | P-556S   | 1 mL  |

**Methamidophos** see **Monitor**

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**

## Methidathion

O,O-Dimethyl-S-(2-methoxy-1,3,4-thiadiazol-  
5(4H)-onyl-4-methyl) dithiophosphate

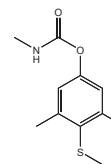


**CAS** 950-37-8 **MF** C<sub>6</sub>H<sub>11</sub>N<sub>2</sub>O<sub>4</sub>PS<sub>3</sub> **MW** 302.33  
**PS** S **SOL** T, A, H **SG** 1.51 g/cm<sup>3</sup> **MP** 40 °C  
**BP** N/A **FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-195N   | 10 mg |
| 100 µg/mL in MeOH | P-195S ‡ | 1 mL  |

## Methiocarb

4-Methylthio-3,5-xylyl methylcarbamate

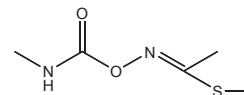


**CAS** 2032-65-7 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub>S **MW** 225.31  
**PS** S **SOL** D, IPA, T **SG** 1.24 g/cm<sup>3</sup> **MP** 119 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-156N   | 10 mg |
| 100 µg/mL in MeOH | P-156S   | 1 mL  |

## Methomyl

S-methyl N-(methylcarbamoyloxy)thioacetimidate

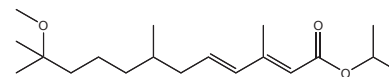


**CAS** 16752-77-5 **MF** C<sub>5</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 162.21  
**PS** S **SG** 1.17 g/cm<sup>3</sup> **MP** 78 °C **BP** 144 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-032N   | 10 mg |
| 100 µg/mL in MeOH | P-032S   | 1 mL  |

## Methoprene

Isopropyl (E,E)-(R,S)-11-methoxy-3,7,  
11-trimethyldodeca-2,4-dienoate



**CAS** 40596-69-8 **MF** C<sub>19</sub>H<sub>34</sub>O<sub>3</sub> **MW** 310.47 **PS** L  
**SOL** W **SG** 0.921 g/cm<sup>3</sup> **MP** N/A **BP** 100 °C  
**FP** 136 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-157N   | 10 mg |
| 100 µg/mL in MeOH | P-157S   | 1 mL  |

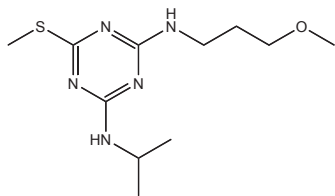




# Pesticide Standards

## Methoprotryne

Isopropyl-[4-(3-methoxypropylamino)-6-(methylthio)-s-triazin-2-yl]amine



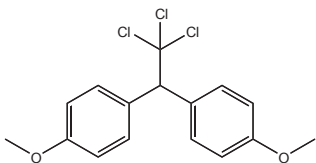
**CAS** 841-06-5 **MF** C<sub>11</sub>H<sub>21</sub>N<sub>5</sub>OS **MW** 271.38 **PS** S  
**SOL** D, A, MeOH **SG** 1.32 g/cm<sup>3</sup> **MP** 112 °C  
**BP** 363 °C **FP** 175 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-564N   | 10 mg |
| 100 µg/mL in MeOH | P-564S   | 1 mL  |

**Methoxone** see MCPA acid

## Methoxychlor

1,1'-(2,2,2-Trichloroethylidene)bis(4-methoxybenzene)

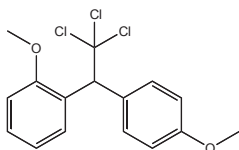


**CAS** 72-43-5 **MF** C<sub>16</sub>H<sub>15</sub>Cl<sub>3</sub>O<sub>2</sub> **MW** 345.65 **PS** S  
**SOL** MeOH **SG** 1.41 g/cm<sup>3</sup> **MP** 86 - 88 °C  
**BP** >100 °C **FP** <60 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-064N   | 10 mg |
| 100 µg/mL in MeOH | P-064S   | 1 mL  |

## o,p'-Methoxychlor

1,1,1-trichloro-2-(o-methoxyphenyl)-2-(p-methoxyphenyl)ethane

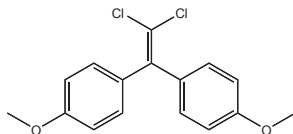


**CAS** 30667-99-3 **MF** C<sub>16</sub>H<sub>15</sub>Cl<sub>3</sub>O<sub>2</sub> **MW** 345.65  
**PS** S **SG** 1.41 g/cm<sup>3</sup> **MP** ~89 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-535S   | 1 mL |

## p,p'-Methoxychlor-olefin

1,1'-(Dichloroethenylidene)bis(4-methoxybenzene)

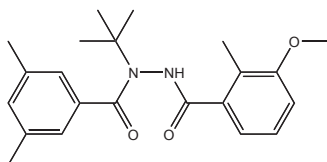


**CAS** 2132-70-9 **MF** C<sub>16</sub>H<sub>14</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 309.19 **PS** S  
**SG** 1.23 g/cm<sup>3</sup> **MP** 118 - 119 °C **BP** 413 °C **FP** 145 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-466S   | 1 mL |

## Methoxyfenozide

N'-(tert-Butyl)-N'-(3,5-dimethylbenzoyl)-3-methoxy-2-methylbenzohydrazide

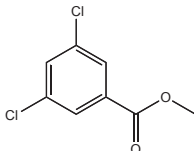


**CAS** 161050-58-4 **MF** C<sub>22</sub>H<sub>28</sub>N<sub>2</sub>O<sub>3</sub> **MW** 368.47  
**PS** S **SOL** DMSO, A **SG** 1.10 g/cm<sup>3</sup> **MP** 204.5 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-857N    | 10 mg |
| 100 µg/mL in AcCN | P-857S-CN | 1 mL  |

## Methyl-3,5-dichlorobenzoate

3,5-Dichlorobenzoic acid methyl ester

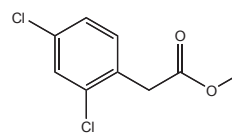


**CAS** 2905-67-1 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 205.04 **PS** S  
**SG** 1.36 g/cm<sup>3</sup> **MP** N/A **BP** 273 °C **FP** 118 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-247N   | 10 mg |
| 100 µg/mL in MeOH | P-247S   | 1 mL  |

## Methyl-2,4-dichlorophenylacetate

Methyl-2,4-Dichlorophenylacetate

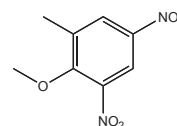


**CAS** 55954-23-9 **MF** C<sub>9</sub>H<sub>8</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 219.06  
**S L** **SG** 1.32 g/cm<sup>3</sup> **MP** N/A **BP** 272 °C **FP** 115 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-214N   | 10 mg |
| 100 µg/mL in MeOH | P-214S   | 1 mL  |

## 2-Methyl-4,6-dinitroanisole

2-Methyl-4,6-dinitroanisole

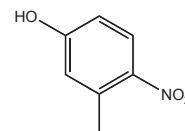


**CAS** 29027-13-2 **MF** C<sub>8</sub>H<sub>8</sub>N<sub>2</sub>O<sub>5</sub> **MW** 212.16  
**SG** 1.38 g/cm<sup>3</sup> **MP** N/A **BP** 369 °C **FP** 183 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-611N   | 10 mg |
| 100 µg/mL in MeOH | P-611S   | 1 mL  |

## 3-Methyl-4-nitrophenol

3-Methyl-4-nitrophenol

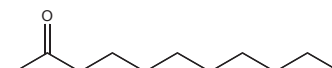


**CAS** 2581-34-2 **MF** C<sub>7</sub>H<sub>7</sub>NO<sub>3</sub> **MW** 153.14 **PS** S  
**SG** 1.32 g/cm<sup>3</sup> **MP** 125 - 130 °C **BP** 200 °C **FP** 110 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-509N   | 10 mg |
| 100 µg/mL in MeOH | P-509S   | 1 mL  |

## Methyl nonyl ketone Δ

Methyl nonyl ketone



**CAS** 112-12-9 **MF** C<sub>11</sub>H<sub>22</sub>O **MW** 170.29  
**SOL** MeOH, A, IPA **SG** 0.82 g/cm<sup>3</sup> **MP** N/A  
**BP** 231 °C **FP** 89 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-415N    | 10 mg |
| 100 µg/mL in MeOH | P-415S    | 1 mL  |
| 100 µg/mL in AcCN | P-415S-CN | 1 mL  |

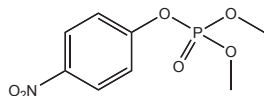
| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isocetane           |
|              |                                       | <b>W</b>             | Water               |

Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.



## Methyl paraoxon

Dimethyl-p-nitrophenylphosphate

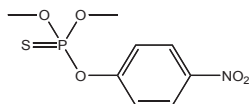


**CAS** 950-35-6 **MF** C<sub>8</sub>H<sub>10</sub>NO<sub>6</sub>P **MW** 247.14 **PS** L  
**SG** 1.38 g/cm<sup>3</sup> **MP** 0 - 4 °C **BP** 315 °C **FP** 144 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-311N   | 10 mg |
| 100 µg/mL in MeOH | P-311S   | 1 mL  |

## Methyl parathion

O,O-Dimethyl O-(p-nitrophenyl) phosphorothioate

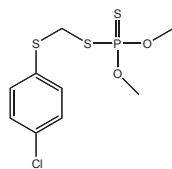


**CAS** 298-00-0 **MF** C<sub>8</sub>H<sub>10</sub>NO<sub>5</sub>PS **MW** 263.33 **PS** S  
**SG** 1.38 g/cm<sup>3</sup> **MP** 35 - 36 °C **BP** 154 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-065N   | 10 mg |
| 100 µg/mL in MeOH | P-065S   | 1 mL  |

## Methyl Trithion

[[4-(4-chlorophenyl)thio]methylthio]-dimethoxy-thioxo-phosphorane

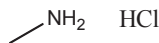


**CAS** 953-17-3 **MF** C<sub>9</sub>H<sub>12</sub>ClO<sub>2</sub>PS<sub>3</sub> **MW** 314.81

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-652S   | 1 mL |

## Methylamine hydrochloride

Methylamine hydrochloride

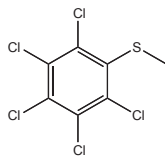


**CAS** 593-51-1 **MF** CH<sub>5</sub>N • HCl **MW** 67.52 **PS** S  
**SG** N/A **MP** 228 - 233 °C **BP** 375 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-624N   | 10 mg |
| 100 µg/mL in MeOH | P-624S   | 1 mL  |

## Methylpentachlorophenyl sulfide

Pentachlorothioanisole

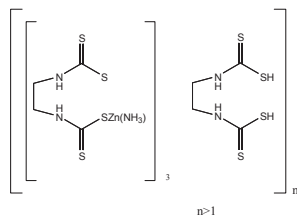


**CAS** 1825-19-0 **MF** C<sub>7</sub>H<sub>3</sub>Cl<sub>5</sub>S **MW** 296.43 **PS** S  
**SG** 1.68 g/cm<sup>3</sup> **MP** 95 °C **BP** 318 °C **FP** 140 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-567N   | 10 mg |
| 100 µg/mL in MeOH | P-567S   | 1 mL  |

## Metiram

Ethylenebis(dithiocarbamic acid), polymer with ammonia complex of zinc EBDC



**CAS** 9006-42-2 **MF** [C<sub>16</sub>H<sub>33</sub>N<sub>11</sub>S<sub>16</sub>Zn<sub>3</sub>]<sub>x</sub>  
**MW** (1088.6)<sub>x</sub> **PS** S **SG** 1.86 g/cm<sup>3</sup> **MP** ~156 °C  
**BP** N/A **FP** N/A

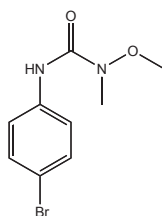
| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-416N   | 10 mg |

## Metizolin

see Benazolin

## Metobromuron

3-(4-Bromophenyl)-1-methoxy-1-methylurea

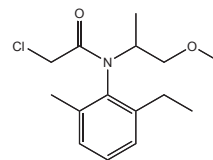


**CAS** 3060-89-7 **MF** C<sub>9</sub>H<sub>11</sub>BrN<sub>2</sub>O<sub>2</sub> **MW** 259.1 **PS** S  
**SOL** D, A, MeOH **SG** 1.53 g/cm<sup>3</sup> **MP** 95 - 96 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-436N   | 10 mg |
| 100 µg/mL in MeOH | P-436S   | 1 mL  |

## Metolachlor

2-Chloro-6'-ethyl-N-(2-methoxy-1-methylethyl)acet-o-toluidide

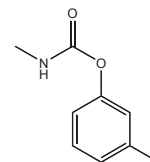


**CAS** 51218-45-2 **MF** C<sub>14</sub>H<sub>22</sub>ClNO<sub>2</sub> **MW** 271.8 **PS** L  
**SOL** MeOH, H, D **SG** 1.12 g/cm<sup>3</sup> **MP** N/A  
**BP** 100 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-158N   | 10 mg |
| 100 µg/mL in MeOH | P-158S   | 1 mL  |

## Metolcarb

m-Tolyl methylcarbamate

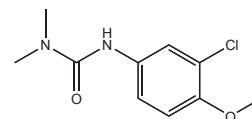


**CAS** 1129-41-5 **MF** C<sub>9</sub>H<sub>11</sub>NO<sub>2</sub> **MW** 165.2 **PS** S  
**SOL** MeOH **SG** 1.08 g/cm<sup>3</sup> **MP** 74 - 77 °C  
**BP** 242 °C **FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-494N   | 10 mg |
| 100 µg/mL in MeOH | P-494S   | 1 mL  |

## Metoxuron

3-(3-chloro-4-methoxyphenyl)-1,1-dimethylurea

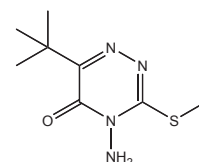


**CAS** 19937-59-8 **MF** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O<sub>2</sub> **MW** 228.7  
**PS** S **SOL** CN, A, T **SG** 1.25 g/cm<sup>3</sup> **MP** 124 - 127 °C **BP** 392 °C **FP** 191 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-437N   | 10 mg |
| 100 µg/mL in MeOH | P-437S   | 1 mL  |

## Metribuzin

4-Amino-6-tert-butyl-3-methylthio-1,2,4-triazin-5(4H)-one



**CAS** 21087-64-9 **MF** C<sub>8</sub>H<sub>14</sub>N<sub>4</sub>OS **MW** 214.32 **PS** S  
**SG** 1.31 g/cm<sup>3</sup> **MP** 126 °C **BP** 132 °C **FP** N/A

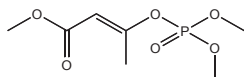
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-089N   | 10 mg |
| 100 µg/mL in MeOH | P-089S   | 1 mL  |



# Pesticide Standards

## Mevinphos

2-Butenoic acid,3-[(dimethoxyphosphinyl)oxy]-, methyl ester

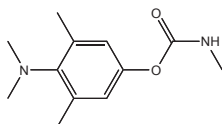


**CAS** 7786-34-7 **MF** C<sub>7</sub>H<sub>13</sub>O<sub>6</sub>P **MW** 224.15  
**PS** L **SOL** MeOH, IPA **SG** 1.23 g/cm<sup>3</sup> **MP** -56 °C  
**BP** 99-103 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-074N   | 10 mg |
| 100 µg/mL in MeOH | P-074S   | 1 mL  |

## Mexacarbate

4-Dimethylamino-3,5-xylyl methylcarbamate

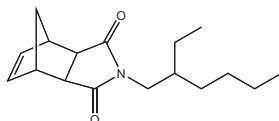


**CAS** 315-18-4 **MF** C<sub>12</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub> **MW** 222.32 **PS** S  
**SOL** A **SG** 1.08 g/cm<sup>3</sup> **MP** 85 °C **BP** 318 °C  
**FP** 146 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-030N   | 10 mg |
| 100 µg/mL in MeOH | P-030S   | 1 mL  |

## MGK-264

N-(2-ethylhexyl)-8,9,10-trinorborn-5-ene-2,3-dicarboximide

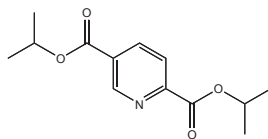


**CAS** 113-48-4 **MF** C<sub>17</sub>H<sub>25</sub>NO<sub>2</sub> **MW** 275.43 **PS** L  
**SG** 1.04 g/cm<sup>3</sup> **MP** <-20 °C **BP** 150 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-082N   | 10 mg |
| 100 µg/mL in MeOH | P-082S   | 1 mL  |

## MGK-326

Dipropyl 2,5-pyridine-2,5-dicarboxylate



**CAS** 136-45-8 **MF** C<sub>13</sub>H<sub>17</sub>NO<sub>4</sub> **MW** 251.28 **PS** L  
**SG** 1.12 g/cm<sup>3</sup> **MP** 21 °C **BP** 302 °C **FP** N/A

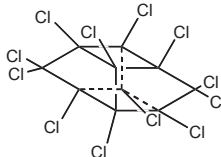
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-342N   | 10 mg |
| 100 µg/mL in MeOH | P-342S   | 1 mL  |

## MIPC

see Isoprocارب

## Mirex

Dodecachloropentacyclo[5.3.0.0.2,6.0.3,9.0.4,8]decane



**CAS** 2385-85-5 **MF** C<sub>10</sub>Cl<sub>12</sub> **MW** 545.5 **PS** S  
**SG** 2.25 g/cm<sup>3</sup> **MP** 485 °C **BP** N/A **FP** 202 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-066N   | 10 mg |
| 100 µg/mL in MeOH | P-066S   | 1 mL  |

## Mitotane

see o,p'-DDD

## Mocap

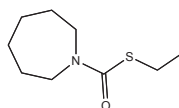
see Ethoprop

## Molinat

see Molinate

## Molinate

S-Ethyl azepan-1-carbothioate

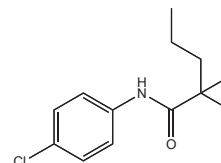


**CAS** 2212-67-1 **MF** C<sub>9</sub>H<sub>17</sub>NOS **MW** 187.3 **PS** L  
**SOL** MeOH, A **SG** 1.06 g/cm<sup>3</sup> **MP** N/A **BP** 202 °C  
**FP** 93 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-176N   | 10 mg |
| 100 µg/mL in MeOH | P-176S   | 1 mL  |

## Monalide

4'-Chloro-2,2-dimethylvalerianilide



**CAS** 7287-36-7 **MF** C<sub>13</sub>H<sub>18</sub>ClNO **MW** 239.74 **PS** S  
**SG** 1.10 g/cm<sup>3</sup> **MP** 87 - 88 °C **BP** 378 °C **FP** 184 °C

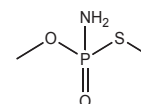
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-737N   | 10 mg |
| 100 µg/mL in MeOH | P-737S   | 1 mL  |

## Moncut™

see Flutolanil

## Monitor

O,S-Dimethyl phosphoramidothioate



**CAS** 10265-92-6 **MF** C<sub>2</sub>H<sub>8</sub>NO<sub>2</sub>PS **MW** 141.13 **PS** S  
**SOL** A **SG** 1.27 g/cm<sup>3</sup> **MP** 45 °C **BP** ~160 °C  
**FP** 212 °C

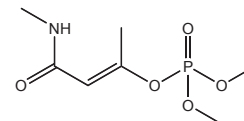
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-155N   | 10 mg |
| 100 µg/mL in MeOH | P-155S   | 1 mL  |

## Monocron

see Monocrotophos

## Monocrotophos

(E)-Dimethyl 1-methyl-3-(methylamino)-3-oxo-1-phosphoric acid, propenyl ester



**CAS** 6923-22-4 **MF** C<sub>7</sub>H<sub>14</sub>NO<sub>5</sub>P **MW** 223.16 **PS** S  
**SOL** MeOH, A, T **SG** 1.22 g/cm<sup>3</sup> **MP** 55 °C  
**BP** 125 °C **FP** N/A

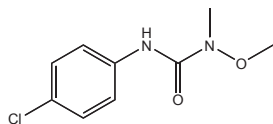
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-112N   | 10 mg |
| 100 µg/mL in MeOH | P-112S   | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



## Monolinuron

3-(4-Chlorophenyl)-1-methoxy-1-methylurea

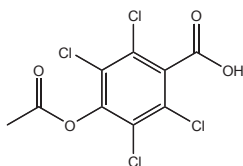


**CAS** 1746-81-2 **MF** C<sub>9</sub>H<sub>11</sub>ClN<sub>2</sub>O<sub>2</sub> **MW** 214.65 **PS** S  
**SOL** MeOH, A, IPA **SG** 1.30 g/cm<sup>3</sup> **MP** 80 - 83 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-382N   | 10 mg |
| 100 µg/mL in MeOH | P-382S   | 1 mL  |

## Monomethyltetrachloroterephthalate

Monomethyl tetrachloroterephthalate

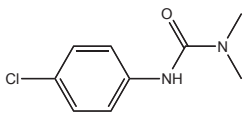


**CAS** 887-54-7 **MF** C<sub>9</sub>H<sub>4</sub>Cl<sub>4</sub>O<sub>4</sub> **MW** 317.94 **PS** S  
**SG** 1.69 g/cm<sup>3</sup> **MP** 158 - 159 °C **BP** 429 °C **FP** 213 °C

| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-707N   | 10 mg |
| 100 µg/mL in Acetone | P-707S-A | 1 mL  |

## Monuron

3-(4-chlorophenyl)-1,1-dimethylurea

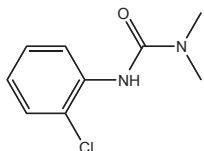


**CAS** 150-68-5 **MF** C<sub>9</sub>H<sub>11</sub>ClN<sub>2</sub>O **MW** 198.65 **PS** S  
**SOL** A **SG** 1.27 g/cm<sup>3</sup> **MP** 174 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-023N   | 10 mg |
| 100 µg/mL in MeOH | P-023S   | 1 mL  |

## 2-Monuron

3-(2-chlorophenyl)-1,1-dimethylurea

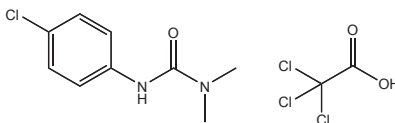


**CAS** N/A **MF** C<sub>9</sub>H<sub>11</sub>ClN<sub>2</sub>O **MW** 198.65 **PS** S  
**SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-633N   | 10 mg |
| 100 µg/mL in MeOH | P-633S   | 1 mL  |

## Monuron TCA

3-(4-Chlorophenyl)-1,1-dimethylurea  
trichloroacetate salt



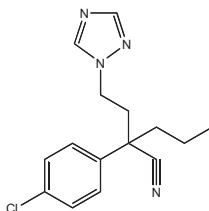
**CAS** 140-41-0 **MF** C<sub>2</sub>HCl<sub>3</sub>O<sub>2</sub>•C<sub>9</sub>H<sub>11</sub>ClN<sub>2</sub>O  
**MW** 362.04 **PS** S **SOL** A **SG** N/A **MP** 78 - 81 °C  
**BP** 359 °C **FP** 171 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-034N   | 10 mg |
| 100 µg/mL in MeOH | P-034S   | 1 mL  |

**Morestan** see **Chinomethionate**  
**MPCPS** see **Methylpentachlorophenyl sulfide**  
**MSMA** see **Bueno**  
**MTMC** see **Metolcarb**

## Myclobutanil

A-Butyl-A(4-Chlorophenyl)-1H-1,2,4-Thiazole-1-  
Propanenitrile



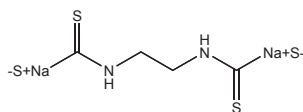
**CAS** 88671-89-0 **MF** C<sub>15</sub>H<sub>17</sub>ClN<sub>4</sub> **MW** 288.78 **PS** S  
**SOL** MeOH, A, EA **SG** 1.16 g/cm<sup>3</sup> **MP** 63 - 68 °C  
**BP** 465 °C **FP** 235 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-330N   | 10 mg |
| 100 µg/mL in MeOH | P-330S   | 1 mL  |

**N-Serve** see **Nitrapyrin**

## Nabam

Ethylene bisdithiocarbamate, disodium

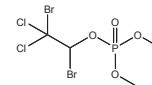


**CAS** 142-59-6 **MF** C<sub>4</sub>H<sub>6</sub>N<sub>2</sub>Na<sub>2</sub>S<sub>4</sub> **MW** 256.35 **PS** S  
**SOL** MeOH, A, EA **SG** 1.14 g/cm<sup>3</sup> **MP** N/A  
**BP** 308 °C **FP** 140 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-383N   | 10 mg |
| 100 µg/mL in MeOH | P-383S   | 1 mL  |

## Naled

1,2-Dibromo-2,2-dichloroethyl dimethyl phosphate



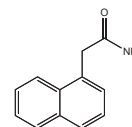
**CAS** 300-76-5 **MF** C<sub>4</sub>H<sub>7</sub>Br<sub>2</sub>Cl<sub>2</sub>O<sub>4</sub>P **MW** 380.78  
**PS** S **SOL** IS **SG** 1.96 g/cm<sup>3</sup> **MP** 27 °C **BP** 110 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-159N   | 10 mg |
| 100 µg/mL in MeOH | P-159S   | 1 mL  |

**Namab** see **Nabam**

## 1-Naphthalene acetamide

1-Naphthalene acetamide

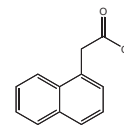


**CAS** 86-86-2 **MF** C<sub>12</sub>H<sub>11</sub>NO **MW** 185.2 **PS** S  
**SOL** A, IPA **SG** N/A **MP** 180 - 183 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-512N   | 10 mg |
| 100 µg/mL in MeOH | P-512S   | 1 mL  |

## 1-Naphthylacetic acid

1-Naphthylacetic acid

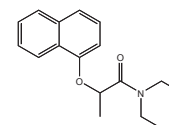


**CAS** 86-87-3 **MF** C<sub>12</sub>H<sub>10</sub>O<sub>2</sub> **MW** 186.21 **PS** S  
**SOL** MeOH, A, IPA **SG** 1.11 g/cm<sup>3</sup> **MP** 130 °C  
**BP** N/A **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-461N   | 10 mg |
| 100 µg/mL in MeOH | P-461S   | 1 mL  |

## Napropamide

N,N-Diethyl-2-naphthoxypropanamid  
(unstated stereochemistry)



**CAS** 15299-99-7 **MF** C<sub>17</sub>H<sub>21</sub>NO<sub>2</sub> **MW** 271.35  
**PS** S **SOL** A, H **SG** 1.08 g/cm<sup>3</sup> **MP** 73 - 78 °C  
**BP** 430 °C **FP** 214 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-179N   | 10 mg |
| 100 µg/mL in MeOH | P-179S   | 1 mL  |

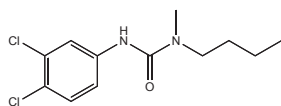
**Naptalam** see **Alanap**  
**Navadel** see **Dioxathion**



# Pesticide Standards

## Neburon

1-Butyl-3-(3,4-Dichlorophenyl)-1-methylurea

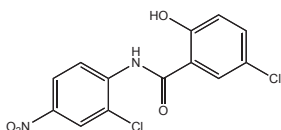


**CAS** 555-37-3 **MF** C<sub>12</sub>H<sub>16</sub>Cl<sub>2</sub>N<sub>2</sub>O **MW** 275.17  
**PS** S **SG** N/A **MP** 102 - 103 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-041N   | 10 mg |
| 100 µg/mL in MeOH | P-041S   | 1 mL  |

## Niclosamide

2'-5-Dichloro-4'-nitrosalicylanilide

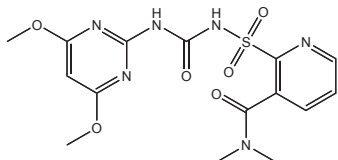


**CAS** 50-65-7 **MF** C<sub>13</sub>H<sub>6</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>4</sub> **MW** 327.12  
**PS** S **SG** N/A **MP** 208 °C **BP** 424 °C **FP** 210 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-160N   | 10 mg |
| 100 µg/mL in MeOH | P-160S   | 1 mL  |

## Nicosulfuron

2-(4,6-Dimethoxypyrimidin-2-ylcarbamoysulfamoyl)-N,N-dimethylnicotinamide



**CAS** 111991-09-4 **MF** C<sub>15</sub>H<sub>18</sub>N<sub>6</sub>O<sub>6</sub>S **MW** 410.41  
**PS** S **SOL** D, CN, A **SG** 1.44 g/cm<sup>3</sup>  
**MP** 141 - 144 °C **BP** N/A **FP** N/A

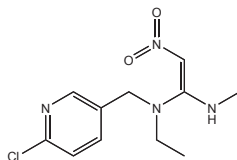
| Matrix            | Cat. No.    | Unit  |
|-------------------|-------------|-------|
| Neat              | P-591N      | 10 mg |
| 100 µg/mL in AcCN | P-591S-CN ‡ | 1 mL  |

## Nissorun

see *Hexythiazox*

## Nitenpyram

(E)-N-(6-chloro-3-pyridylmethyl)-N-ethyl-N'-methyl-2-nitrovinylidenediamine

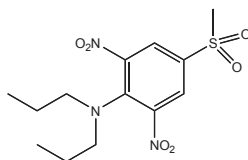


**CAS** 120738-89-8 **MF** C<sub>11</sub>H<sub>15</sub>ClN<sub>4</sub>O<sub>2</sub> **MW** 270.72  
**PS** S **SOL** MeOH, D, A **SG** 1.40 g/cm<sup>3</sup> **MP** 82 °C  
**BP** N/A **FP** >70 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-858N    | 10 mg |
| 100 µg/mL in AcCN | P-858S-CN | 1 mL  |

## Nitralin

4-Methylsulphonyl-2,6-dinitro-N,N-dipropylaniline

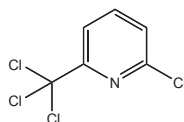


**CAS** 4726-14-1 **MF** C<sub>13</sub>H<sub>19</sub>N<sub>3</sub>O<sub>6</sub>S **MW** 345.37 **PS** S  
**SG** 1.33 g/cm<sup>3</sup> **MP** 151 - 152 °C **BP** 507 °C  
**FP** 260 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-583N   | 10 mg |
| 100 µg/mL in MeOH | P-583S   | 1 mL  |

## Nitrapyrin

2-Chloro-6-(trichloromethyl)pyridine

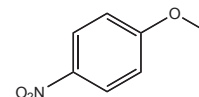


**CAS** 1929-82-4 **MF** C<sub>6</sub>H<sub>3</sub>Cl<sub>4</sub>N **MW** 230.91 **PS** S  
**SOL** D, A **SG** 1.58 g/cm<sup>3</sup> **MP** 62 - 63 °C  
**BP** 136 - 138 °C **FP** 135 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-489N   | 10 mg |
| 100 µg/mL in MeOH | P-489S   | 1 mL  |

## 4-Nitroanisole

4-Nitroanisole

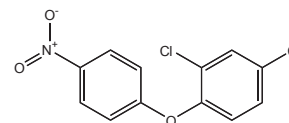


**CAS** 100-17-4 **MF** C<sub>7</sub>H<sub>7</sub>NO<sub>3</sub> **MW** 153.14 **PS** S  
**SG** 1.22 g/cm<sup>3</sup> **MP** 54 °C **BP** 274 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-273N   | 10 mg |
| 100 µg/mL in MeOH | P-273S   | 1 mL  |

## Nitrofen

2,4-Dichlorophenyl-4-nitrophenyl ether

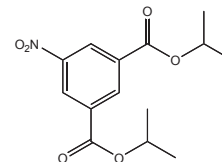


**CAS** 1836-75-5 **MF** C<sub>12</sub>H<sub>7</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 284.09 **PS** S  
**SG** 1.45 g/cm<sup>3</sup> **MP** 69 - 72 °C **BP** 361 °C **FP** 172 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-363N   | 10 mg |
| 100 µg/mL in MeOH | P-363S   | 1 mL  |

## Nitrothal-isopropyl

Diisopropyl 5-nitroisophthalate

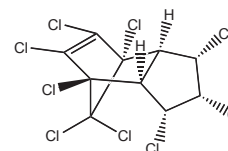


**CAS** 10552-74-6 **MF** C<sub>14</sub>H<sub>17</sub>NO<sub>6</sub> **MW** 295.29 **PS** S  
**SOL** A, EA **SG** 1.21 g/cm<sup>3</sup> **MP** 65 °C **BP** 398 °C  
**FP** 157 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-695N   | 10 mg |
| 100 µg/mL in MeOH | P-695S   | 1 mL  |

## cis-Nonachlor

2,3-3a-4,7a-hexahydro-4,7-methano-(1H)indene



**CAS** 5103-73-1 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>6</sub> **MW** 444.22 **PS** S  
**SG** 1.59 g/cm<sup>3</sup> **MP** 209 - 210 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-297N   | 10 mg |
| 100 µg/mL in MeOH | P-297S   | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |

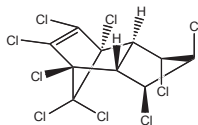
‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**





## trans-Nonachlor

(1- $\alpha$ ,2- $\beta$ ,3- $\alpha$ ,3a- $\alpha$ ,4- $\beta$ ,7- $\beta$ ,7a- $\alpha$ )-1,2,3,4,5,6,7,8-Nonachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene

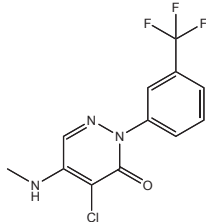


**CAS** 39765-80-5 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>9</sub> **MW** 444.22 **PS** S  
**SG** 1.86 g/cm<sup>3</sup> **MP** 148 - 149 °C **BP** 451 °C  
**FP** 229 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-184N   | 10 mg |
| 100 µg/mL in MeOH | P-184S   | 1 mL  |

## Norflurazon

4-Chloro-5-methylamino-2-( $\alpha$ , $\alpha$ , $\alpha$ -trifluoro-m-tolyl)pyridazin-3(2H)-one

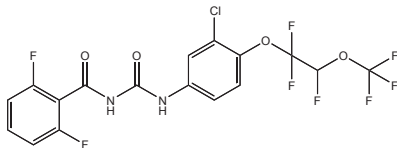


**CAS** 27314-13-2 **MF** C<sub>12</sub>H<sub>9</sub>ClF<sub>3</sub>N<sub>3</sub>O **MW** 303.67  
**PS** S **SOL** A **SG** 1.45 g/cm<sup>3</sup> **MP** 176 °C  
**BP** 345 °C **FP** 163 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-217N   | 10 mg |
| 100 µg/mL in MeOH | P-217S   | 1 mL  |

## Novaluron

1-[3-chloro-4-(1,1,2-trifluoro-2-trifluoromethoxyethoxy)phenyl]-3-(2,6-difluorobenzoyl)urea



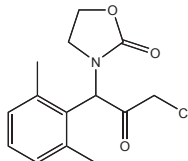
**CAS** 116714-46-6 **MF** C<sub>17</sub>H<sub>9</sub>ClF<sub>8</sub>N<sub>2</sub>O<sub>4</sub> **MW** 492.7

| Matrix            | Cat. No.   | Unit |
|-------------------|------------|------|
| Neat              | P-966N-5MG | 5 mg |
| 100 µg/mL in MeOH | P-966S     | 1 mL |

|                  |                            |
|------------------|----------------------------|
| <b>Nuarimol</b>  | see <b>Trimidal</b>        |
| <b>Nunacton</b>  | see <b>Monocrotophos</b>   |
| <b>Octachlor</b> | see <b>Chlordane</b>       |
| <b>Octalene</b>  | see <b>Aldrin</b>          |
| <b>Off</b>       | see <b>Deet (Off)</b>      |
| <b>Ofunack</b>   | see <b>Pyridaphenthion</b> |

## Ofurace

(+/-)-2-Chloro-N-(2,6-dimethylphenyl)-N-(tetrahydro-2-oxo-3-furanyl)-acetamide

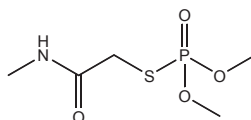


**CAS** 58810-48-3 **MF** C<sub>14</sub>H<sub>16</sub>ClNO<sub>3</sub> **MW** 281.73  
**PS** S **SG** 1.30 g/cm<sup>3</sup> **MP** 144 - 146 °C **BP** 483 °C  
**FP** 246 °C

| Matrix         | Cat. No.       | Unit |
|----------------|----------------|------|
| 10 µg/mL in TP | P-653S-TP-0.1X | 1 mL |

## Omethoate

O,O-Dimethyl S-methylcarbamoylmethyl phosphorothioate



**CAS** 1113-02-6 **MF** C<sub>5</sub>H<sub>12</sub>NO<sub>4</sub>PS **MW** 213.19 **PS** L  
**SOL** MeOH, A, IPA **SG** 1.32 g/cm<sup>3</sup> **MP** -28 °C  
**BP** ~135 °C **FP** 128 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-121N   | 10 mg |
| 100 µg/mL in MeOH | P-121S   | 1 mL  |

## Omite

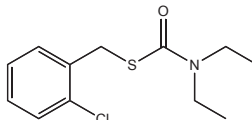
see **Propargite**

## OMPA

see **Schradan**

## Orbencarb

S-2-Chlorobenzyl diethylthiocarbamate



**CAS** 34622-58-7 **MF** C<sub>12</sub>H<sub>16</sub>ClNOS **MW** 257.78  
**PS** L **SOL** MeOH, H, D **SG** 1.18 g/cm<sup>3</sup> **MP** 9 °C  
**BP** 350 °C **FP** 166 °C

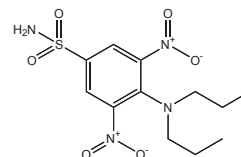
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-433N   | 10 mg |
| 100 µg/mL in MeOH | P-433S   | 1 mL  |

## Orthene

see **Acephate**

## Oryzalin

3,5-Dinitro-N<sub>4</sub>,N<sub>4</sub>-dipropylsulfanilamide

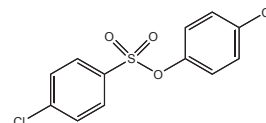


**CAS** 19044-88-3 **MF** C<sub>12</sub>H<sub>18</sub>N<sub>4</sub>O<sub>6</sub>S **MW** 346.36  
**PS** S **SG** 1.20 g/cm<sup>3</sup> **MP** 142 °C **BP** ~265 °C  
**FP** 265 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-043N   | 10 mg |
| 100 µg/mL in MeOH | P-043S   | 1 mL  |

## Ovex

Benzenesulfonic acid,4-chloro-, 4-chlorophenyl ester

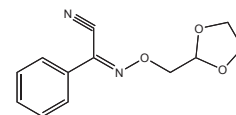


**CAS** 80-33-1 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>2</sub>O<sub>3</sub>S **MW** 303.16 **PS** S  
**SG** 1.46 g/cm<sup>3</sup> **MP** 86 °C **BP** 430 °C **FP** 214 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-425N   | 10 mg |
| 100 µg/mL in MeOH | P-425S   | 1 mL  |

## Oxabetrinil

(aZ)-a-[(1,3-dioxolan-2-yl)methoxyimino] benzeneAcCN

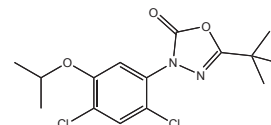


**CAS** 74782-23-3 **MF** C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub> **MW** 232.24  
**PS** S **SOL** D, A, T **SG** 1.22 g/cm<sup>3</sup> **MP** 78 °C  
**BP** 350 °C **FP** 165 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-995N   | 10 mg |
| 100 µg/mL in MeOH | P-995S   | 1 mL  |

## Oxadiazon

2-tert-Butyl-3-(2,4-dichloro-5-isopropoxyphenyl)-1,3,4-oxadiazol-2(3H)-one



**CAS** 19666-30-9 **MF** C<sub>15</sub>H<sub>18</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub> **MW** 345.22  
**PS** S **SOL** T, A, MeOH **SG** 1.31 g/cm<sup>3</sup>  
**MP** 88 - 90 °C **BP** 417 °C **FP** 206 °C

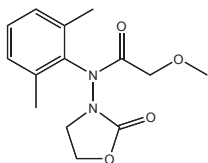
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-236N   | 10 mg |
| 100 µg/mL in MeOH | P-236S   | 1 mL  |



# Pesticide Standards

## Oxadixyl

2-Methoxy-N-(2-oxo-1,3-oxazolidin-3-yl)acet-  
2',6'-xylidide

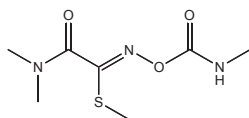


**CAS** 77732-09-3 **MF** C<sub>14</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub> **MW** 278.3  
**PS** S **SG** 1.26 g/cm<sup>3</sup> **MP** 104 °C **BP** 368 °C  
**FP** 177 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-560S   | 1 mL |

## Oxamyl

S-Methyl N,N'-dimethyl-N-(methylcarbamoyloxy)-  
1-thio-oxamimidate

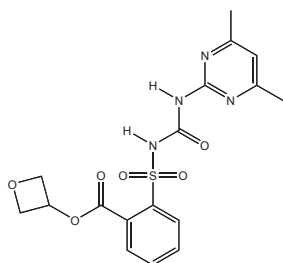


**CAS** 23135-22-0 **MF** C<sub>7</sub>H<sub>13</sub>N<sub>3</sub>O<sub>3</sub>S **MW** 219.26  
**PS** S **SOL** MeOH, A, T **SG** 0.97 g/cm<sup>3</sup> **MP** 100 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-161N   | 10 mg |
| 100 µg/mL in MeOH | P-161S   | 1 mL  |

## Oxasulfuron

Oxetan-3-yl-2-[(4,6-dimethylpyrimidin-2-yl)  
carbamoylsulfamoyl]benzoate



**CAS** 144651-06-9 **MF** C<sub>17</sub>H<sub>18</sub>N<sub>4</sub>O<sub>6</sub>S **MW** 406.41  
**PS** S **SOL** A, D, EA **SG** 1.49 g/cm<sup>3</sup> **MP** 158 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-859N    | 10 mg |
| 100 µg/mL in AcCN | P-859S-CN | 1 mL  |

### Property Key

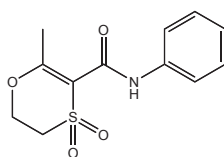
**CAS** Chemical Abstract  
Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State  
(Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity  
(g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

## Oxycarboxin

2,3-Dihydro-6-methyl-5-phenylcarbamoyl-  
1,4-oxathi-ine 4,4-dioxide

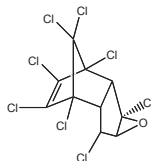


**CAS** 5259-88-1 **MF** C<sub>12</sub>H<sub>13</sub>NO<sub>4</sub>S **MW** 267.3 **PS** S  
**SOL** DMSO, A, MeOH **SG** 1.39 g/cm<sup>3</sup>  
**MP** 127.5 - 130 °C **BP** 528 °C **FP** 273 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-391N   | 10 mg |
| 100 µg/mL in MeOH | P-391S   | 1 mL  |

## Oxychlordane Isomer

1,2,4,5,6,7,8,8-octachloro-2,3-epoxy-3a,4,7,7a-  
tetrahydro-4,7-methanoinidan

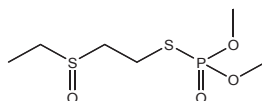


**CAS** 27304-13-8 **MF** C<sub>10</sub>H<sub>4</sub>Cl<sub>8</sub>O **MW** 423.74 **PS** S  
**SG** 1.97 g/cm<sup>3</sup> **MP** 144 °C **BP** 442 °C **FP** 165 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-331S   | 1 mL |

## Oxydemeton-methyl

S-2-Ethylsulfinyethylethyl  
O,O-dimethyl phosphorothioate



**CAS** 301-12-2 **MF** C<sub>6</sub>H<sub>15</sub>O<sub>4</sub>PS<sub>2</sub> **MW** 246.3 **PS** L  
**SG** 1.28 g/cm<sup>3</sup> **MP** -10 °C **BP** 365 °C **FP** N/A

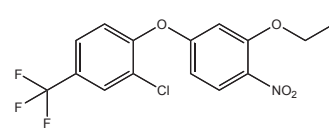
| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-290S   | 1 mL |

## Oxydisulfoton

see *Disulfoton sulfoxide*

## Oxyfluorfen

2-Chloro-alpha,alpha,alpha-trifluoro-p-tolyl  
3-ethoxy-4-nitrophenyl ether



**CAS** 42874-03-3 **MF** C<sub>15</sub>H<sub>11</sub>ClF<sub>3</sub>NO<sub>4</sub> **MW** 361.7  
**PS** S **SOL** A **SG** 1.40 g/cm<sup>3</sup> **MP** 83 - 84 °C **BP** N/A  
**FP** N/A

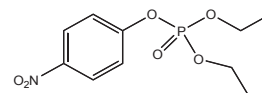
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-277N   | 10 mg |
| 100 µg/mL in MeOH | P-277S   | 1 mL  |

## Oxythioquinox

see *Chinomethionate*

## Paraoxon

O,O-Diethyl O-p-nitrophenyl phosphate

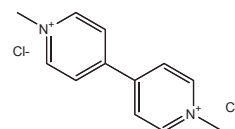


**CAS** 311-45-5 **MF** C<sub>10</sub>H<sub>14</sub>NO<sub>6</sub>P **MW** 275.2 **PS** L  
**SG** 1.30 g/cm<sup>3</sup> **MP** N/A **BP** 345 °C **FP** 162 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-453N   | 10 mg |
| 100 µg/mL in MeOH | P-453S   | 1 mL  |

## Paraquat dichloride tetrahydrate

1,1'-Dimethyl-4,4'-bipyridinium dichloride  
tetrahydrate

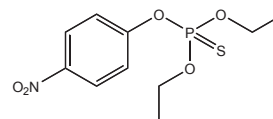


**CAS** 1910-42-5 **MF** C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>•2Cl **MW** 257.16  
(anhydrous base) **PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** ~340 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-051N   | 10 mg |
| 100 µg/mL in MeOH | P-051S   | 1 mL  |

## Parathion

O,O-Diethyl O-4-nitrophenyl phosphorothioate



**CAS** 56-38-2 **MF** C<sub>10</sub>H<sub>14</sub>NO<sub>5</sub>PS **MW** 291.26 **PS**  
L **SOL** D, H, T **SG** 1.26 g/cm<sup>3</sup> **MP** 6 °C **BP** 150 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-070N   | 10 mg |
| 100 µg/mL in MeOH | P-070S   | 1 mL  |

## PCA

*Pebulate*

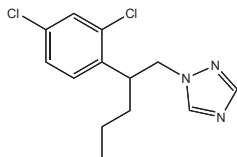
see *Pyrazon*

see *Tillam*



## Penconazole

1-[2-(2,4-Dichlorophenyl)-n-pentyl]-1H-1,2,4-triazole

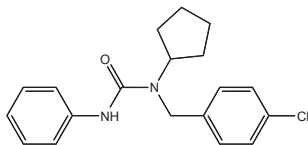


**CAS** 66246-88-6 **MF** C<sub>13</sub>H<sub>15</sub>Cl<sub>2</sub>N<sub>3</sub> **MW** 284.18  
**PS** S **SOL** A, T, H **SG** 1.30 g/cm<sup>3</sup> **MP** 61 °C  
**BP** >360 °C **FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-450N   | 10 mg |
| 100 µg/mL in MeOH | P-450S   | 1 mL  |

## Pencycuron

1-(4-chlorobenzyl)-l-cyclopentyl-3-phenylurea

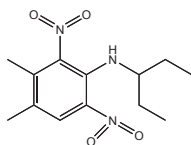


**CAS** 66063-05-6 **MF** C<sub>19</sub>H<sub>21</sub>ClN<sub>2</sub>O **MW** 328.84  
**PS** S **SOL** D, T, H **SG** 1.22 g/cm<sup>3</sup> **MP** 129 °C  
**BP** 528 °C **FP** 273 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-358N   | 10 mg |
| 100 µg/mL in MeOH | P-358S   | 1 mL  |

## Pendimethalin

N-(1-Ethylpropyl)-2,6-dinitro-3,4-xylidine



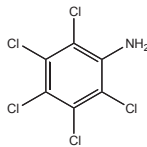
**CAS** 40487-42-1 **MF** C<sub>13</sub>H<sub>19</sub>N<sub>3</sub>O<sub>4</sub> **MW** 281.31 **PS** S  
**SOL** A, H, T **SG** 1.19 g/cm<sup>3</sup> **MP** 56 °C  
**BP** 330 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-097N   | 10 mg |
| 100 µg/mL in MeOH | P-097S   | 1 mL  |

**Penoxalin** see **Pendimethalin**

## Pentachloroaniline

Pentachloroaniline

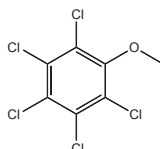


**CAS** 527-20-8 **MF** C<sub>6</sub>H<sub>2</sub>Cl<sub>5</sub>N **MW** 265.35 **PS** S  
**SG** 1.75 g/cm<sup>3</sup> **MP** 232 - 234 °C **BP** 336 °C **FP** 157 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-875N    | 10 mg |
| 100 µg/mL in AcCN | P-875S-CN | 1 mL  |

## Pentachloroanisole

Pentachloroanisole

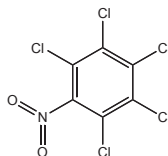


**CAS** 1825-21-4 **MF** C<sub>7</sub>H<sub>3</sub>Cl<sub>5</sub>O **MW** 280.36 **PS** S  
**SG** 1.62 g/cm<sup>3</sup> **MP** 108 °C **BP** 321 °C **FP** 127 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-199N   | 10 mg |
| 100 µg/mL in MeOH | P-199S   | 1 mL  |

## Pentachloronitrobenzene

Pentachloronitrobenzene



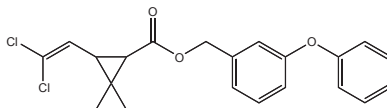
**CAS** 82-68-8 **MF** C<sub>6</sub>Cl<sub>5</sub>NO<sub>2</sub> **MW** 295.33 **PS** S  
**SG** 1.72 g/cm<sup>3</sup> **MP** 142 - 146 °C **BP** 328 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-113N   | 10 mg |
| 100 µg/mL in MeOH | P-113S   | 1 mL  |

**Percolate** see **Imidan**

## Permethrin

3-Phenoxybenzyl (1RS)-cis,trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

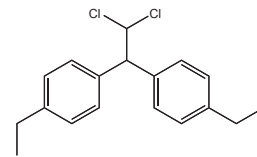


**CAS** 52645-53-1 **MF** C<sub>21</sub>H<sub>20</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 391.29  
**PS** S **SOL** H, MeOH **SG** 1.29 g/cm<sup>3</sup> **MP** 34 °C  
**BP** 200 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-128N   | 10 mg |
| 100 µg/mL in MeOH | P-128S   | 1 mL  |

## Perthane

1,1-Dichloro-2,2-bis(p-ethylphenyl)ethane



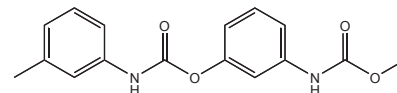
**CAS** 72-56-0 **MF** C<sub>18</sub>H<sub>20</sub>Cl<sub>2</sub> **MW** 307.26 **PS** S  
**SG** 1.13 g/cm<sup>3</sup> **MP** 60 °C **BP** N/A **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-162N   | 10 mg |
| 100 µg/mL in MeOH | P-162S   | 1 mL  |

**Phenamiphos** see **Fenamiphos**  
**Phencapton** see **Carbophenothion**

## Phenmedipham

Methyl 3-(3-methylcarbaniloyloxy)carbanilate

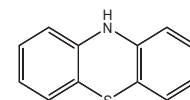


**CAS** 13684-63-4 **MF** C<sub>16</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub> **MW** 300.31 **PS** S  
**SOL** A, EA, D **SG** 0.54 g/cm<sup>3</sup> **MP** 143 - 144 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-392N   | 10 mg |
| 100 µg/mL in MeOH | P-392S   | 1 mL  |

## Phenothiazine

Dibenzo-p-thiazine



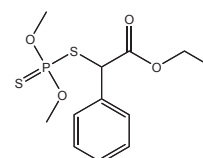
**CAS** 92-84-2 **MF** C<sub>12</sub>H<sub>9</sub>NS **MW** 199.27 **PS** S  
**SG** 1.23 g/cm<sup>3</sup> **MP** 182 - 187 °C **BP** 371 °C **FP** 178 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-579N   | 10 mg |
| 100 µg/mL in MeOH | P-579S   | 1 mL  |

**d-Phenothrin** see **Sumithrin**

## Phenthoate

S-alpha-Ethoxycarbonylbenzyl  
O,O-dimethyl phosphorodithioate



**CAS** 2597-03-7 **MF** C<sub>12</sub>H<sub>11</sub>O<sub>4</sub>PS<sub>2</sub> **MW** 320.37 **PS** L  
**SOL** MeOH, CN, H **SG** 1.23 g/cm<sup>3</sup> **MP** 17.5 °C  
**BP** N/A **FP** 165 - 170 °C

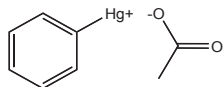
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-476N   | 10 mg |
| 100 µg/mL in MeOH | P-476S   | 1 mL  |



# Pesticide Standards

## Phenyl mercury acetate

(acetato-O)phenylmercury (9CI)

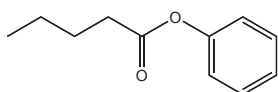


**CAS** 62-38-4 **MF** C<sub>8</sub>H<sub>8</sub>HgO<sub>2</sub> **MW** 336.74 **PS** S  
**SOL** A, MeOH **SG** N/A **MP** 148 -151 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-393N   | 10 mg |
| 100 µg/mL in MeOH | P-393S   | 1 mL  |

## Phenyl valerate

Valeric acid, phenyl ester

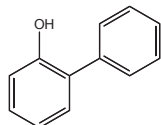


**CAS** 20115-23-5 **MF** C<sub>11</sub>H<sub>14</sub>O<sub>2</sub> **MW** 178.23 **PS** L  
**SG** 1.01 g/cm<sup>3</sup> **MP** N/A **BP** 250 °C **FP** 95 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-734N   | 10 mg |
| 100 µg/mL in MeOH | P-734S   | 1 mL  |

## o-Phenylphenol

o-Phenylphenol

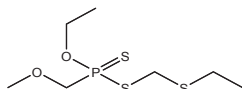


**CAS** 90-43-7 **MF** C<sub>12</sub>H<sub>10</sub>O **MW** 170.21 **PS** S  
**SG** 1.24 g/cm<sup>3</sup> **MP** 58 °C **BP** 284 °C **FP** 124 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-460N   | 10 mg |
| 100 µg/mL in MeOH | P-460S   | 1 mL  |

## Phorate

O,O-Diethyl S-ethylthiomethyl phosphorodithioate

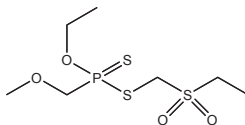


**CAS** 298-02-2 **MF** C<sub>17</sub>H<sub>17</sub>O<sub>2</sub>PS<sub>3</sub> **MW** 260.38 **PS** L  
**SOL** MeOH, IPA **SG** 1.17 g/cm<sup>3</sup> **MP** <-15 °C  
**BP** 119 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-170N   | 10 mg |
| 100 µg/mL in MeOH | P-170S   | 1 mL  |

## Phorate sulfone

O,O-Diethyl-S-ethylsulfonylethylmethyl phosphorodithioate

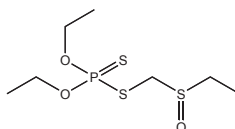


**CAS** 2588-04-7 **MF** C<sub>7</sub>H<sub>17</sub>O<sub>4</sub>PS<sub>3</sub> **MW** 292.38 **PS** L  
**SG** 1.31 g/cm<sup>3</sup> **MP** N/A **BP** 397 °C **FP** 194 °C

| Matrix              | Cat. No. | Unit |
|---------------------|----------|------|
| 100 µg/mL in Hexane | P-655S-H | 1 mL |

## Phorate sulfoxide

Phorate sulfoxide

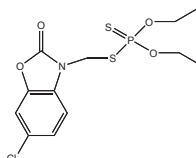


**CAS** 2588-03-6 **MF** C<sub>7</sub>H<sub>17</sub>O<sub>3</sub>PS<sub>3</sub> **MW** 276.38

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-732N   | 10 mg |
| 100 µg/mL in MeOH | P-732S   | 1 mL  |

## Phosalone

S-6-Chloro-2,3-dihydro-2-oxobenzoxazol-3-ylmethyl  
O,O-diethyl phosphorodithioate



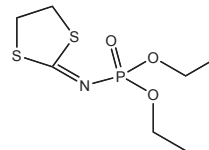
**CAS** 2310-17-0 **MF** C<sub>12</sub>H<sub>15</sub>ClNO<sub>4</sub>PS<sub>2</sub> **MW** 367.81  
**PS** S **SOL** CN, D, T **SG** 1.34 g/cm<sup>3</sup> **MP** 42 - 48 °C  
**BP** N/A **FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-163N   | 10 mg |
| 100 µg/mL in MeOH | P-163S   | 1 mL  |

**Phosdrin** *see Mevinphos*

## Phosfolan

(Diethoxyphosphinyl)dithioimidocarbonic acid  
cyclic ethylene ester



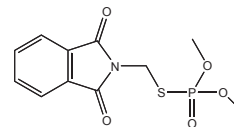
**CAS** 947-02-4 **MF** C<sub>7</sub>H<sub>14</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 255.3 **PS** S  
**SOL** T, A **SG** 1.42 g/cm<sup>3</sup> **MP** 37-45 °C **BP** 339 °C  
**FP** 159 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-234N   | 10 mg |
| 100 µg/mL in MeOH | P-234S   | 1 mL  |

**Phosmet** *see Imidan*

## Phosmet oxon

N-(dimethoxyphosphinoylthiomethyl)  
phthalimide;oxoimidan

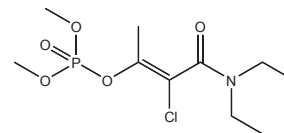


**CAS** 3735-33-9 **MF** C<sub>11</sub>H<sub>12</sub>NO<sub>5</sub>PS **MW** 301.26

| Matrix               | Cat. No. | Unit |
|----------------------|----------|------|
| 100 µg/mL in Toluene | P-733S-T | 1 mL |

## Phosphamidon

2-Chloro-2-diethylcarbamoyl-1-methylvinyl  
dimethyl phosphate



**CAS** 13171-21-6 **MF** C<sub>10</sub>H<sub>19</sub>ClNO<sub>5</sub>P **MW** 299.69  
**PS** L **SOL** D, T, A **SG** 1.21 g/cm<sup>3</sup> **MP** -45 °C  
**BP** 120 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-075N   | 10 mg |
| 100 µg/mL in MeOH | P-075S   | 1 mL  |

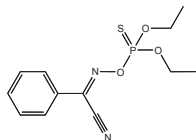
**Phosphothion** *see Malathion*  
**Phosvel** *see Leptophos*  
**Phosvin** *see Zinc phosphide*

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



## Phoxim

O,O-diethyl alpha-cyanobenzylideneamino-phosphorothioate

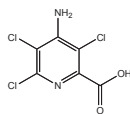


**CAS** 14816-18-3 **MF** C<sub>12</sub>H<sub>15</sub>N<sub>2</sub>O<sub>3</sub>PS **MW** 298.3  
**PS L** **SOL** CN, D, A **SG** 1.21 g/cm<sup>3</sup> **MP** N/A  
**BP** 362 °C **FP** 173 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-357N   | 10 mg |
| 100 µg/mL in MeOH | P-357S   | 1 mL  |

## Picloram

4-Amino-3,5,6-trichloro-2-picolinic acid

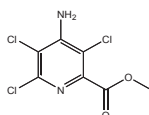


**CAS** 1918-02-1 **MF** C<sub>6</sub>H<sub>2</sub>Cl<sub>3</sub>N<sub>2</sub>O<sub>2</sub> **MW** 241.46 **PS** S  
**SOL** MeOH, A, T **SG** 0.85 g/cm<sup>3</sup> **MP** ~215 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-047N   | 10 mg |
| 100 µg/mL in MeOH | P-047S   | 1 mL  |

## Picloram methyl ester

4-Amino-3,5,6-trichloropyridine-2-carboxylic acid methyl ester



**CAS** 14143-55-6 **MF** C<sub>7</sub>H<sub>2</sub>Cl<sub>3</sub>N<sub>2</sub>O<sub>2</sub> **MW** 255.48  
**PS** S **SG** 1.61 g/cm<sup>3</sup> **MP** N/A **BP** 395 °C **FP** 192 °C

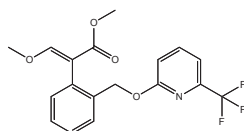
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-198N   | 10 mg |
| 100 µg/mL in MeOH | P-198S   | 1 mL  |

## 4-Picoline

see 4-Aminopyridine

## Picoxystrobin

Methyl-(E)-3-methoxy-2-[2-[6-(trifluoromethyl)-2-pyridyloxy]methyl]phenyl]acrylate



**CAS** 117428-22-5 **MF** C<sub>16</sub>H<sub>16</sub>F<sub>3</sub>NO<sub>4</sub> **MW** 367.32  
**PS** S **SOL** A, EA, MeOH **SG** 1.40 g/cm<sup>3</sup> **MP** 75 °C  
**BP** N/A **FP** N/A

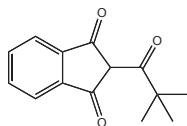
| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-860N    | 10 mg |
| 100 µg/mL in AcCN | P-860S-CN | 1 mL  |

## Pimeton

see Simeton

## Pindone

2-(Trimethylacetyl)-1,3-indandione

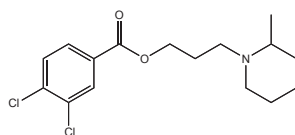


**CAS** 83-26-1 **MF** C<sub>14</sub>H<sub>14</sub>O<sub>3</sub> **MW** 230.26 **PS** S  
**SG** 1.06 g/cm<sup>3</sup> **MP** 155 - 156 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-394N   | 10 mg |
| 100 µg/mL in MeOH | P-394S   | 1 mL  |

## Piperalin

3-(2-Methylpiperidino)propyl 3,4-dichlorobenzoate

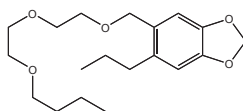


**CAS** 3478-94-2 **MF** C<sub>16</sub>H<sub>21</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 330.25  
**PS** L **SG** 1.19 g/cm<sup>3</sup> **MP** N/A **BP** 156 - 157 °C  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-663N   | 10 mg |
| 100 µg/mL in MeOH | P-663S   | 1 mL  |

## Piperonyl butoxide

5-[2-(2-Butoxyethoxy)ethoxymethyl]-6-propyl-1,3-benzodioxole

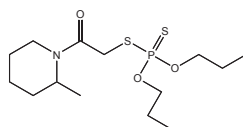


**CAS** 51-03-6 **MF** C<sub>19</sub>H<sub>30</sub>O<sub>5</sub> **MW** 338.44 **PS** L  
**SG** 1.06 g/cm<sup>3</sup> **MP** N/A **BP** 180 °C **FP** 171 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-348N   | 10 mg |
| 100 µg/mL in MeOH | P-348S   | 1 mL  |

## Piperophos

S-2-methylpiperdinocarbonylmethyl O,O-dipropyl phosphorothioate



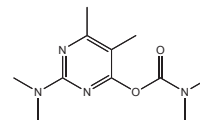
**CAS** 24151-93-7 **MF** C<sub>14</sub>H<sub>28</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 353.48  
**PS** L **SG** 1.15 g/cm<sup>3</sup> **MP** N/A **BP** 445 °C **FP** 223 °C

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-656N   | 10 mg |

**Pipron** see **Piperalin**  
**Pirate** see **Chlorfenapyr**

## Pirimicarb

2-Dimethylamino-5,6-dimethylpyrimidin-4-yl dimethylcarbamate

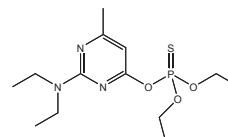


**CAS** 23103-98-2 **MF** C<sub>11</sub>H<sub>18</sub>N<sub>4</sub>O<sub>2</sub> **MW** 238.29 **PS** S  
**SOL** MeOH, A **SG** 1.18 g/cm<sup>3</sup> **MP** 92 °C **BP** N/A  
**FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-304N   | 10 mg |
| 100 µg/mL in MeOH | P-304S   | 1 mL  |

## Pirimiphos-ethyl

O-2-Diethylamino-6-methylpyrimidin-4-yl O,O-diethyl phosphorothioate

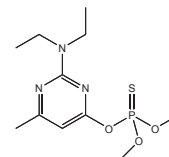


**CAS** 23505-41-1 **MF** C<sub>13</sub>H<sub>24</sub>N<sub>2</sub>O<sub>3</sub>PS **MW** 333.39  
**PS** L **SG** 1.14 g/cm<sup>3</sup> **MP** N/A **BP** 130 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-328N   | 10 mg |
| 100 µg/mL in MeOH | P-328S   | 1 mL  |

## Pirimiphos-methyl

O-2-Diethylamino-6-methylpyrimidin-4-yl O,O-dimethyl phosphorothioate



**CAS** 29232-93-7 **MF** C<sub>11</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub>PS **MW** 305.37  
**PS** L **SOL** MeOH, IPA **SG** 1.17 g/cm<sup>3</sup> **MP** 16 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-305N   | 10 mg |
| 100 µg/mL in MeOH | P-305S   | 1 mL  |

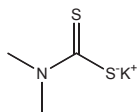
**Pirimor** see **Pirimicarb**  
**Pival** see **Pindone**  
**PMP** see **Phenmedipham**  
**Polytrin** see **Cypermethrin**



# Pesticide Standards

## Potassium dimethyl dithiocarbamate

Potassium dimethyl dithiocarbamate

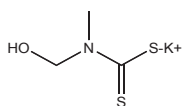


**CAS** 128-03-0 **MF** C<sub>3</sub>H<sub>6</sub>KNS<sub>2</sub> **MW** 159.32 **PS** L  
**SG** 1.22 g/cm<sup>3</sup> **MP** N/A **BP** 129 °C **FP** N/A

| Matrix            | Cat. No.    | Unit |
|-------------------|-------------|------|
| 100 µg/mL in AcCN | P-714S-CN ‡ | 1 mL |

## Potassium n-hydroxymethyl-n-methyl dithiocarbamate

Potassium n-hydroxymethyl-n-methyl dithiocarbamate

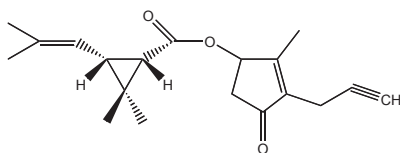


**CAS** 51026-28-9 **MF** C<sub>3</sub>H<sub>6</sub>KNOS<sub>2</sub> **MW** 175.32 **PS** L  
**SG** 1.19 g/cm<sup>3</sup> **MP** N/A **BP** 207 °C **FP** 79 °C

| Matrix            | Cat. No.    | Unit |
|-------------------|-------------|------|
| 100 µg/mL in AcCN | P-715S-CN ‡ | 1 mL |

## Prallethrin

2-Methyl-4-oxo-3-(prop-2-ynyl)cyclopent-2-en-1-yl  
2,2-dimethyl-3-(2-methylprop-1-enyl)  
cyclopropanecarboxylate



**CAS** 23031-36-9 **MFC** C<sub>19</sub>H<sub>24</sub>O<sub>3</sub> **MW** 300.39 **PS** S  
**SG** 1.08 g/cm<sup>3</sup> **MP** 140 °C **BP** 390 °C **FP** 168 °C

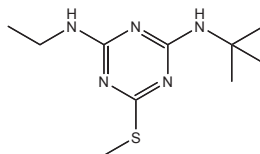
| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-667S   | 1 mL |

**Pramitol**

see Prometon

## Prebane

2-tert-Butylamino-4-ethylamino-6-methylthio-1,3,5-triazine

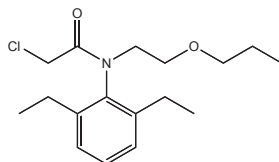


**CAS** 886-50-0 **MF** C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>S **MW** 241.36 **PS** S  
**SG** 1.12 g/cm<sup>3</sup> **MP** 105 °C **BP** 274 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-119N   | 10 mg |
| 100 µg/mL in MeOH | P-119S   | 1 mL  |

## Pretilachlor

2-Chloro-2',6'-diethyl-N-(2-propoxyethyl)acetanilide

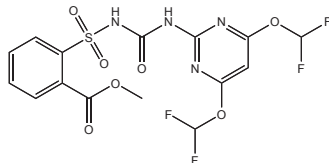


**CAS** 51218-49-6 **MF** C<sub>17</sub>H<sub>26</sub>ClNO<sub>2</sub> **MW** 311.85  
**PS** L **SOL** MeOH, H, D **SG** 1.07 g/cm<sup>3</sup> **MP** N/A  
**BP** 442 °C **FP** 221 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-485N   | 10 mg |
| 100 µg/mL in MeOH | P-485S   | 1 mL  |

## Primisulfuron-methyl

3-(4,6-bis(Difluoromethoxy)pyrimidin-2-yl)-  
1-(2-methoxycarbonylphenylsulfonyl)urea

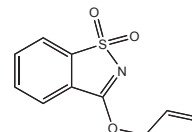


**CAS** 86209-51-0 **MF** C<sub>15</sub>H<sub>12</sub>F<sub>4</sub>N<sub>4</sub>O<sub>7</sub>S **MW** 468.34  
**PS** S **SOL** A, T, H **SG** 1.61 g/cm<sup>3</sup> **MP** 196 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-833N    | 10 mg |
| 100 µg/mL in AcCN | P-833S-CN | 1 mL  |

## Probenazole

3-Allyloxy-1,2-benz[d]isothiazole 1,1-dioxide

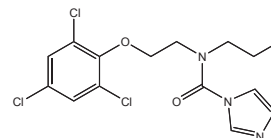


**CAS** 27605-76-1 **MFC** C<sub>10</sub>H<sub>8</sub>NO<sub>3</sub>S **MW** 223.25 **PS** S  
**SG** 1.33 g/cm<sup>3</sup> **MP** 138 °C **BP** 369 °C **FP** 177 °C

| Matrix               | Cat. No. | Unit  |
|----------------------|----------|-------|
| Neat                 | P-710N   | 10 mg |
| 100 µg/mL in Acetone | P-710S-A | 1 mL  |

## Prochloraz

N-Propyl-N-(2,4,6-trichlorophenoxy)  
ethyl-imidazole-1-carboxamide



**CAS** 67747-09-5 **MF** C<sub>15</sub>H<sub>16</sub>Cl<sub>3</sub>N<sub>3</sub>O<sub>2</sub> **MW** 376.66  
**PS** S **SOL** MeOH, D, T **SG** 1.37 g/cm<sup>3</sup>  
**MP** 46.5 - 49.3 °C **BP** 500 °C **FP** 256 °C

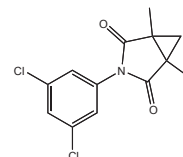
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-549N   | 10 mg |
| 100 µg/mL in MeOH | P-549S   | 1 mL  |

**Proconazole**

see Tiit

## Procymidone

N-(3,5-Dichlorophenyl)-1,  
2-dimethylcyclopropane-1,2-dicarboximide



**CAS** 32809-16-8 **MF** C<sub>13</sub>H<sub>11</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 284.14  
**PS** S **SOL** A, MeOH **SG** 1.50 g/cm<sup>3</sup> **MP** 164 -  
166 °C **BP** 478 °C **FP** 243 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-430N   | 10 mg |
| 100 µg/mL in MeOH | P-430S   | 1 mL  |

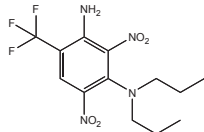
| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |





## Prodiamine

2-Dipropylamino- $\alpha,\alpha,\alpha$ -trifluoro-4,6-dinitro-*o*-toluidine

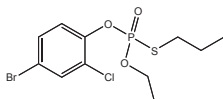


**CAS** 29091-21-2 **MF** C<sub>13</sub>H<sub>17</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub> **MW** 350.29  
**PS** S **SOL** A, CN, H **SG** 1.38 g/cm<sup>3</sup> **MP** 124 °C  
**BP** 433 °C **FP** 216 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-739N   | 10 mg |
| 100 µg/mL in MeOH | P-739S   | 1 mL  |

## Profenofos

O-4-Bromo-2-chlorophenyl O-ethyl S-propyl phosphorothioate

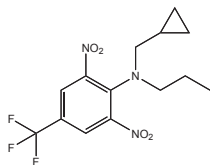


**CAS** 41198-08-7 **MF** C<sub>11</sub>H<sub>15</sub>BrClO<sub>3</sub>PS **MW** 373.63  
**PS** L **SOL** MeOH, A **SG** 1.46 g/cm<sup>3</sup> **MP** N/A  
**BP** 110 °C **FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-260N   | 10 mg |
| 100 µg/mL in MeOH | P-260S ‡ | 1 mL  |

## Profluralin

N-(cyclopropylmethyl)- $\alpha,\alpha,\alpha$ -trifluoro-2,6-dinitro-N-propyl-p-toluidine

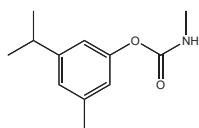


**CAS** 26399-36-0 **MF** C<sub>14</sub>H<sub>16</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub> **MW** 347.29  
**PS** L, S **SG** 1.41 g/cm<sup>3</sup> **MP** 32 - 33 °C **BP** 393 °C  
**FP** 192 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-099N   | 10 mg |
| 100 µg/mL in MeOH | P-099S   | 1 mL  |

## Promecarb

3-Isopropyl-5-methylphenyl methylcarbamate



**CAS** 2631-37-0 **MF** C<sub>12</sub>H<sub>17</sub>NO<sub>2</sub> **MW** 207.27 **PS** S  
**SOL** MeOH, A **SG** 1.02 g/cm<sup>3</sup> **MP** 117 °C  
**BP** 282 °C **FP** 124 °C

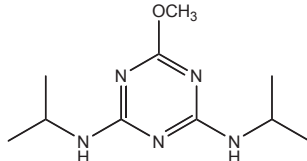
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-265N   | 10 mg |
| 100 µg/mL in MeOH | P-265S ‡ | 1 mL  |

Promet

see Furathiocarb

## Prometon

6-methoxy-N,N'-bis(1-methylethyl)-1,3,5-triazine-2,4-diamine



**CAS** 1610-18-0 **MF** C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>O **MW** 225.34 **PS** S  
**SOL** MeOH, A, D **SG** 1.09 g/cm<sup>3</sup> **MP** 91 - 92 °C  
**BP** N/A **FP** N/A

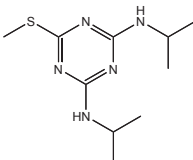
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-077N   | 10 mg |
| 100 µg/mL in MeOH | P-077S   | 1 mL  |

## Prometrin

see Prometryne

## Prometryne

2-Methylthio-4,6-bis(isopropyl amino)-1,3,5-triazine

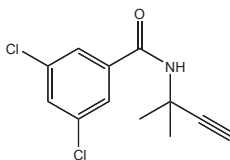


**CAS** 7287-19-6 **MF** C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>S **MW** 241.36 **PS** S  
**SOL** A, T, H **SG** 1.15 g/cm<sup>3</sup> **MP** 119 °C  
**BP** >300 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-078N   | 10 mg |
| 100 µg/mL in MeOH | P-078S   | 1 mL  |

## Pronamide

3,5-Dichloro-N-(1,1-dimethylpropynyl)benzamide

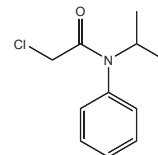


**CAS** 23950-58-5 **MF** C<sub>12</sub>H<sub>11</sub>Cl<sub>2</sub>NO **MW** 256.13  
**PS** S **SOL** MeOH, CN, IPA **SG** 1.26 g/cm<sup>3</sup>  
**MP** 155 - 156 °C **BP** 341 °C **FP** 160 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-164N   | 10 mg |
| 100 µg/mL in MeOH | P-164S   | 1 mL  |

## Propachlor

2-Chloro-N-isopropylacetanilide

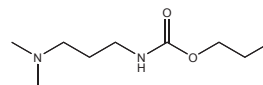


**CAS** 1918-16-7 **MF** C<sub>11</sub>H<sub>14</sub>ClNO **MW** 211.69 **PS** S  
**SOL** A, T **SG** 1.13 g/cm<sup>3</sup> **MP** 77 °C **BP** 110 °C  
**FP** 174 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-215N   | 10 mg |
| 100 µg/mL in MeOH | P-215S   | 1 mL  |

## Propamocarb

Propyl 3-(dimethylamino)propylcarbamate

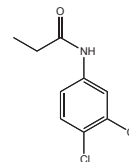


**CAS** 24579-73-5 **MF** C<sub>9</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub> **MW** 188.27 **PS** L  
**SOL** MeOH, D, A **SG** 0.96 g/cm<sup>3</sup> **MP** 45 - 55 °C  
**BP** 272 °C **FP** 118 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-312N   | 10 mg |
| 100 µg/mL in MeOH | P-312S   | 1 mL  |

## Propanil

3',4'-Dichloropropionanilide

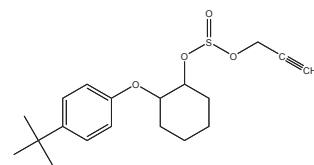


**CAS** 709-98-8 **MF** C<sub>9</sub>H<sub>9</sub>Cl<sub>2</sub>NO **MW** 218.08 **PS** S  
**SOL** D, IPA, T **SG** 1.41 g/cm<sup>3</sup> **MP** 92 - 93 °C  
**BP** 351 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-049N   | 10 mg |
| 100 µg/mL in MeOH | P-049S   | 1 mL  |

## Propargite

2-(4-tert-Butylphenoxy)cyclohexyl prop-2-ynyl sulfite



**CAS** 2312-35-8 **MF** C<sub>19</sub>H<sub>26</sub>O<sub>4</sub>S **MW** 350.47 **PS** L  
**SOL** MeOH, H, D **SG** 1.17 g/cm<sup>3</sup> **MP** N/A  
**BP** 451 °C **FP** 226 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-251N   | 10 mg |
| 100 µg/mL in MeOH | P-251S   | 1 mL  |

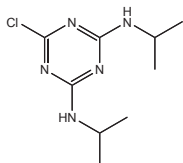
‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a Cold Pack



# Pesticide Standards

## Propazine

6-Chloro-N,N'-bis(1-methylethyl)-  
1,3,5-triazine-2,4-diamine

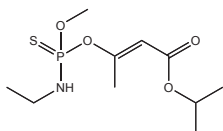


**CAS** 139-40-2 **MF** C<sub>9</sub>H<sub>16</sub>ClN<sub>5</sub> **MW** 229.71 **PS** S  
**SOL** T **SG** 1.16 g/cm<sup>3</sup> **MP** 213 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-079N   | 10 mg |
| 100 µg/mL in MeOH | P-079S   | 1 mL  |

## Propetamphos

(E)-O-2-Isopropoxycarbonyl-1-methylvinyl  
O-methyl ethylphosphoramidothioate

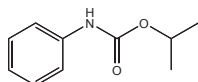


**CAS** 31218-83-4 **MF** C<sub>10</sub>H<sub>20</sub>NO<sub>4</sub>PS **MW** 281.31  
**PS** L **SOL** MeOH, H, A **SG** 1.13 g/cm<sup>3</sup> **MP** N/A  
**BP** 87 - 89 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-417N   | 10 mg |
| 100 µg/mL in MeOH | P-417S   | 1 mL  |

## Propham

1-methylethylphenyl carbamate



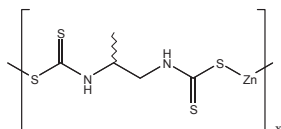
**CAS** 122-42-9 **MF** C<sub>10</sub>H<sub>13</sub>NO<sub>2</sub> **MW** 179.22 **PS** S  
**SOL** MeOH, A, IPA **SG** 1.09 g/cm<sup>3</sup> **MP** 90 °C  
**BP** 272 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-052N   | 10 mg |
| 100 µg/mL in MeOH | P-052S   | 1 mL  |

**Prophos** *see Ethoprop*  
**Propiconazole** *see Tilt*

## Propineb

Zinc propylenebis(dithiocarbamate)



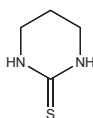
**CAS** 12071-83-9 **MF** (C<sub>5</sub>H<sub>8</sub>N<sub>2</sub>S<sub>4</sub>Zn)<sub>x</sub> **MW** (689.78)x  
**PS** S **SG** 1.81 g/cm<sup>3</sup> **MP** N/A **BP** >150 °C **FP** N/A

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-608N   | 10 mg |

**Propoxur** *see Baygon*

## Propylenethiourea (PTU)

Propylenethiourea



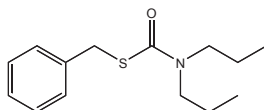
**CAS** 2055-46-1 **MF** C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>S **MW** 116.19 **PS** S  
**SG** 1.20 g/cm<sup>3</sup> **MP** 210 - 212 °C **BP** N/A **FP** NA

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-861N    | 10 mg |
| 100 µg/mL in AcCN | P-861S-CN | 1 mL  |

**Propyzamide** *see Pronamide*

## Prosulfocarb

S-Benzyl dipropylthiocarbamate

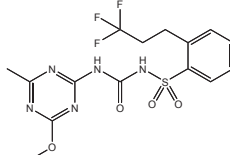


**CAS** 52888-80-9 **MF** C<sub>14</sub>H<sub>21</sub>NOS **MW** 251.39  
**PS** L **SOL** A, EA **SG** 1.05 g/cm<sup>3</sup> **MP** N/A  
**BP** 353 °C **FP** 167 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-742N   | 10 mg |
| 100 µg/mL in MeOH | P-742S   | 1 mL  |

## Prosulfuron

1-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-  
3-[2-(3,3,3-trifluoropropyl)]



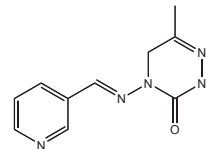
**CAS** 94125-34-5 **MF** C<sub>15</sub>H<sub>16</sub>F<sub>3</sub>N<sub>5</sub>O<sub>4</sub>S **MW** 419.38  
**PS** S **SOL** D, A, EA **SG** 1.45 g/cm<sup>3</sup> **MP** ~155 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-834N    | 10 mg |
| 100 µg/mL in AcCN | P-834S-CN | 1 mL  |

**Prothiofos** *see Tokuthion*  
**Prowl** *see Pendimethalin*  
**Prozinex** *see Propazine*  
**Pydrin** *see Fenvalerate*  
**Pymetrozin** *see Pymetrozine*

## Pymetrozine

(E)-4,5-Dihydro-6-methyl-4-((3-pyridinylmethylene)  
amino)-1,2,4-triazin-3(2H)-one

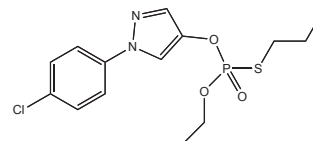


**CAS** 123312-89-0 **MF** C<sub>10</sub>H<sub>11</sub>N<sub>5</sub>O **MW** 217.23  
**PS** S **SOL** H **SG** 1.36 g/cm<sup>3</sup> **MP** 21 **BP** N/A  
**FP** >230 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-835N    | 10 mg |
| 100 µg/mL in AcCN | P-835S-CN | 1 mL  |

## Pyraclufos

O-[1-(4-Chlorophenyl)-1H-pyrazol-4-yl]  
O-ethyl S-propyl phosphorothioate

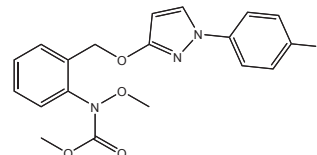


**CAS** 77458-01-6 **MF** C<sub>14</sub>H<sub>18</sub>ClN<sub>2</sub>O<sub>3</sub>PS **MW** 360.8  
**PS** S **SG** 1.33 g/cm<sup>3</sup> **MP** 88 - 89 °C **BP** 454 °C  
**FP** 228 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-716S   | 1 mL |

## Pyraclostrobin

Methyl-[2-[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxymethyl]phenyl]methoxycarbamate



**CAS** 175013-18-0 **MF** C<sub>19</sub>H<sub>18</sub>ClN<sub>2</sub>O<sub>4</sub> **MW** 387.82  
**PS** S **SOL** CN, D, T **SG** 1.27 g/cm<sup>3</sup> **MP** 58 - 63 °C  
**BP** 501 °C **FP** 257 °C

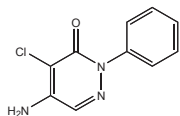
| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-863N    | 10 mg |
| 100 µg/mL in AcCN | P-863S-CN | 1 mL  |

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |



## Pyrazon

5-Amino-4-chloro-2-phenylpyridazin-3(2H)-one

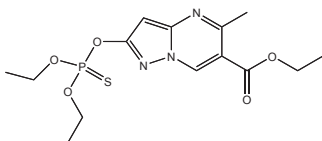


**CAS** 1698-60-8 **MF** C<sub>10</sub>H<sub>8</sub>ClN<sub>3</sub>O **MW** 221.64 **PS** S  
**SG** 1.42 g/cm<sup>3</sup> **MP** 198 - 202 °C **BP** 312 °C **FP** 143 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-395N   | 10 mg |
| 100 µg/mL in MeOH | P-395S   | 1 mL  |

## Pyrazophos

Ethyl 2-diethoxyphosphinothioxy-5-methylpyrazolo[1,5-a]pyrimidine-6-carboxylate

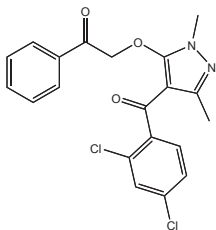


**CAS** 13457-18-6 **MF** C<sub>14</sub>H<sub>20</sub>N<sub>4</sub>O<sub>5</sub>PS **MW** 373.37  
**PS** S **SOL** D, T, A **SG** 1.38 g/cm<sup>3</sup> **MP** 51 - 52 °C  
**BP** ~160 °C **FP** 36 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-359N   | 10 mg |
| 100 µg/mL in MeOH | P-359S   | 1 mL  |

## Pyrazoxyfen

2-(4-(2,4-Dichlorobenzoyl)-1,3-dimethylpyrazol-5-yloxy)acetophenone

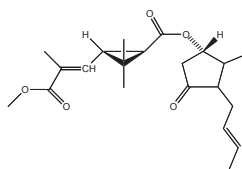


**CAS** 71561-11-0 **MF** C<sub>20</sub>H<sub>16</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub> **MW** 403.26  
**PS** S **SOL** T, A, H **SG** 1.33 g/cm<sup>3</sup> **MP** 111 - 112 °C  
**BP** 600 °C **FP** 317 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-618N   | 10 mg |
| 100 µg/mL in MeOH | P-618S   | 1 mL  |

## Pyrethrins

(Z)-(S)-2-methyl-4-oxo-3-(penta-2,4-dienyl)cyclopent-2-enyl(1R)-=trans-2,2-di.4375methyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate

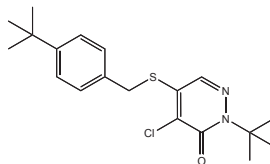


**CAS** 8003-34-7 **MF** N/A **MW** N/A **PS** L  
**SOL** MeOH, IPA **SG** 0.85 g/cm<sup>3</sup> **MP** N/A  
**BP** 170 - 200 °C **FP** 75 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-187N   | 10 mg |
| 100 µg/mL in MeOH | P-187S   | 1 mL  |

## Pyridaben

4-Chloro-2-(1,1-dimethylethyl)-5-(((4-(1,1-dimethylethyl)phenyl)methyl)thio)-3(2H)-pyridazinone

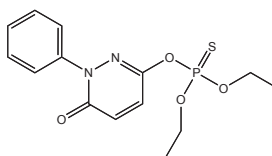


**CAS** 96489-71-3 **MF** C<sub>19</sub>H<sub>25</sub>ClN<sub>2</sub>OS **MW** 364.93  
**PS** S **SG** 1.12 g/cm<sup>3</sup> **MP** 111 - 112 °C **BP** 430 °C  
**FP** 214 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-693N   | 10 mg |
| 100 µg/mL in MeOH | P-693S   | 1 mL  |

## Pyridaphenthion

O-(1,6-Dihydro-6-oxo-1-phenylpyridazin-3-yl) O,O-diethyl phosphorothioate

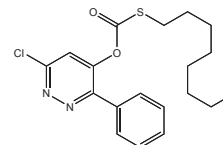


**CAS** 119-12-0 **MF** C<sub>14</sub>H<sub>17</sub>N<sub>2</sub>O<sub>4</sub>PS **MW** 340.34  
**PS** S **SG** 1.30 g/cm<sup>3</sup> **MP** 54 - 56 °C **BP** 416 °C  
**FP** 206 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-610S   | 1 mL |

## Pyridate

6-Chloro-3-phenylpyridazin-4-yl S-octyl thiocarbonate



**CAS** 55512-33-9 **MF** C<sub>19</sub>H<sub>23</sub>ClN<sub>2</sub>O<sub>2</sub>S **MW** 378.92

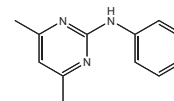
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-404N   | 10 mg |
| 100 µg/mL in MeOH | P-404S   | 1 mL  |

## Pyridazinone

see Pyridaben

## Pyrimethanil

N-(4,6-Dimethylpyrimidin-2-yl)aniline



**CAS** 53112-28-0 **MF** C<sub>12</sub>H<sub>13</sub>N<sub>3</sub> **MW** 199.25 **PS** S  
**SOL** D, A, T **SG** 1.15 g/cm<sup>3</sup> **MP** 96.3 °C **BP** N/A  
**FP** N/A

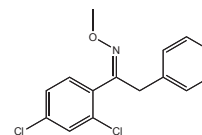
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-723N   | 10 mg |
| 100 µg/mL in MeOH | P-723S   | 1 mL  |

## Pyrinuron

see Vacor

## Pyriphenox

1-(2,4-Dichlorophenyl)-2-(3-pyridinyl)ethanone O-methylloxime

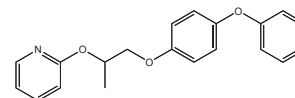


**CAS** 88283-41-4 **MF** C<sub>14</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>2</sub>O **MW** 295.16  
**PS** L **SOL** H, A, T **SG** 1.25 g/cm<sup>3</sup> **MP** N/A  
**BP** 212 °C **FP** 106 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-668S   | 1 mL |

## Pyriproxyfen

2-[1-Methyl-2-(4-phenoxyphenoxy)ethoxy]pyridine



**CAS** 95737-68-1 **MF** C<sub>20</sub>H<sub>19</sub>NO<sub>3</sub> **MW** 321.37 **PS** S  
**SOL** H, MeOH **SG** 1.23 g/cm<sup>3</sup> **MP** 45 - 47 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-795N    | 10 mg |
| 100 µg/mL in AcCN | P-795S-CN | 1 mL  |

## Pyroxystrobin

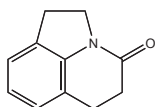
see Azoxystrobin



# Pesticide Standards

## Pyroquilon

1,2,5,6-tetrahydropyrrolo[3,2,1-ij]quinolin-4-one



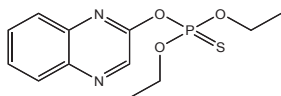
**CAS** 57369-32-1 **MF** C<sub>11</sub>H<sub>11</sub>NO **MW** 173.21 **PS** S  
**SOL** D, MeOH, A **SG** 1.25 g/cm<sup>3</sup> **MP** 112 °C  
**BP** 355 °C **FP** 174 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-696N   | 10 mg |
| 100 µg/mL in MeOH | P-696S   | 1 mL  |

**Pyrrodiazole** see 1,2,4-Triazole

## Quinalphos

O,O-diethyl O-quinoxalin-2-yl phosphorothioate

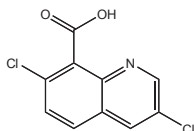


**CAS** 13593-03-8 **MF** C<sub>12</sub>H<sub>15</sub>N<sub>2</sub>O<sub>3</sub>PS **MW** 298.3  
**PS** L **SOL** H, MeOH, CN **SG** 1.24 g/cm<sup>3</sup>  
**MP** 31 - 32 °C **BP** ~142 °C **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-462N   | 10 mg |
| 100 µg/mL in MeOH | P-462S   | 1 mL  |

## Quinclorac Δ

3,7-Dichloro-8-quinolinecarboxylic acid

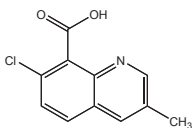


**CAS** 84087-01-4 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 242.06  
**PS** S **SOL** A **SG** 1.58 g/cm<sup>3</sup> **MP** 274 °C  
**BP** 405 °C **FP** 199 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-692N    | 10 mg |
| 100 µg/mL in MeOH | P-692S    | 1 mL  |
| 100 µg/mL in AcCN | P-692S-CN | 1 mL  |

## Quinmerac

7-Chloro-3-methylquinoline-8-carboxylic acid

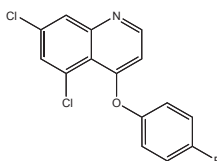


**CAS** 90717-03-6 **MF** C<sub>11</sub>H<sub>8</sub>ClNO<sub>2</sub> **MW** 221.64 **PS** S  
**SOL** D, A, H **SG** 1.49 g/cm<sup>3</sup> **MP** 244 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-836N    | 10 mg |
| 100 µg/mL in AcCN | P-836S-CN | 1 mL  |

## Quinoxifen

5,7-dichloro-4-(4-fluorophenoxy)quinoline



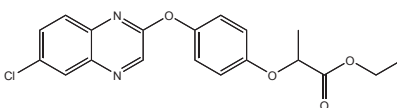
**CAS** 124495-18-7 **MF** C<sub>15</sub>H<sub>8</sub>Cl<sub>2</sub>FNO **MW** 308.13

| Matrix            | Cat. No.   | Unit |
|-------------------|------------|------|
| Neat              | P-882N-5MG | 5 mg |
| 100 µg/mL in MeOH | P-882S     | 1 mL |

**Quintozene** see Pentachloronitrobenzene

## Quizalofop ethyl

Propanoic acid,2-[4-[(6-chloro-2-quinoxalinyloxy)phenoxy]-, ethyl ester



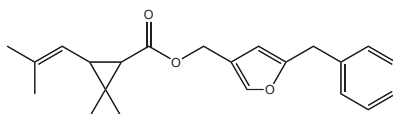
**CAS** 76578-14-8 **MF** C<sub>19</sub>H<sub>17</sub>ClN<sub>2</sub>O<sub>4</sub> **MW** 372.8  
**PS** S **SOL** A, H **SG** 1.30 g/cm<sup>3</sup> **MP** 91 °C  
**BP** 504 °C **FP** 259 °C

| Matrix            | Cat. No.    | Unit  |
|-------------------|-------------|-------|
| Neat              | P-293N      | 10 mg |
| 100 µg/mL in AcCN | P-293S-CN ‡ | 1 mL  |

**Racumin** see Coumatetralyl  
**Ramrod** see Propachlor  
**Randox** see Allidochlor

## Resmethrin

5-Benzyl-3-furylmethyl (±)-cis-trans-chrysanthemate



**CAS** 10453-86-8 **MF** C<sub>22</sub>H<sub>26</sub>O<sub>3</sub> **MW** 338.44 **PS** S  
**SOL** T, D, A **SG** 0.96 g/cm<sup>3</sup> **MP** 56 °C **BP** ~180 °C  
**FP** N/A

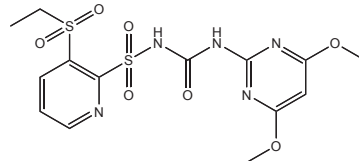
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-325N   | 10 mg |
| 100 µg/mL in MeOH | P-325S   | 1 mL  |

**Rilof** see Piperophos  
**Rimon** see Novaluron

| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |

## Rimsulfuron

1-(4,6-Dimethoxypyrimidin-2-yl)-3-(3-ethylsulfonyl-2-pyridylsulfonyl)urea



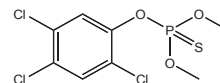
**CAS** 122931-48-0 **MF** C<sub>14</sub>H<sub>17</sub>N<sub>5</sub>O<sub>7</sub>S<sub>2</sub> **MW** 431.45  
**PS** S **SOL** CN, A, EA **SG** 0.78 g/cm<sup>3</sup> **MP** 176 °C  
**BP** N/A **FP** >200 °C

| Matrix            | Cat. No.    | Unit  |
|-------------------|-------------|-------|
| Neat              | P-837N      | 10 mg |
| 100 µg/mL in AcCN | P-837S-CN ‡ | 1 mL  |

**Rogor** see Dimethoate

## Ronnel

O,O-Dimethyl O-(2,4,5-trichlorophenyl) phosphorothioate

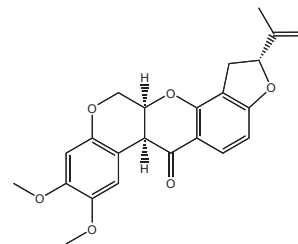


**CAS** 299-84-3 **MF** C<sub>8</sub>H<sub>8</sub>Cl<sub>3</sub>O<sub>3</sub>PS **MW** 321.55 **PS** S  
**SG** 1.44 g/cm<sup>3</sup> **MP** 41 °C **BP** 151 - 154 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-080N   | 10 mg |
| 100 µg/mL in MeOH | P-080S   | 1 mL  |

## Rotenone

(2R, 6aS, 12aS)-1,2,6,6a,12,12a-Hexahydro-2-isopropenyl-8,9-dimethoxychromeno[3,4-b]furo[2,3-h]chromen-6-one



**CAS** 83-79-4 **MF** C<sub>23</sub>H<sub>22</sub>O<sub>6</sub> **MW** 394.42 **PS** S  
**SOL** A, EA, MeOH **SG** 0.67 g/cm<sup>3</sup> **MP** 163 °C  
**BP** 215 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-056N   | 10 mg |
| 100 µg/mL in MeOH | P-056S ‡ | 1 mL  |

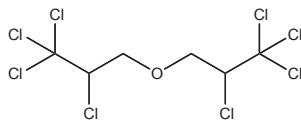
**Roundup** see Glyphosate  
**Rozol** see Chlorophacinone

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



**S<sub>421</sub>**

1,1'-Oxybis(2,3,3,3-tetrachloropropane)

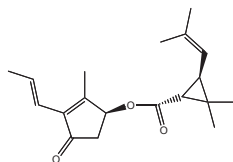


**CAS** 127-90-2 **MF** C<sub>6</sub>H<sub>6</sub>Cl<sub>8</sub>O **MW** 377.73 **PS** S  
**SOL** D **SG** 1.67 g/cm<sup>3</sup> **MP** 177 °C **BP** 374 °C  
**FP** 134 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-749N   | 10 mg |
| 100 µg/mL in MeOH | P-749S   | 1 mL  |

## S-Bioallethrin

(S)-3-Allyl-2-methyl-4-oxocyclopent-2-enyl (1R,3R)-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate



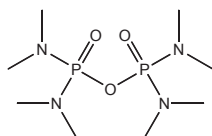
**CAS** 28434-00-6 **MF** C<sub>19</sub>H<sub>26</sub>O<sub>3</sub> **MW** 302.41 **PS** L  
**SG** 1.02 g/cm<sup>3</sup> **MP** N/A **BP** 140 °C **FP** 166 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-664N   | 10 mg |
| 100 µg/mL in MeOH | P-664S   | 1 mL  |

**SADH** see *Alar (SADH)*  
**Safroten** see *Propetamphos*  
**Sancap** see *Dipropetryn*

## Schradan

Octamethylpyrophosphoramide

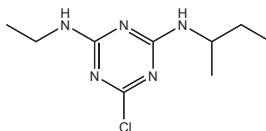


**CAS** 152-16-9 **MF** C<sub>8</sub>H<sub>24</sub>N<sub>4</sub>O<sub>3</sub>P<sub>2</sub> **MW** 286.25 **PS** L  
**SG** 1.17 g/cm<sup>3</sup> **MP** N/A **BP** 320 °C **FP** 147 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-418N   | 10 mg |
| 100 µg/mL in MeOH | P-418S   | 1 mL  |

## Sebuthylazin

2-(sec-Butylamino)-4-chloro-6-(ethylamino)-s-triazine

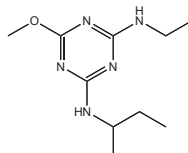


**CAS** 7286-69-3 **MF** C<sub>9</sub>H<sub>16</sub>ClN<sub>5</sub> **MW** 229.71 **PS** S  
**SG** 1.17 g/cm<sup>3</sup> **MP** 158.0 - 159.0 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-432N   | 10 mg |
| 100 µg/mL in MeOH | P-432S   | 1 mL  |

## Secbumeton

2-sec-Butylamino-4-ethylamino-6-methoxy-1,3,5-triazine



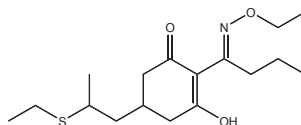
**CAS** 26259-45-0 **MF** C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>O **MW** 225.29 **PS** S  
**SOL** D, MeOH, A **SG** 1.14 g/cm<sup>3</sup> **MP** 86 - 88 °C  
**BP** 364 °C **FP** 175 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-165N   | 10 mg |
| 100 µg/mL in MeOH | P-165S   | 1 mL  |

**Select** see *Clethodim*  
**Semeron** see *Desmetryn*  
**Sencor** see *Metribuzin*  
**Sesone** see *Disul*, sodium salt  
**Sevin** see *Carbaryl*

## Sethoxydim

2-[1-(Ethoximino)butyl]-5-[2-(ethylthio)-propyl]-3-hydroxy-2-cyclohexen-1-one



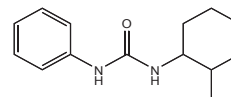
**CAS** 74051-80-2 **MF** C<sub>17</sub>H<sub>29</sub>NO<sub>3</sub>S **MW** 327.48  
**PS** L **SOL** MeOH, H, A **SG** 1.04 g/cm<sup>3</sup> **MP** N/A  
**BP** 90 °C **FP** N/A

| Matrix            | Cat. No.    | Unit  |
|-------------------|-------------|-------|
| Neat              | P-306N      | 10 mg |
| 100 µg/mL in AcCN | P-306S-CN ‡ | 1 mL  |

**Sevin** see *Carbaryl*  
**Sibutol** see *Bitteranol*

## Siduron

1-(2-Methylcyclohexyl)-3-phenylurea

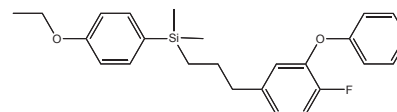


**CAS** 1982-49-6 **MF** C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O **MW** 232.32 **PS** S  
**SOL** D **SG** 1.08 g/cm<sup>3</sup> **MP** 133 - 138 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-063N   | 10 mg |
| 100 µg/mL in MeOH | P-063S   | 1 mL  |

## Silafluofen

(4-ethoxyphenyl)[3-(4-fluoro-3-phenoxyphenyl)propyl](dimethyl)silane



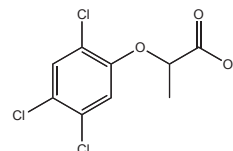
**CAS** 105024-66-6 **MF** C<sub>25</sub>H<sub>29</sub>FO<sub>2</sub>Si **MW** 408.58  
**PS** L **SG** 1.08 g/cm<sup>3</sup> **MP** <25 °C **BP** 484 °C  
**FP** 247 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-717N   | 10 mg |
| 100 µg/mL in MeOH | P-717S   | 1 mL  |

**Silaneophan** see *Silafluofen*

## Silvex Δ

2,4,5-Trichlorophenoxypropanoic acid



**CAS** 93-72-1 **MF** C<sub>9</sub>H<sub>7</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 269.51 **PS** S  
**SG** N/A **MP** 175 - 177 °C **BP** 378 °C **FP** 183 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-084N    | 10 mg |
| 100 µg/mL in MeOH | P-084S    | 1 mL  |
| 100 µg/mL in AcCN | P-084S-CN | 1 mL  |

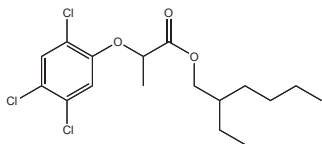
Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.



# Pesticide Standards

## Silvex 2-ethylhexyl ester

2-(2,4,5-Trichlorophenoxy)propionic acid,  
2-ethylhexyl ester

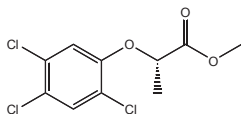


**CAS** N/A **MF** C<sub>17</sub>H<sub>23</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 381.72 **PS** S  
**SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-728N   | 10 mg |
| 100 µg/mL in MeOH | P-728S   | 1 mL  |

## Silvex methyl ester

Methyl 2-(2,4,5-trichlorophenoxy)propionate

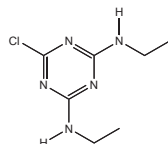


**CAS** 4841-20-7 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 283.53 **PS** S  
**SG** 1.40 g/cm<sup>3</sup> **MP** 88 - 90 °C **BP** 337 °C **FP** 135 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-115N   | 10 mg |
| 100 µg/mL in MeOH | P-115S   | 1 mL  |

## Simazine

6-Chloro-N,N'-diethyl-1,3,5-triazine-2,4-diamine

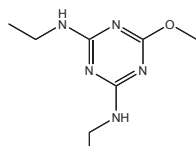


**CAS** 122-34-9 **MF** C<sub>7</sub>H<sub>12</sub>ClN<sub>5</sub> **MW** 201.66 **PS** S  
**SOL** A, T, H **SG** 1.30 g/cm<sup>3</sup> **MP** 226 °C **BP** N/A  
**FP** 100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-085N   | 10 mg |
| 100 µg/mL in MeOH | P-085S   | 1 mL  |

## Simeton

2,4-bis(Ethylamino)-6-methoxy-s-triazine

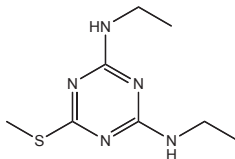


**CAS** 673-04-1 **MF** C<sub>8</sub>H<sub>15</sub>N<sub>5</sub>O **MW** 197.24 **PS** S  
**SG** 1.20 g/cm<sup>3</sup> **MP** 114 - 116 °C **BP** 347 °C **FP** 164 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-501N   | 10 mg |
| 100 µg/mL in MeOH | P-501S   | 1 mL  |

## Simetryn

N,N'-Diethyl-6-methylthio-1,3,5-triazine-2,4-diamine



**CAS** 1014-70-6 **MF** C<sub>8</sub>H<sub>15</sub>N<sub>5</sub>S **MW** 213.3 **PS** S  
**SOL** A, MeOH, T **SG** 1.02 g/cm<sup>3</sup> **MP** 82 - 83 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-166N   | 10 mg |
| 100 µg/mL in MeOH | P-166S   | 1 mL  |

## Siperin

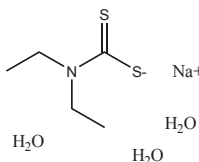
see Cypermethrin

## SMDC

see Metam-sodium dihydrate

## Sodium diethyldithiocarbamate trihydrate

Diethyldithiocarbamic acid sodium salt trihydrate



**CAS** 20624-25-3 **MF** C<sub>5</sub>H<sub>10</sub>NNaS<sub>2</sub>•3H<sub>2</sub>O **MW**  
225.31 **PS** S **SG** 1.1 g/cm<sup>3</sup> **MP** 97 °C **BP** N/A  
**FP** N/A

| Matrix             | Cat. No. | Unit  |
|--------------------|----------|-------|
| Neat               | P-505N   | 10 mg |
| 100 µg/mL in Water | P-505S-W | 1 mL  |

## Sonalan

see Ethalfluralin

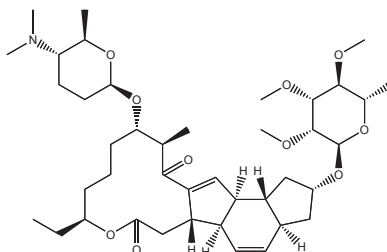
## Sonar

see Fluridone

## Spectracide®

see Diazinon

## Spinosad

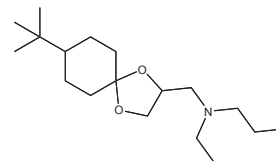


**CAS** 168316-95-8 **MF** C<sub>41</sub>H<sub>65</sub>NO<sub>10</sub> + C<sub>42</sub>H<sub>67</sub>NO<sub>10</sub>  
**MW** 731.96/745.98 **PS** S **SOL** D, T, A  
**SG** 0.51 g/cm<sup>3</sup> **MP** 84 - 99 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-864N    | 10 mg |
| 100 µg/mL in AcCN | P-864S-CN | 1 mL  |

## Spiroxamine

N-Ethyl-N-propyl-8-tert-butyl-1,  
4-dioxaspiro[4.5]dec-2-ylmethylamine



**CAS** 118134-30-8 **MF** C<sub>18</sub>H<sub>35</sub>NO<sub>2</sub> **MW** 297.48 **PS** L  
**SOL** H, D, T **SG** 0.94 g/cm<sup>3</sup> **MP** N/A  
**BP** 128 - 131 °C **FP** 147 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-869N    | 10 mg |
| 100 µg/mL in AcCN | P-869S-CN | 1 mL  |

## Starlex

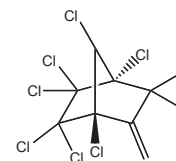
see Pyraclofos

## Stiropfos

see Tetrachlorvinphos

## Strobane

Terbutol

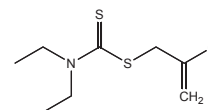


**CAS** 8001-50-1 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>7</sub> **MW** 377.35 **PS** L  
**SG** 1.63 g/cm<sup>3</sup> **MP** N/A **BP** 416 °C **FP** 206 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-339N   | 10 mg |
| 100 µg/mL in MeOH | P-339S   | 1 mL  |

## Sulfallate

Carbamodithioic acid,N,N-diethyl-,  
2-chloro-2-propen-1-yl ester

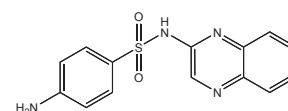


**CAS** 95-06-7 **MF** C<sub>8</sub>H<sub>14</sub>ClNS<sub>2</sub> **MW** 223.79 **PS** L  
**SG** 1.16 g/cm<sup>3</sup> **MP** N/A **BP** 315 °C **FP** 114 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-327N   | 10 mg |
| 100 µg/mL in MeOH | P-327S   | 1 mL  |

## Sulfaquinoxaline

4-Amino-N-2-quinoxaliny-1-benzenesulfonamide



**CAS** 59-40-5 **MF** C<sub>14</sub>H<sub>12</sub>N<sub>4</sub>O<sub>2</sub>S **MW** 300.34

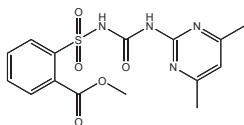
| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-681S   | 1 mL |





## Sulfometuron methyl ester

Benzoic acid, 2-[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methylester

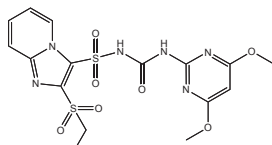


**CAS** 74222-97-2 **MF** C<sub>15</sub>H<sub>16</sub>N<sub>4</sub>O<sub>5</sub>S **MW** 364.38  
**PS** S **SOL** DMSO, D, A **SG** 1.48 g/cm<sup>3</sup>  
**MP** 198 - 202 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-336N   | 10 mg |
| 100 µg/mL in MeOH | P-336S   | 1 mL  |

## Sulfosulfuron

N-[[[(4,6-Dimethoxy-2-pyrimidinyl)amino]carbonyl]-2-(ethylsulfonyl)imidazo[1,2-a]pyridine-3-sulfonamide

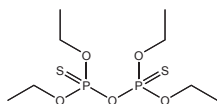


**CAS** 141776-32-1 **MF** C<sub>16</sub>H<sub>18</sub>N<sub>6</sub>O<sub>7</sub>S<sub>2</sub> **MW** 470.48  
**PS** S **SG** 1.52 g/cm<sup>3</sup> **MP** 201-202 °C **BP** N/A  
**FP** N/A

| Matrix           | Cat. No.       | Unit |
|------------------|----------------|------|
| 10 µg/mL in AcCN | P-865S-CN-0.1X | 1 mL |

## Sulfotep

Tetraethyl dithiopyrophosphate

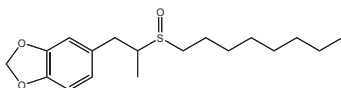


**CAS** 3689-24-5 **MF** C<sub>8</sub>H<sub>20</sub>O<sub>5</sub>P<sub>2</sub>S<sub>2</sub> **MW** 322.32 **PS** L  
**SOL** A **SG** 1.20 g/cm<sup>3</sup> **MP** N/A **BP** 120 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-167N   | 10 mg |
| 100 µg/mL in MeOH | P-167S   | 1 mL  |

## Sulfoxide

2-(1,3-benzodioxol-5-yl)ethyl octyl sulfoxide



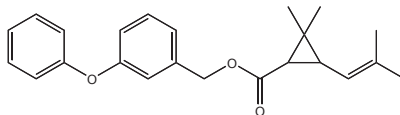
**CAS** 120-62-7 **MF** C<sub>18</sub>H<sub>26</sub>O<sub>3</sub>S **MW** 324.48 **PS** L  
**SG** 1.11 g/cm<sup>3</sup> **MP** N/A **BP** 185 °C **FP** 247 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-396N   | 10 mg |
| 100 µg/mL in MeOH | P-396S   | 1 mL  |

**Sulprofos** see **Bolstar**

## Sumithrin

2,2-Dimethyl-3-(2-methyl-1-propenyl) cyclopropanecarboxylic acid (3-phenoxyphenyl)methyl ester



**CAS** 26002-80-2 **MF** C<sub>23</sub>H<sub>26</sub>O<sub>3</sub> **MW** 350.45 **PS** L  
**SG** 1.12 g/cm<sup>3</sup> **MP** N/A **BP** 437 °C **FP** 187 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-050N   | 10 mg |
| 100 µg/mL in MeOH | P-050S   | 1 mL  |

## Supona

see **Chlorfenvinphos**

## Suprathion

see **Methidathion**

## Surflan

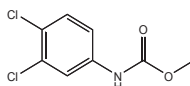
see **Oryzalin**

## Sutan

see **Butylate**

## Sweep

Methyl 3,4-dichlorocarbanilate



**CAS** 1918-18-9 **MF** C<sub>8</sub>H<sub>7</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 220.05 **PS** S  
**SG** 1.44 g/cm<sup>3</sup> **MP** N/A **BP** 252 °C **FP** 106 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-061N   | 10 mg |
| 100 µg/mL in MeOH | P-061S   | 1 mL  |

## Systhane

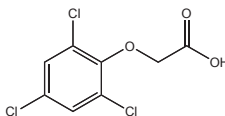
see **Myclobutanil**

## Systox

see **Demeton (mixed isomers)**

## 2,4,6-T Δ

2-(2,4,6-trichlorophenoxy)acetic acid

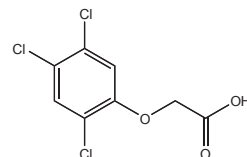


**CAS** 575-89-3 **MF** C<sub>8</sub>H<sub>5</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 255.48 **PS** S  
**SG** 1.59 g/cm<sup>3</sup> **MP** 128 - 129 °C **BP** 373 °C **FP** 180 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-523N    | 10 mg |
| 100 µg/mL in MeOH | P-523S    | 1 mL  |
| 100 µg/mL in AcCN | P-523S-CN | 1 mL  |

## 2,4,5-T Acid Δ

2,4,5-Trichlorophenoxyacetic acid

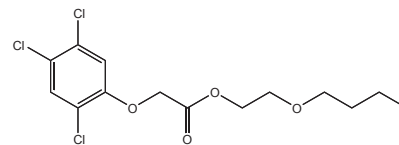


**CAS** 93-76-5 **MF** C<sub>8</sub>H<sub>5</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 255.48 **PS** S  
**SOL** MeOH, T **SG** 1.80 g/cm<sup>3</sup> **MP** 153 - 156 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-168N    | 10 mg |
| 100 µg/mL in MeOH | P-168S    | 1 mL  |
| 100 µg/mL in AcCN | P-168S-CN | 1 mL  |

## 2,4,5-T butoxyethyl ester

2-butoxyethyl 2-(2,4,5-trichlorophenoxy)acetate

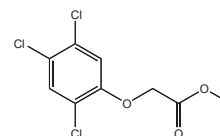


**CAS** 2545-59-7 **MF** C<sub>14</sub>H<sub>17</sub>Cl<sub>3</sub>O<sub>4</sub> **MW** 355.64 **PS** L  
**SOL** MeOH, T **SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-441N    | 10 mg |
| 100 µg/mL in AcCN | P-441S-CN | 1 mL  |

## 2,4,5-T methyl ester

2,4,5-Trichlorophenoxyacetate



**CAS** 1928-37-6 **MF** C<sub>9</sub>H<sub>7</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 269.51 **PS** S  
**SG** 1.45 g/cm<sup>3</sup> **MP** 89 - 92 °C **BP** 325 °C **FP** 137 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-067N   | 10 mg |
| 100 µg/mL in MeOH | P-067S   | 1 mL  |

### Property Key

**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

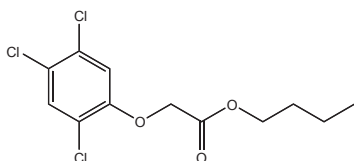
**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water



# Pesticide Standards

## 2,4,5-T n-butyl ester

Butyl-2,4,5-trichlorophenoxyacetate



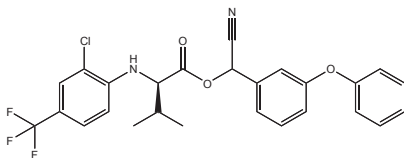
**CAS** 93-79-8 **MF** C<sub>12</sub>H<sub>13</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 311.59 **PS** L  
**SOL** MeOH, T **SG** 1.32 g/cm<sup>3</sup> **MP** N/A **BP** 337 °C  
**FP** 182 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-440N    | 10 mg |
| 100 µg/mL in AcCN | P-440S-CN | 1 mL  |

**Talstar** see **Bifenthrin**  
**Tamaron** see **Monitor**

## Tau-Fluvalinate

(RS)-alpha-cyano-3-phenoxybenzyl N-(2-chloro-alpha,alpha,alpha-trifluoro-p-tolyl)-D-valinate



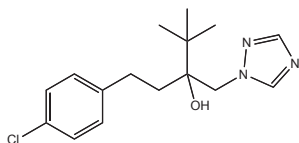
**CAS** 102851-06-9 **MF** C<sub>26</sub>H<sub>22</sub>ClF<sub>3</sub>N<sub>2</sub>O<sub>3</sub> **MW** 502.91  
**PS** L **SOL** MeOH, H, T **SG** 1.31 g/cm<sup>3</sup> **MP** N/A  
**BP** 450 °C **FP** 296 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-356N    | 10 mg |
| 100 µg/mL in MeOH | P-356S ‡  | 1 mL  |
| 100 µg/mL in AcCN | P-356S-CN | 1 mL  |

**TBZ** see **Thiabendazole**  
**TCA** see **Trichloroacetic acid**  
**TCNB** see **2,3,5,6-Tetrachloronitrobenzene**  
**TDE** see **p,p'-DDD**

## Tebuconazol

(RS)-1-p-Chlorophenyl-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)pentan-3-ol



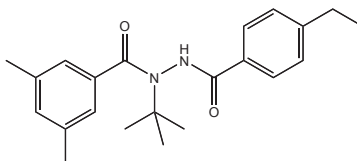
**CAS** 107534-96-3 **MF** C<sub>16</sub>H<sub>22</sub>ClN<sub>3</sub>O **MW** 307.82  
**PS** S **SOL** D, T, IPA **SG** 1.25 g/cm<sup>3</sup> **MP** 102.4 °C  
**BP** N/A **FP** >100 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-451N   | 10 mg |
| 100 µg/mL in MeOH | P-451S   | 1 mL  |

**Tebufenocide** see **Tebufenozide**

## Tebufenozide

N-tert-butyl-N'-(4-ethylbenzoyl)-3,5-dimethylbenzohydrazide

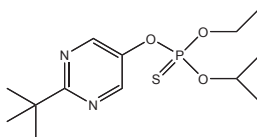


**CAS** 112410-23-8 **MF** C<sub>22</sub>H<sub>28</sub>N<sub>2</sub>O<sub>2</sub> **MW** 352.47  
**PS** S **SOL** MeOH, A, EA **SG** 1.03 g/cm<sup>3</sup> **MP** 191 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-726N   | 10 mg |
| 100 µg/mL in MeOH | P-726S   | 1 mL  |

## Tebupirimfos

O-[2-(1,1-dimethylethyl)-5-pyrimidinyl] O-ethyl O-(1-methylethyl) phosphorothioate

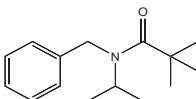


**CAS** 96182-53-5 **MF** C<sub>13</sub>H<sub>23</sub>N<sub>2</sub>O<sub>3</sub>PS **MW** 318.37  
**PS** S **SOL** MeOH, T, IPA **SG** 1.15 g/cm<sup>3</sup> **MP** 87 - 88 °C **BP** 359 °C **FP** 176 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-727N   | 10 mg |
| 100 µg/mL in MeOH | P-727S   | 1 mL  |

## Tebutam

N-benzyl-N-isopropylpivalamide

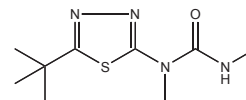


**CAS** 35256-85-0 **MF** C<sub>15</sub>H<sub>23</sub>NO **MW** 233.35 **PS** L  
**SG** 0.98 g/cm<sup>3</sup> **MP** <20 °C **BP** 98 °C **FP** 80 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-879S   | 1 mL |

## Tebuthiuron

1-(5-tert-Butyl-1,3,4-thiadiazol-2-yl)-1,3-dimethylurea



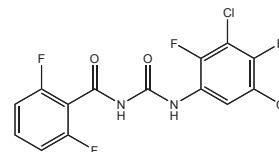
**CAS** 34014-18-1 **MF** C<sub>9</sub>H<sub>16</sub>N<sub>4</sub>OS **MW** 228.32 **PS** S  
**SOL** MeOH, CN, A **SG** 1.19 g/cm<sup>3</sup> **MP** 161 - 164 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-188N   | 10 mg |
| 100 µg/mL in MeOH | P-188S   | 1 mL  |

**Tecnazene** see **2,3,5,6-Tetrachloronitrobenzene**  
**Tedion V-18** see **Tetradifon**  
**TEDP** see **Sulfotep**

## Teflubenzuron

1-(2,5-dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea

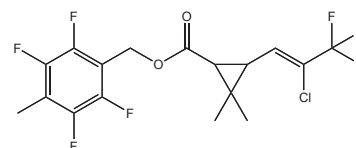


**CAS** 83121-18-0 **MF** C<sub>14</sub>H<sub>6</sub>Cl<sub>2</sub>F<sub>4</sub>N<sub>2</sub>O<sub>2</sub> **MW** 381.11  
**PS** S **SOL** DMSO, D, A **SG** 1.65 g/cm<sup>3</sup>  
**MP** 222 - 223 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-452N   | 10 mg |
| 100 µg/mL in MeOH | P-452S   | 1 mL  |

## Tefluthrin

2,3,5,6-Tetrafluoro-4-methylbenzyl(Z)-1-(RS,3RS)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate



**CAS** 79538-32-2 **MF** C<sub>17</sub>H<sub>14</sub>ClF<sub>7</sub>O<sub>2</sub> **MW** 418.73  
**PS** S **SG** 1.23 g/cm<sup>3</sup> **MP** 44 - 46 °C **BP** 358 °C  
**FP** 107 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-568S ‡ | 1 mL |

**Telodrin** see **Isobenzan**  
**Temephos** see **Abate**  
**Temik** see **Aldicarb**

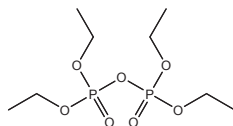
| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



## TEPP

Tetraethylpyrophosphate

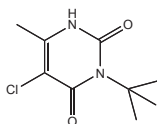


**CAS** 107-49-3 **MF** C<sub>8</sub>H<sub>20</sub>O<sub>7</sub>P<sub>2</sub> **MW** 290.19 **PS** L  
**SG** 1.19 g/cm<sup>3</sup> **MP** N/A **BP** 310 °C **FP** N/A

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-207N   | 10 mg |

## Terbacil

3-tert-butyl-5-chloro-6-methyluracil



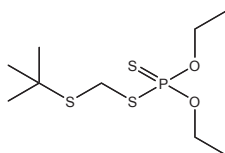
**CAS** 5902-51-2 **MF** C<sub>9</sub>H<sub>13</sub>ClN<sub>2</sub>O<sub>2</sub> **MW** 216.69 **PS** S  
**SG** 1.34 g/cm<sup>3</sup> **MP** 175 - 177 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-096N   | 10 mg |
| 100 µg/mL in MeOH | P-096S   | 1 mL  |

**Terbucarb** *see Terbutol*

## Terbufos

S-tert-Butylthiomethyl  
O,O-diethyl phosphorodithioate

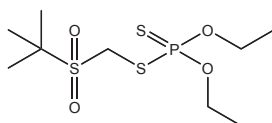


**CAS** 13071-79-9 **MF** C<sub>9</sub>H<sub>21</sub>O<sub>2</sub>PS<sub>3</sub> **MW** 288.43 **PS** L  
**SOL** MeOH, A, IPA **SG** 1.10 g/cm<sup>3</sup> **MP** -29.2 °C  
**BP** 69 °C **FP** 88 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-208N   | 10 mg |
| 100 µg/mL in MeOH | P-208S   | 1 mL  |

## Terbufos Sulfone

Phosphorodithioic acid, S-[(1,1-dimethylethyl)  
sulfonyl]methyl] O,O-diethyl ester

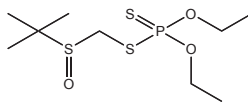


**CAS** 56070-16-7 **MF** C<sub>9</sub>H<sub>21</sub>O<sub>4</sub>PS<sub>3</sub> **MW** 320.43  
**PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** 74 - 75 °C **BP** 411 °C  
**FP** 203 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| Neat              | P-729S   | 1 mL |
| 100 µg/mL in MeOH | P-729S   | 1 mL |

## Terbufos-sulfoxide

Phosphorodithioic acid, S-[(1,1-dimethylethyl)  
sulfinyl-methyl] O,O-diethyl ester (9CI)

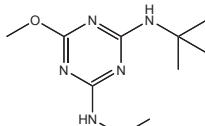


**CAS** 10548-10-4 **MF** C<sub>9</sub>H<sub>21</sub>O<sub>3</sub>PS<sub>3</sub> **MW** 304.43 **PS** L  
**SOL** MeOH, A, IPA **SG** 1.24 g/cm<sup>3</sup> **MP** N/A  
**BP** 397 °C **FP** 194 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-730N   | 10 mg |
| 100 µg/mL in MeOH | P-730S   | 1 mL  |

## Terbumeton

N<sub>2</sub>-tert-Butyl-N<sub>4</sub>-ethyl-6-methoxy-1,3,5-triazine-  
2,4-diamine

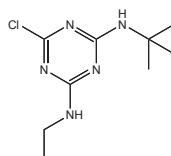


**CAS** 33693-04-8 **MF** C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>O **MW** 225.29 **PS** S  
**SOL** D, MeOH, A **SG** 1.08 g/cm<sup>3</sup> **MP** 124 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-504N   | 10 mg |
| 100 µg/mL in MeOH | P-504S   | 1 mL  |

## Terbuthylazine

N<sub>2</sub>-tert-butyl-6-chloro-N<sub>4</sub>-ethyl-1,3,5-triazine-  
2,4-diamine

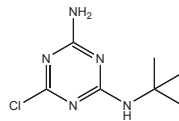


**CAS** 5915-41-3 **MF** C<sub>9</sub>H<sub>16</sub>ClN<sub>5</sub> **MW** 229.71 **PS** S  
**SOL** A, H **SG** 1.19 g/cm<sup>3</sup> **MP** 178 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-169N   | 10 mg |
| 100 µg/mL in MeOH | P-169S   | 1 mL  |

## Terbuthylazine desethyl

2-Amino-4-tert-butylamino-6-chloro-1,3,5-triazine

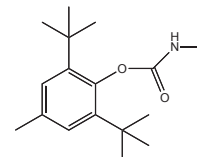


**CAS** 30125-63-4 **MF** C<sub>7</sub>H<sub>12</sub>ClN<sub>5</sub> **MW** 201.66 **PS** S  
**SOL** EA **SG** 1.19 g/cm<sup>3</sup> **MP** 177 - 179 °C  
**BP** 387 °C **FP** 188 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-613N   | 10 mg |
| 100 µg/mL in MeOH | P-613S   | 1 mL  |

## Terbutol

2,6-Di-tert-butyl-p-tolyl methylcarbamate



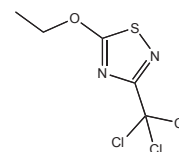
**CAS** 1918-11-2 **MF** C<sub>17</sub>H<sub>27</sub>NO<sub>2</sub> **MW** 277.4 **PS** S  
**SG** 0.97 g/cm<sup>3</sup> **MP** 200 - 201 °C **BP** 334 °C  
**FP** 156 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-464N   | 10 mg |
| 100 µg/mL in MeOH | P-464S   | 1 mL  |

**Terbutryne** *see Prebane*  
**Terraneb** *see Chloroneb*

## Terrazole

Ethyl 3-trichloromethyl-1,2,4-thiadiazol-5-yl ether

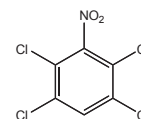


**CAS** 2593-15-9 **MF** C<sub>5</sub>H<sub>5</sub>Cl<sub>3</sub>N<sub>2</sub>OS **MW** 247.53 **PS** L  
**SG** 1.50 g/cm<sup>3</sup> **MP** 20 °C **BP** 95 °C **FP** 154 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-190N   | 10 mg |
| 100 µg/mL in MeOH | P-190S   | 1 mL  |

## 2,3,5,6-Tetrachloronitrobenzene

2,3,5,6-Tetrachloronitrobenzene



**CAS** 117-18-0 **MF** C<sub>6</sub>HCl<sub>4</sub>NO<sub>2</sub> **MW** 260.89 **PS** S  
**SG** 1.75 g/cm<sup>3</sup> **MP** 98 - 101 °C **BP** 304 °C **FP** 143 °C

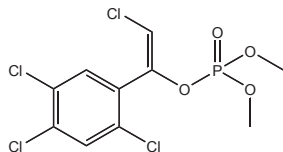
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-467N   | 10 mg |
| 100 µg/mL in MeOH | P-467S   | 1 mL  |



# Pesticide Standards

## Tetrachlorvinphos

1,2,4-Trichloro-5-[2-chloro-1-dimethoxyphosphoryloxy-ethenyl]benzene

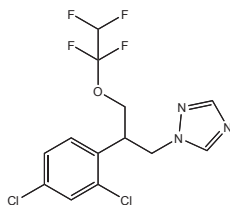


**CAS** 961-11-5 **MF** C<sub>10</sub>H<sub>9</sub>Cl<sub>4</sub>O<sub>4</sub>P **MW** 365.96 **PS** S  
**SOL** D, A **SG** 1.52 g/cm<sup>3</sup> **MP** 94 - 97 °C **BP** 400 °C  
**FP** 303 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-125N   | 10 mg |
| 100 µg/mL in MeOH | P-125S   | 1 mL  |

## Tetraconazole

(RS)-2-(2,4-dichlorophenyl)-3-(1H-1,2,4-triazol-1-yl)propyl-1,1,2,2-tetrafluoroethyl ether

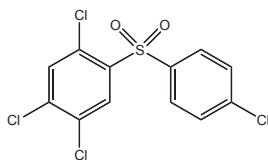


**CAS** 112281-77-3 **MF** C<sub>13</sub>H<sub>11</sub>Cl<sub>2</sub>F<sub>4</sub>N<sub>3</sub>O **MW** 372.15  
**PS** L **SOL** MeOH, A **SG** 1.50 g/cm<sup>3</sup> **MP** 6 °C  
**BP** 438 °C **FP** 219 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-721N   | 10 mg |
| 100 µg/mL in MeOH | P-721S   | 1 mL  |

## Tetradifon

4-Chlorophenyl 2,4,5-trichlorophenyl sulfone

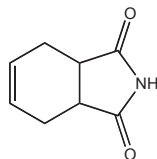


**CAS** 116-29-0 **MF** C<sub>12</sub>H<sub>6</sub>Cl<sub>4</sub>O<sub>2</sub>S **MW** 356.05 **PS** S  
**SOL** D, A, EA **SG** 1.52 g/cm<sup>3</sup> **MP** 146 °C **BP** N/A  
**FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-261N   | 10 mg |
| 100 µg/mL in MeOH | P-261S   | 1 mL  |

## 1,2,3,6-Tetrahydrophthalimide

1,2,3,6-Tetrahydrophthalimide

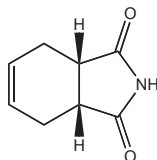


**CAS** 85-40-5 **MF** C<sub>8</sub>H<sub>7</sub>NO<sub>2</sub> **MW** 151.18 **PS** S  
**SG** 1.23 g/cm<sup>3</sup> **MP** 132 - 140 °C **BP** 337 °C  
**FP** 165 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-621N   | 10 mg |
| 100 µg/mL in MeOH | P-621S   | 1 mL  |

## cis-d<sub>4</sub>-Tetrahydrophthalimide

cis-d<sub>4</sub>-Tetrahydrophthalimide

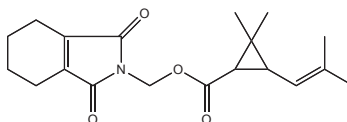


**CAS** 1469-48-3 **MF** C<sub>8</sub>H<sub>7</sub>NO<sub>2</sub> **MW** 151.16 **PS** S  
**SG** 1.28 g/cm<sup>3</sup> **MP** 129 - 133 °C **BP** 337 °C **FP** 165 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-116S   | 1 mL |

## Tetramethrin

Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propen-1-yl)-, (1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)methyl ester

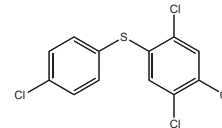


**CAS** 7696-12-0 **MF** C<sub>19</sub>H<sub>25</sub>NO<sub>4</sub> **MW** 331.41 **PS** S  
**SOL** MeOH, H **SG** 1.11 g/cm<sup>3</sup> **MP** 60 - 80 °C  
**BP** 185 - 190 °C **FP** >200 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-406N   | 10 mg |
| 100 µg/mL in MeOH | P-406S   | 1 mL  |

## Tetrasul

4-Chlorophenyl 2,4,5-trichlorophenyl sulfide



**CAS** 2227-13-6 **MF** C<sub>12</sub>H<sub>6</sub>Cl<sub>4</sub>S **MW** 324.05 **PS** S  
**SG** 1.55 g/cm<sup>3</sup> **MP** 146.5 - 147.5 °C **BP** 408 °C  
**FP** 186 °C

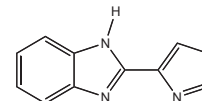
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-552N   | 10 mg |
| 100 µg/mL in MeOH | P-552S   | 1 mL  |

## Tetron

see **TEPP**

## Thiabendazole

2-(4-Thiazolyl)benzimidazole

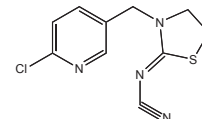


**CAS** 148-79-8 **MF** C<sub>10</sub>H<sub>7</sub>N<sub>3</sub>S **MW** 201.25 **PS** S  
**SOL** MeOH, A, EA **SG** 1.34 g/cm<sup>3</sup> **MP** 297 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-068N   | 10 mg |
| 100 µg/mL in MeOH | P-068S   | 1 mL  |

## Thiacloprid

(3-((6-Chloro-3-pyridinyl)methyl)-2-thiazolidinylidene)cyanamide

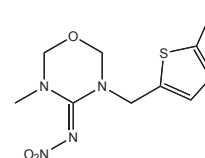


**CAS** 111988-49-9 **MF** C<sub>10</sub>H<sub>8</sub>ClN<sub>3</sub>S **MW** 252.72  
**PS** S **SOL** D, DMSO, A **SG** 1.46 g/cm<sup>3</sup> **MP** 136 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-838N    | 10 mg |
| 100 µg/mL in AcCN | P-838S-CN | 1 mL  |

## Thiamethoxam

3-(2-Chloro-5-thiazolylmethyl)tetrahydro-5-methyl-N-nitro-4H-1,3,5-oxadiazin-4-imine



**CAS** 153719-23-4 **MF** C<sub>8</sub>H<sub>10</sub>ClN<sub>5</sub>O<sub>3</sub>S **MW** 291.72  
**PS** S **SOL** A, EA, T **SG** 0.47 g/cm<sup>3</sup> **MP** 140 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-866N    | 10 mg |
| 100 µg/mL in AcCN | P-866S-CN | 1 mL  |

### Property Key

**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

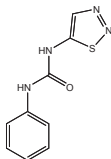
### Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water



## Thidiazuron

1-Phenyl-3-(1,2,3-thiadiazol-5-yl)urea

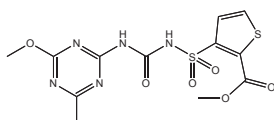


**CAS** 51707-55-2 **MF** C<sub>9</sub>H<sub>8</sub>N<sub>4</sub>OS **MW** 220.25 **PS** S **SOL** A, MeOH, T **SG** 1.51 g/cm<sup>3</sup> **MP** 210 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-369N   | 10 mg |
| 100 µg/mL in MeOH | P-369S   | 1 mL  |

## Thifensulfuron methyl

Methyl-3-(4-methoxy-6-methyl-1,3,5-triazin-2-ylcarbamoylsulfamoyl)thiophene-2-carboxylate



**CAS** 79277-27-3 **MF** C<sub>12</sub>H<sub>13</sub>N<sub>5</sub>O<sub>6</sub>S<sub>2</sub> **MW** 387.39 **PS** S **SOL** D, A, CN **SG** 1.58 g/cm<sup>3</sup> **MP** 176 °C **BP** N/A **FP** N/A

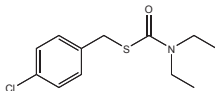
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-468N   | 10 mg |
| 100 µg/mL in MeOH | P-468S   | 1 mL  |

## Thimet

see Phorate

## Thiobencarb

S-4-Chlorobenzyl diethylthiocarbamate

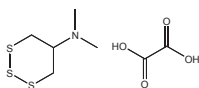


**CAS** 28249-77-6 **MF** C<sub>12</sub>H<sub>16</sub>ClNOS **MW** 257.78 **PS** L **SOL** MeOH, H, D **SG** 1.18 g/cm<sup>3</sup> **MP** 3.3 °C **BP** 153 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-180N   | 10 mg |
| 100 µg/mL in MeOH | P-180S   | 1 mL  |

## Thiocyclam Hydrogen oxalate

N,N-dimethyl-1,2,3-trithian-5-amine hydrogen oxalate



**CAS** 31895-22-4 **MF** C<sub>7</sub>H<sub>13</sub>N<sub>2</sub>O<sub>4</sub>S<sub>3</sub> **MW** 271.38 **PS** S **SOL** M, E, A **SG** 0.60 g/cm<sup>3</sup> **MP** 125 -128 °C **BP** 281 °C **FP** 124 °C

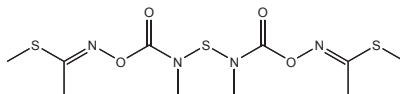
| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-688S   | 1 mL |

**alpha-Thiodan**  
**Thiodan II**  
**Thiodemeton**

see **Endosulfan I**  
see **Endosulfan II**  
see **Disulfoton**

## Thiodicarb

Bis[1-methylthioacetaldehyde-O-(N-methylcarbamoyl)oximino]sulfide

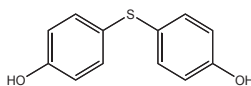


**CAS** 59669-26-0 **MF** C<sub>10</sub>H<sub>18</sub>N<sub>4</sub>O<sub>4</sub>S<sub>3</sub> **MW** 354.47 **PS** S **SOL** D, A, T **SG** 1.47 g/cm<sup>3</sup> **MP** 170 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-477N   | 10 mg |
| 100 µg/mL in MeOH | P-477S   | 1 mL  |

## 4,4'-Thiodiphenol

4,4'-Thiodiphenol

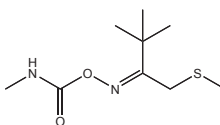


**CAS** 2664-63-3 **MF** C<sub>12</sub>H<sub>10</sub>O<sub>2</sub>S **MW** 218.27 **PS** S **SG** 1.37 g/cm<sup>3</sup> **MP** 154 - 156 °C **BP** 453 °C **FP** 220 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-117N   | 10 mg |
| 100 µg/mL in MeOH | P-117S   | 1 mL  |

## Thiofanox

3,3-Dimethyl-1-methylthiobutanone O-methylcarbamoyloxime

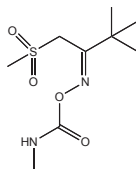


**CAS** 39196-18-4 **MF** C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 218.32 **PS** S **SG** 1.05 g/cm<sup>3</sup> **MP** 57 - 58 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-266N   | 10 mg |
| 100 µg/mL in MeOH | P-266S   | 1 mL  |

## Thiofanox sulfone

3,3-Dimethyl-1-(methylsulfonyl)-2-butanone O-((methylamino)carbonyl)oxime



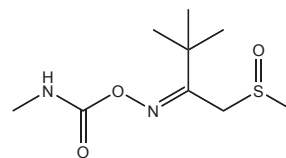
**CAS** 39184-59-3 **MF** C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> **MW** 250.32 **PS** N/A **SG** 1.18 g/cm<sup>3</sup> **MP** N/A **BP** N/A **FP** N/A

| Matrix           | Cat. No.       | Unit |
|------------------|----------------|------|
| 10 µg/mL in AcCN | P-839S-CN-0.1X | 1 mL |

Δ Pesticides containing a carboxyl group will autoesterify in MeOH. These standards are intended for use as a post-esterification standard for GC analysis. For other types of analysis (ex. HPLC) we suggest a non-hydroxylic solvent such as Acetonitrile.

## Thiofanox sulfoxide

3,3-Dimethyl-1-(methylsulfinyl)-2-butanone O-((methylamino)carbonyl)oxime

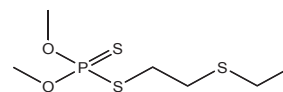


**CAS** 39184-27-5 **MF** C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 234.32 **PS** S **SG** 1.16 g/cm<sup>3</sup> **MP** 88 - 89 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-702N   | 10 mg |
| 100 µg/mL in MeOH | P-702S   | 1 mL  |

## Thiometon

2-Ethylthioethyl O,O-dimethyl phosphorodithioate

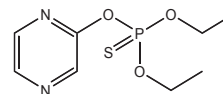


**CAS** 640-15-3 **MF** C<sub>6</sub>H<sub>15</sub>O<sub>2</sub>PS<sub>3</sub> **MW** 246.35 **PS** L **SG** 1.21 g/cm<sup>3</sup> **MP** N/A **BP** 110 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-486N   | 10 mg |
| 100 µg/mL in MeOH | P-486S   | 1 mL  |

## Thionazin

o,o-Diethyl-o-2-pyrazinylphosphorothioate

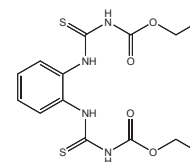


**CAS** 297-97-2 **MF** C<sub>8</sub>H<sub>13</sub>N<sub>2</sub>O<sub>2</sub>PS **MW** 248.24 **PS** L **SG** 1.21 g/cm<sup>3</sup> **MP** -1 °C **BP** 80 °C **FP** N/A

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-171S   | 1 mL |

## Thiophanate Δ

Diethyl 4,4'-(o-phenylene)bis(3-thioallophanate)



**CAS** 23564-06-9 **MF** C<sub>14</sub>H<sub>18</sub>N<sub>4</sub>O<sub>4</sub>S<sub>2</sub> **MW** 370.45 **PS** S **SG** 1.41 g/cm<sup>3</sup> **MP** 195 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No.    | Unit  |
|-------------------|-------------|-------|
| Neat              | P-321N      | 10 mg |
| 100 µg/mL in MeOH | P-321S      | 1 mL  |
| 100 µg/mL in AcCN | P-321S-CN ‡ | 1 mL  |

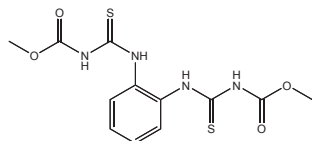
‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**



# Pesticide Standards

## Thiophanate-methyl

Dimethyl [(1,2-phenylene)bis-(iminocarbonothionyl)] bis[carbamate]



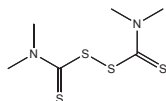
**CAS** 23564-05-8 **MF** C<sub>12</sub>H<sub>14</sub>N<sub>4</sub>O<sub>4</sub>S<sub>2</sub> **MW** 342.4  
**PS** S **SOL** A, MeOH, CN **SG** 1.50 g/cm<sup>3</sup> **MP** 172 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-349N   | 10 mg |
| 100 µg/mL in MeOH | P-349S   | 1 mL  |

**Thiophos** see **Parathion**

## Thiram

bis(Dimethylthiocarbamoyl) disulfide

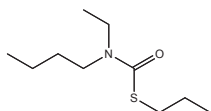


**CAS** 137-26-8 **MF** C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>S<sub>4</sub> **MW** 240.44 **PS** S  
**SOL** D, A, T **SG** 1.29 g/cm<sup>3</sup> **MP** 156 °C **BP** N/A  
**FP** 149 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-118N   | 10 mg |
| 100 µg/mL in MeOH | P-118S   | 1 mL  |

## Tillam

S-Propyl butyl(ethyl)thiocarbamate



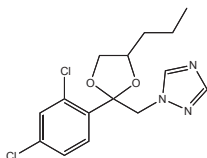
**CAS** 1114-71-2 **MF** C<sub>10</sub>H<sub>21</sub>NOS **MW** 203.35  
**PS** L **SG** 0.96 g/cm<sup>3</sup> **MP** N/A **BP** 142 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-105N   | 10 mg |
| 100 µg/mL in MeOH | P-105S   | 1 mL  |

**Tillox** see **Benazolin**

## Tilt

1-(2-(2',4'-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl-methyl)-1H-1,2,4-triazole

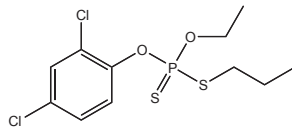


**CAS** 60207-90-1 **MF** C<sub>15</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>2</sub> **MW** 342.22  
**PS** L **SG** 1.39 g/cm<sup>3</sup> **MP** N/A **BP** 480 °C  
**FP** 244 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-280N   | 10 mg |
| 100 µg/mL in MeOH | P-280S   | 1 mL  |

## Tokuthion

O-2,4-Dichlorophenyl O-ethyl S-propyl phosphorothioate



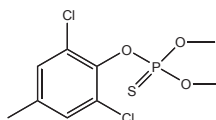
**CAS** 34643-46-4 **MF** C<sub>11</sub>H<sub>15</sub>Cl<sub>2</sub>O<sub>2</sub>PS<sub>2</sub> **MW** 345.25  
**PS** L **SG** 1.35 g/cm<sup>3</sup> **MP** N/A **BP** 398 °C  
**FP** 194 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-126N   | 10 mg |
| 100 µg/mL in MeOH | P-126S   | 1 mL  |

**Tolban** see **Profluralin**

## Tolclofos-methyl

O-(2,6-Dichloro-p-tolyl)  
O,O-dimethyl phosphorothioate

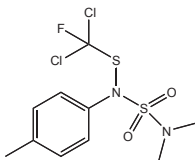


**CAS** 57018-04-9 **MF** C<sub>9</sub>H<sub>7</sub>Cl<sub>2</sub>O<sub>3</sub>PS **MW** 301.13  
**PS** S **SOL** MeOH, H **SG** 1.40 g/cm<sup>3</sup> **MP** 78-80 °C  
**BP** 338 °C **FP** 158 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-557N   | 10 mg |
| 100 µg/mL in MeOH | P-557S   | 1 mL  |

## Tolyfluanide

N-dichlorofluoromethylthio-N',N'-dimethyl-  
N-p-tolylsulfamide



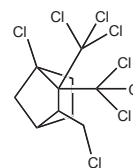
**CAS** 731-27-1 **MF** C<sub>10</sub>H<sub>13</sub>Cl<sub>2</sub>FN<sub>2</sub>O<sub>2</sub>S<sub>2</sub> **MW** 347.26  
**PS** S **SOL** CN, D, A **SG** 1.50 g/cm<sup>3</sup> **MP** 96 °C  
**BP** 366 °C **FP** 175 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-553N   | 10 mg |
| 100 µg/mL in MeOH | P-553S ‡ | 1 mL  |

**Torak** see **Dialifos**  
**Tordon** see **Picloram**

‡ To delay premature breakdown of thermally labile products in transit we suggest requesting a **Cold Pack**

## Toxaphene



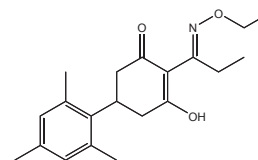
**CAS** 8001-35-2 **MF** C<sub>10</sub>H<sub>10</sub>Cl<sub>8</sub> **MW** 413.81 **PS** S  
**SG** 1.65 g/cm<sup>3</sup> **MP** 65 - 90 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-093N   | 10 mg |
| 100 µg/mL in MeOH | P-093S   | 1 mL  |

**2,4,5-TP** see **Silvex**  
**2,4,5-TP methyl ester** see **Silvex methyl ester**

## Tralkoxydim

2-[1-(ethoxyimino)propyl]-3-hydroxy-  
5-mesitylcyclohex-2-enone

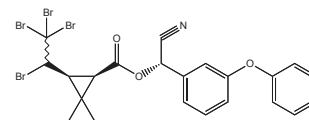


**CAS** 87820-88-0 **MF** C<sub>20</sub>H<sub>27</sub>NO<sub>3</sub> **MW** 329.43 **PS** S  
**SOL** D, T, EA **SG** 1.09 g/cm<sup>3</sup> **MP** N/A  
**BP** 461 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-405N   | 10 mg |
| 100 µg/mL in MeOH | P-405S   | 1 mL  |

## Tralomethrin

alpha-Cyano-3-phenoxybenzyl 2,2-dimethyl-3-  
(1,2,2,2-tetrabromoethyl)cyclopropanecarboxylate



**CAS** 66841-25-6 **MF** C<sub>22</sub>H<sub>19</sub>Br<sub>4</sub>NO<sub>3</sub> **MW** 665.01  
**PS** S **SOL** D, T, A **SG** 1.70 g/cm<sup>3</sup> **MP** 138-148 °C  
**BP** N/A **FP** 63 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-478N   | 10 mg |
| 100 µg/mL in MeOH | P-478S   | 1 mL  |

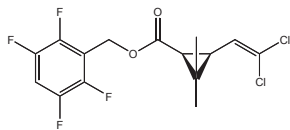
| Property Key |                                       | Solubility Key (SOL) |                     |
|--------------|---------------------------------------|----------------------|---------------------|
| <b>CAS</b>   | Chemical Abstract Service Number      | <b>A</b>             | Acetone             |
| <b>MF</b>    | Molecular Formula                     | <b>CN</b>            | Acetonitrile (AcCN) |
| <b>MW</b>    | Molecular Weight                      | <b>D</b>             | Methylene chloride  |
| <b>PS</b>    | Physical State (Solid, Liquid)        | <b>DMSO</b>          | Dimethyl sulfoxide  |
| <b>SOL</b>   | Solubility                            | <b>EA</b>            | Ethyl acetate       |
| <b>SG</b>    | Specific Gravity (g/cm <sup>3</sup> ) | <b>H</b>             | Hexane              |
| <b>MP</b>    | Melting Point (°C)                    | <b>IPA</b>           | Isopropanol         |
| <b>BP</b>    | Boiling Point (°C)                    | <b>MeOH</b>          | Methanol            |
| <b>FP</b>    | Flash Point (°C)                      | <b>MC</b>            | Methyl cellosolve   |
|              |                                       | <b>T</b>             | Toluene             |
|              |                                       | <b>TP</b>            | Isooctane           |
|              |                                       | <b>W</b>             | Water               |





## Transfluthrin

2,3,5,6-Tetrafluorobenzyl (1R,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate



**CAS** 118712-89-3 **MF** C<sub>15</sub>H<sub>12</sub>Cl<sub>2</sub>F<sub>4</sub>O<sub>2</sub> **MW** 371.15  
**PS S SOL** H, D, T **SG** 1.51 g/cm<sup>3</sup> **MP** 32 °C  
**BP** 351 °C **FP** 115 °C

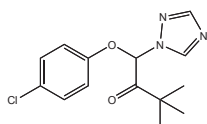
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-743N   | 10 mg |
| 100 µg/mL in MeOH | P-743S   | 1 mL  |

## Treflan

see Trifluralin

## Triadimefon

1-(4-Chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)butan-2-one

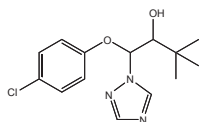


**CAS** 43121-43-3 **MF** C<sub>14</sub>H<sub>16</sub>ClN<sub>3</sub>O<sub>2</sub> **MW** 293.75  
**PS S SOL** D, T, IPA **SG** 1.28 g/cm<sup>3</sup> **MP** 82 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-069N   | 10 mg |
| 100 µg/mL in MeOH | P-069S   | 1 mL  |

## Triadimenol

(1RS,2RS;1RS,2SR)-1-(4-Chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)butan-2-ol

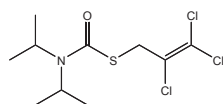


**CAS** 55219-65-3 **MF** C<sub>14</sub>H<sub>16</sub>ClN<sub>3</sub>O<sub>2</sub> **MW** 295.76  
**PS S SOL** D, IPA, T **SG** 1.24 g/cm<sup>3</sup>  
**MP** 121 - 127 °C **BP** 465 °C **FP** 235 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-361N   | 10 mg |
| 100 µg/mL in MeOH | P-361S   | 1 mL  |

## Triallate

S-2,3,3-Trichloroallyl di-isopropyl(thiocarbamate)

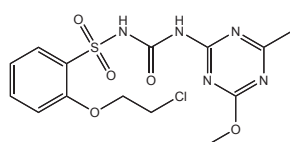


**CAS** 2303-17-5 **MF** C<sub>10</sub>H<sub>16</sub>Cl<sub>3</sub>NOS **MW** 304.66  
**PS S SOL** A, EA **SG** 1.27 g/cm<sup>3</sup> **MP** 29 °C  
**BP** 148 - 149 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-268N   | 10 mg |
| 100 µg/mL in MeOH | P-268S   | 1 mL  |

## Triasulfuron

2-(2-Chloroethoxy)-N-((4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino)carbonyl)benzenesulfonamide



**CAS** 82097-50-5 **MF** C<sub>14</sub>H<sub>16</sub>ClN<sub>5</sub>O<sub>5</sub> **MW** 401.83  
**PS S SOL** T, D, A **SG** 1.47 g/cm<sup>3</sup>  
**MP** 178.1 °C (decomp) **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-592N   | 10 mg |
| 100 µg/mL in MeOH | P-592S   | 1 mL  |

## 1,2,4-Triazole

1,2,4-Triazole

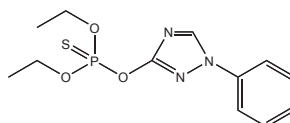


**CAS** 288-88-0 **MF** C<sub>2</sub>H<sub>3</sub>N<sub>3</sub> **MW** 69.07 **PS S**  
**SG** 1.27 g/cm<sup>3</sup> **MP** 119 - 121 °C **BP** 260 °C  
**FP** 139 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-627N   | 10 mg |
| 100 µg/mL in MeOH | P-627S   | 1 mL  |

## Triazophos

O,O-Diethyl O-(1-phenyl-1H-1,2,4-triazol-3-yl)phosphorothioate

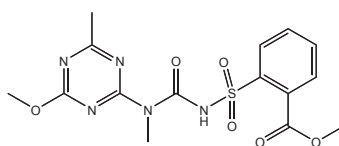


**CAS** 24017-47-8 **MF** C<sub>12</sub>H<sub>16</sub>N<sub>3</sub>O<sub>3</sub>PS **MW** 313.31  
**PS L SOL** MeOH, D, A **SG** 1.25 g/cm<sup>3</sup> **MP** 0-5 °C  
**BP** N/A **FP** 25 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-334N   | 10 mg |
| 100 µg/mL in MeOH | P-334S   | 1 mL  |

## Tribenuron-methyl

Methyl 2-[4-methoxy-6-methyl-1,3,5-triazin-2-yl(methyl)carbamoylsulfomoyl]benzoate



**CAS** 101200-48-0 **MF** C<sub>15</sub>H<sub>17</sub>N<sub>5</sub>O<sub>6</sub>S **MW** 395.39  
**PS S SOL** CN, A, EA **SG** 1.15 g/cm<sup>3</sup> **MP** 141 °C  
**BP** 377 °C **FP** 182 °C

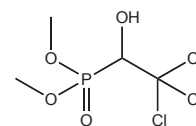
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-666N   | 10 mg |
| 100 µg/mL in MeOH | P-666S   | 1 mL  |

## Tribufos

see DEF 6

## Trichlorfon

Dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate

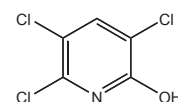


**CAS** 52-68-6 **MF** C<sub>4</sub>H<sub>8</sub>Cl<sub>3</sub>O<sub>4</sub>P **MW** 257.44  
**PS S SG** 1.73 g/cm<sup>3</sup> **MP** 78 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-044N   | 10 mg |
| 100 µg/mL in MeOH | P-044S   | 1 mL  |

## 3,5,6-Trichloro-2-pyridinol

3,5,6-Trichloro-2-pyridinol

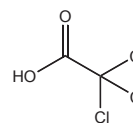


**CAS** 6515-38-4 **MF** C<sub>5</sub>H<sub>2</sub>Cl<sub>3</sub>NO **MW** 198.43 **PS S**  
**SOL** MeOH, A **SG** 1.67 g/cm<sup>3</sup> **MP** 172 - 174 °C  
**BP** 255 °C **FP** 108 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-626N   | 10 mg |
| 100 µg/mL in MeOH | P-626S   | 1 mL  |

## Trichloroacetic acid

Trichloroacetic acid

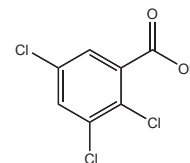


**CAS** 76-03-9 **MF** C<sub>2</sub>HCl<sub>3</sub>O<sub>2</sub> **MW** 163.39 **PS S**  
**SG** 1.6 g/cm<sup>3</sup> **MP** 58 °C **BP** 198 °C **FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-459N    | 10 mg |
| 100 µg/mL in MeOH | P-459S    | 1 mL  |
| 100 µg/mL in AcCN | P-459S-CN | 1 mL  |

## 2,3,5-Trichlorobenzoic acid

2,3,5-Trichlorobenzoic acid



**CAS** 50-73-7 **MF** C<sub>7</sub>H<sub>2</sub>Cl<sub>3</sub>O<sub>2</sub> **MW** 225.46 **PS S**  
**SG** 1.64 g/cm<sup>3</sup> **MP** 166-167 °C **BP** 329 °C  
**FP** 153 °C

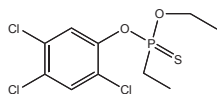
| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-508N    | 10 mg |
| 100 µg/mL in MeOH | P-508S    | 1 mL  |
| 100 µg/mL in AcCN | P-508S-CN | 1 mL  |



# Pesticide Standards

## Trichloronate

O-Ethyl O-2,4,5-trichlorophenyl ethylphosphonothioate

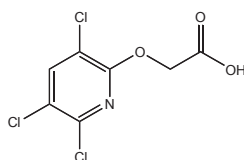


**CAS** 327-98-0 **MF** C<sub>10</sub>H<sub>12</sub>Cl<sub>3</sub>O<sub>2</sub>PS **MW** 333.6  
**PS** L **SOL** D **SG** 1.36 g/cm<sup>3</sup> **MP** N/A **BP** 380 °C  
**FP** 179 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-127N   | 10 mg |
| 100 µg/mL in MeOH | P-127S   | 1 mL  |

## Triclopyr Δ

3,5,6-Trichloro-2-pyridyloxyacetic acid

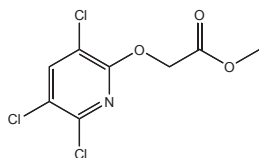


**CAS** 55335-06-3 **MF** C<sub>7</sub>H<sub>4</sub>Cl<sub>3</sub>NO<sub>3</sub> **MW** 256.47  
**PS** S **SG** 1.85 g/cm<sup>3</sup> **MP** 149 °C **BP** ~290 °C  
**FP** N/A

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-289N    | 10 mg |
| 100 µg/mL in MeOH | P-289S    | 1 mL  |
| 100 µg/mL in AcCN | P-289S-CN | 1 mL  |

## Triclopyr methyl ester

3,4,6-Trichloro-2-pyridyloxyacetic acid methyl ester

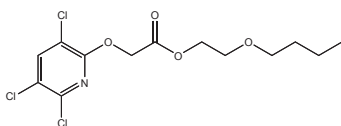


**CAS** 60825-26-5 **MF** C<sub>8</sub>H<sub>4</sub>Cl<sub>3</sub>NO<sub>3</sub> **MW** 270.5  
**PS** S **SG** 1.51 g/cm<sup>3</sup> **MP** 103 - 104 °C **BP** 313 °C  
**FP** 143 °C

| Matrix            | Cat. No. | Unit |
|-------------------|----------|------|
| 100 µg/mL in MeOH | P-291S   | 1 mL |

## Triclopyr-2-butoxy ethyl ester

Acetic acid, ((3,5,6-trichloro-2-pyridinyl)oxy)-, 2-butoxyethyl ester

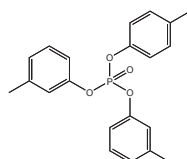


**CAS** 64700-56-7 **MF** C<sub>13</sub>H<sub>16</sub>Cl<sub>3</sub>NO<sub>4</sub> **MW** 356.63  
**PS** L **SOL** MeOH, A, EA **SG** 1.33 g/cm<sup>3</sup> **MP** N/A  
**BP** >150 °C **FP** 64 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-703N    | 10 mg |
| 100 µg/mL in AcCN | P-703S-CN | 1 mL  |

## Tricresyl phosphate

Tricresylphosphate

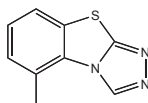


**CAS** 1330-78-5 **MF** C<sub>21</sub>H<sub>21</sub>O<sub>4</sub>P **MW** 368.36  
**PS** L **SG** 1.17 g/cm<sup>3</sup> **MP** < -40 °C **BP** 265 °C  
**FP** >110 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-209N   | 10 mg |
| 100 µg/mL in MeOH | P-209S   | 1 mL  |

## Tricyclazole

5-Methyl-1,3,4-triazolo[3,4-b][1,3]benzothiazole

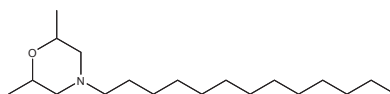


**CAS** 41814-78-2 **MF** C<sub>9</sub>H<sub>7</sub>N<sub>3</sub>S **MW** 189.24 **PS** S  
**SG** 1.40 g/cm<sup>3</sup> **MP** 185 °C **BP** 275 °C **vFP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-090N   | 10 mg |
| 100 µg/mL in MeOH | P-090S   | 1 mL  |

## Tridemorph

2,6-Dimethyl-4-tridecylmorpholine

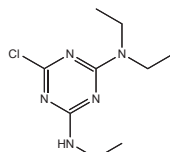


**CAS** 24602-86-6 **MF** C<sub>19</sub>H<sub>39</sub>NO **MW** 297.52  
**PS** L **SOL** A, EA **SG** 0.86 g/cm<sup>3</sup> **MP** N/A  
**BP** 134 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-307N   | 10 mg |
| 100 µg/mL in MeOH | P-307S   | 1 mL  |

## Trietazine

2-Chloro-4-diethylamino-6-ethylamino-1,3,5-triazine

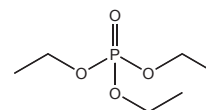


**CAS** 1912-26-1 **MF** C<sub>9</sub>H<sub>16</sub>ClN<sub>5</sub> **MW** 229.71 **PS** S  
**SOL** A **SG** 1.22 g/cm<sup>3</sup> **MP** 100 - 101 °C **BP** 374 °C  
**FP** 180 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-492N   | 10 mg |
| 100 µg/mL in MeOH | P-492S   | 1 mL  |

## Triethylphosphate

Triethylphosphate

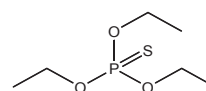


**CAS** 78-40-0 **MF** C<sub>6</sub>H<sub>15</sub>O<sub>4</sub>P **MW** 182.15 **PS** L  
**SG** 1.07 g/cm<sup>3</sup> **MP** -56.0 °C **BP** 215 °C **FP** 116 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-335N   | 10 mg |
| 100 µg/mL in MeOH | P-335S   | 1 mL  |

## o,o,o-Triethylphosphorothioate

O,O,O-Triethylphosphorothioate

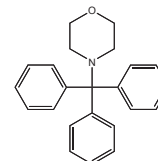


**CAS** 126-68-1 **MF** C<sub>6</sub>H<sub>15</sub>O<sub>3</sub>PS **MW** 198.22 **PS** L  
**SG** 1.08 g/cm<sup>3</sup> **MP** N/A **BP** 220 °C **FP** 225 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-172N   | 10 mg |
| 100 µg/mL in MeOH | P-172S   | 1 mL  |

## Trifenmorph

4-(Triphenylmethyl)morpholine

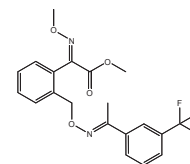


**CAS** 1420-06-0 **MF** C<sub>23</sub>H<sub>23</sub>NO **MW** 329.43  
**PS** S **SG** 1.12 g/cm<sup>3</sup> **MP** 174 - 176 °C **BP** 432 °C  
**FP** 126 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-300N   | 10 mg |
| 100 µg/mL in MeOH | P-300S   | 1 mL  |

## Trifloxystrobin

Methyl-(2Z)-2-methoxyimino-2-[2-[[1-[3-(trifluoromethyl)phenyl]ethylideneamino]oxymethyl]phenyl]acetate



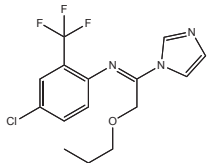
**CAS** 141517-21-7 **MF** C<sub>20</sub>H<sub>19</sub>F<sub>3</sub>N<sub>2</sub>O<sub>4</sub> **MW** 408.37  
**PS** S **SG** 1.22 g/cm<sup>3</sup> **MP** 158 - 159 °C **BP** 470 °C  
**FP** 238 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-867N    | 10 mg |
| 100 µg/mL in AcCN | P-867S-CN | 1 mL  |



## Triflumizole

1-((4-Chloro-2-(trifluoromethyl)phenyl)imino)-2-propoxyethyl)-1H-imidazole

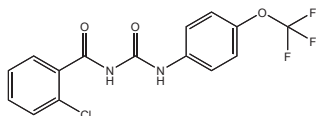


**CAS** 68694-11-1 **MF** C<sub>15</sub>H<sub>15</sub>ClF<sub>3</sub>N<sub>3</sub>O **MW** 345.75  
**PS** S **SOL** H, E, A **SG** 1.38 g/cm<sup>3</sup> **MP** 81 °C  
**BP** ~230 °C **FP** >230 °C

| Matrix            | Cat. No.  | Unit |
|-------------------|-----------|------|
| 100 µg/mL in AcCN | P-479S-CN | 1 mL |

## Triflurumuron

2-chloro-N-[[[4-(trifluoromethoxy)phenyl]amino]carbonyl]benzamide

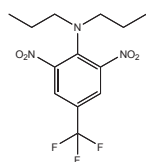


**CAS** 64628-44-0 **MF** C<sub>15</sub>H<sub>10</sub>ClF<sub>3</sub>N<sub>2</sub>O<sub>3</sub> **MW** 358.7  
**PS** S **SOL** D, T, IPA **SG** 1.48 g/cm<sup>3</sup> **MP** 195 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-689N   | 10 mg |
| 100 µg/mL in MeOH | P-689S   | 1 mL  |

## Trifluralin

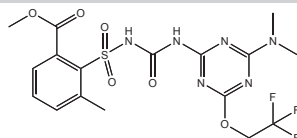
alpha,alpha,alpha-Trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine



**CAS** 1582-09-8 **MF** C<sub>13</sub>H<sub>16</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub> **MW** 335.28  
**PS** S **SOL** CN, T, A **SG** 1.36 g/cm<sup>3</sup> **MP** 49 °C  
**BP** 96 °C **FP** 151 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-197N   | 10 mg |
| 100 µg/mL in MeOH | P-197S   | 1 mL  |

## Triflurosulfuron-methyl

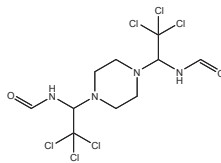


**CAS** 126535-15-7 **MF** C<sub>17</sub>H<sub>19</sub>F<sub>3</sub>N<sub>6</sub>O<sub>6</sub>S **MW** 492.43  
**PS** S **SOL** D, A, CN **SG** 1.45 g/cm<sup>3</sup> **MP** 160 °C  
**BP** N/A **FP** 150 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-840N    | 10 mg |
| 100 µg/mL in AcCN | P-840S-CN | 1 mL  |

## Triforine

N,N'-[Piperazine-1,4-diylbis(trichloromethyl)methylene]diformamide

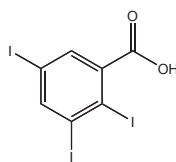


**CAS** 26644-46-2 **MF** C<sub>10</sub>H<sub>14</sub>Cl<sub>6</sub>N<sub>4</sub>O<sub>2</sub> **MW** 434.96  
**PS** S **SOL** DMSO, D, A **SG** 1.55 g/cm<sup>3</sup> **MP** 155 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-308N   | 10 mg |
| 100 µg/mL in MeOH | P-308S   | 1 mL  |

## 2,3,5-Triiodobenzoic acid Δ

2,3,5-Triiodobenzoic acid

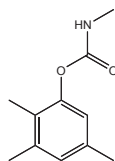


**CAS** 88-82-4 **MF** C<sub>7</sub>H<sub>3</sub>I<sub>3</sub>O<sub>2</sub> **MW** 499.81 **PS** S  
**SG** 2.97 g/cm<sup>3</sup> **MP** 224 - 226 °C **BP** 457 °C  
**FP** 230 °C

| Matrix            | Cat. No.  | Unit  |
|-------------------|-----------|-------|
| Neat              | P-507N    | 10 mg |
| 100 µg/mL in MeOH | P-507S    | 1 mL  |
| 100 µg/mL in AcCN | P-507S-CN | 1 mL  |

## 2,3,5-Trimethacarb

2,3,5-Trimethylphenyl methylcarbamate



**CAS** 2655-15-4 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub> **MW** 193.24  
**PS** S **SG** 1.05 g/cm<sup>3</sup> **MP** 122.0 - 123.0 °C  
**BP** 288 °C **FP** 128 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-515N   | 10 mg |
| 100 µg/mL in MeOH | P-515S   | 1 mL  |

### Property Key

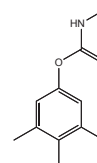
**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

## 3,4,5-Trimethacarb

3,4,5-Trimethylphenyl methylcarbamate

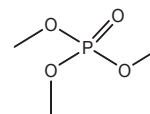


**CAS** 2686-99-9 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub> **MW** 193.24  
**PS** S **SG** 1.05 g/cm<sup>3</sup> **MP** 105 - 114 °C **BP** 295 °C  
**FP** 132 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-516N   | 10 mg |
| 100 µg/mL in MeOH | P-516S   | 1 mL  |

## Trimethyl phosphate

Trimethyl phosphate

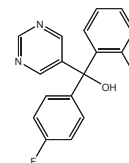


**CAS** 512-56-1 **MF** C<sub>3</sub>H<sub>9</sub>O<sub>4</sub>P **MW** 140.07 **PS** L  
**SG** 1.20 g/cm<sup>3</sup> **MP** -46 °C **BP** 197 °C **FP** 107 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-210N   | 10 mg |
| 100 µg/mL in MeOH | P-210S   | 1 mL  |

## Trimidal

5-(2-Chloro-4'-fluorobenzhydryl)-4-hydroxypyrimidine

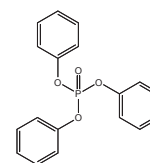


**CAS** 63284-71-9 **MF** C<sub>17</sub>H<sub>12</sub>ClFN<sub>2</sub>O **MW** 314.74  
**PS** S **SG** 0.70 g/cm<sup>3</sup> **MP** 126 °C **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-422N   | 10 mg |
| 100 µg/mL in MeOH | P-422S   | 1 mL  |

## Triphenylphosphate

Triphenylphosphate



**CAS** 115-86-6 **MF** C<sub>18</sub>H<sub>15</sub>O<sub>4</sub>P **MW** 326.28 **PS** S  
**SG** 1.27 g/cm<sup>3</sup> **MP** 50 °C **BP** 370 °C **FP** 220 °C

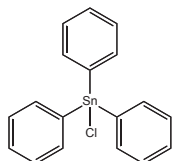
| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-192N   | 10 mg |
| 100 µg/mL in MeOH | P-192S   | 1 mL  |



# Pesticide Standards

## Triphenyltin chloride

Triphenyltin chloride



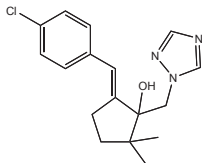
**CAS** 639-58-7 **MF** C<sub>18</sub>H<sub>15</sub>Cl<sub>5</sub>Sn **MW** 385.47  
**PS** S **SG** N/A **MP** 97 - 107 °C **BP** 397 °C  
**FP** 200 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-526N   | 10 mg |
| 100 µg/mL in MeOH | P-526S   | 1 mL  |

**Trithion** see **Carbophenothion**

## Triticonazole

(±)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-ylmethyl)cyclopentanol



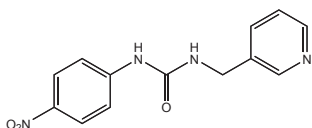
**CAS** 131983-72-7 **MF** C<sub>17</sub>H<sub>20</sub>ClN<sub>3</sub>O **MW** 317.81

| Matrix         | Cat. No.       | Unit |
|----------------|----------------|------|
| 10 µg/mL in TP | P-868S-TP-0.1X | 1 mL |

**Trizilin** see **Nitrofen**  
**Tugon** see **Trichlorfon**

## Vacor

1-(3-Pyridylmethyl)-3-(4-nitrophenyl)urea



**CAS** 53558-25-1 **MF** C<sub>13</sub>H<sub>12</sub>N<sub>4</sub>O<sub>3</sub> **MW** 272.26  
**PS** S **SG** 1.38 g/cm<sup>3</sup> **MP** 223 - 225 °C **BP** 274 °C  
**FP** 240 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-240N   | 10 mg |
| 100 µg/mL in MeOH | P-240S   | 1 mL  |

### Property Key

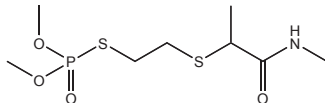
**CAS** Chemical Abstract Service Number  
**MF** Molecular Formula  
**MW** Molecular Weight  
**PS** Physical State (Solid, Liquid)  
**SOL** Solubility  
**SG** Specific Gravity (g/cm<sup>3</sup>)  
**MP** Melting Point (°C)  
**BP** Boiling Point (°C)  
**FP** Flash Point (°C)

### Solubility Key (SOL)

**A** Acetone  
**CN** Acetonitrile (AcCN)  
**D** Methylene chloride  
**DMSO** Dimethyl sulfoxide  
**EA** Ethyl acetate  
**H** Hexane  
**IPA** Isopropanol  
**MeOH** Methanol  
**MC** Methyl cellosolve  
**T** Toluene  
**TP** Isooctane  
**W** Water

## Vamidothion

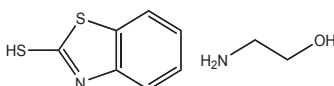
O,O-Dimethyl S-2-(1-methylcarbamoylthio)ethyl phosphorothioate



**CAS** 2275-23-2 **MF** C<sub>8</sub>H<sub>18</sub>NO<sub>4</sub>PS<sub>2</sub> **MW** 287.34  
**PS** S **SOL** CN, D, T **SG** 1.24 g/cm<sup>3</sup> **MP** 43 °C  
**BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-350N   | 10 mg |
| 100 µg/mL in MeOH | P-350S   | 1 mL  |

## Vanicide-20S



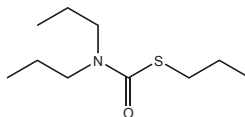
**CAS** N/A **MF** C<sub>7</sub>H<sub>8</sub>NS<sub>2</sub>•C<sub>2</sub>H<sub>4</sub>NO **MW** 228.34  
**PS** S **SG** N/A **MP** N/A **BP** N/A **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-073N   | 10 mg |
| 100 µg/mL in MeOH | P-073S   | 1 mL  |

**Vapona** see **Dichlorvos**  
**Vendex** see **Fenbutatin oxide**  
**Vernam** see **Vernolate**

## Vernolate

S-Propyl dipropylthiocarbamate

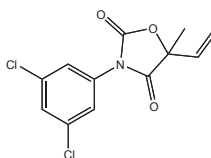


**CAS** 1929-77-7 **MF** C<sub>10</sub>H<sub>21</sub>NOS **MW** 203.38  
**PS** L **SG** 0.95 g/cm<sup>3</sup> **MP** N/A **BP** 258 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-111N   | 10 mg |
| 100 µg/mL in MeOH | P-111S   | 1 mL  |

## Vinclozolin

(RS)-3-(3,5-Dichlorophenyl)-5-methyl-5-vinyl-1,3-oxazolidine-2,4-dione



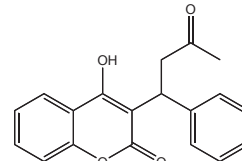
**CAS** 50471-44-8 **MF** C<sub>12</sub>H<sub>9</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 286.11  
**PS** S **SOL** D, A, EA **SG** 1.51 g/cm<sup>3</sup>  
**MP** 107 - 110 °C **BP** 131 °C **FP** N/A

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-122N   | 10 mg |
| 100 µg/mL in MeOH | P-122S   | 1 mL  |

**Voltage** see **Pyraclofos**  
**Vydate** see **Oxamyl**

## Warfarin

(RS)-4-hydroxy-3-(3-oxo-1-phenylbutyl)coumarin



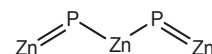
**CAS** 81-81-2 **MF** C<sub>19</sub>H<sub>16</sub>O<sub>4</sub> **MW** 308.33 **PS** S  
**SOL** MeOH, IPA, A **SG** 1.31 g/cm<sup>3</sup> **MP** 162 - 164 °C  
**BP** 515 °C **FP** 189 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-076N   | 10 mg |
| 100 µg/mL in MeOH | P-076S   | 1 mL  |

**Zectran** see **Mexacarbate**

## Zinc phosphide

Zinc phosphide

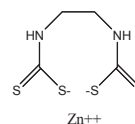


**CAS** 1314-84-7 **MF** P<sub>2</sub>Zn<sub>3</sub> **MW** 258.12 **PS** S  
**SG** 4.55 g/cm<sup>3</sup> **MP** 420 °C **BP** 1100 °C **FP** N/A

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-527N   | 10 mg |

## Zineb

Zinc ethylenebis(dithiocarbamate)



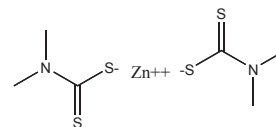
**CAS** 12122-67-7 **MF** C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>S<sub>4</sub>•Zn **MW** 275.76  
**PS** S **SG** 1.74 g/cm<sup>3</sup> **MP** 157 °C **BP** N/A **FP** 90 °C

| Matrix | Cat. No. | Unit  |
|--------|----------|-------|
| Neat   | P-098N   | 10 mg |

**Zinophos** see **Thionazin**

## Ziram

Zinc dimethyldithiocarbamate



**CAS** 137-30-4 **MF** C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>S<sub>4</sub>Zn **MW** 305.83  
**PS** S **SOL** A, T, MeOH **SG** 1.66 g/cm<sup>3</sup> **MP** 246 °C  
**BP** N/A **FP** 93 °C

| Matrix            | Cat. No. | Unit  |
|-------------------|----------|-------|
| Neat              | P-324N   | 10 mg |
| 100 µg/mL in MeOH | P-324S   | 1 mL  |

**Zolone** see **Phosalone**



| CAS      | PAGE | CAS      | PAGE | CAS       | PAGE | CAS       | PAGE | CAS        | PAGE | CAS        | PAGE | CAS        | PAGE | CAS          | PAGE |
|----------|------|----------|------|-----------|------|-----------|------|------------|------|------------|------|------------|------|--------------|------|
| 50-29-3  | 22   | 121-75-5 | 45   | 947-02-4  | 56   | 2463-84-5 | 24   | 10606-46-9 | 25   | 28772-56-7 | 9    | 56073-10-0 | 9    | 88283-41-4   | 61   |
| 50-65-7  | 52   | 122-14-5 | 34   | 950-10-7  | 46   | 2497-06-5 | 29   | 11141-17-6 | 4    | 29027-13-2 | 48   | 57018-04-9 | 70   | 88671-89-0   | 51   |
| 50-73-7  | 71   | 122-34-9 | 64   | 950-35-6  | 49   | 2497-07-6 | 29   | 12071-83-9 | 60   | 29091-05-2 | 28   | 57153-18-1 | 45   | 90717-03-6   | 62   |
| 51-03-6  | 57   | 122-42-9 | 60   | 950-37-8  | 47   | 2536-31-4 | 14   | 12122-67-7 | 74   | 29091-21-2 | 59   | 57369-32-1 | 62   | 90982-32-4   | 14   |
| 51-36-5  | 24   | 122-88-3 | 17   | 953-17-3  | 49   | 2540-82-1 | 38   | 12427-38-2 | 45   | 29232-93-7 | 57   | 57646-30-7 | 38   | 91465-08-6   | 18   |
| 51-79-6  | 33   | 123-33-1 | 45   | 957-51-7  | 28   | 2545-59-7 | 65   | 12771-68-5 | 3    | 29973-13-5 | 32   | 57837-19-1 | 46   | 94125-34-5   | 60   |
| 52-68-6  | 71   | 126-68-1 | 72   | 959-98-8  | 30   | 2581-34-2 | 48   | 12789-03-6 | 13   | 30043-49-3 | 32   | 57966-95-7 | 19   | 94593-91-6   | 16   |
| 52-85-7  | 33   | 126-75-0 | 22   | 961-11-5  | 68   | 2588-03-6 | 56   | 13067-93-1 | 18   | 30125-63-4 | 67   | 58769-20-3 | 44   | 95465-99-9   | 11   |
| 53-19-0  | 21   | 127-90-2 | 63   | 962-58-3  | 23   | 2588-04-7 | 56   | 13071-79-9 | 67   | 30560-19-1 | 1    | 58810-48-3 | 53   | 95737-68-1   | 61   |
| 55-38-9  | 35   | 128-03-0 | 58   | 999-81-5  | 4    | 2593-15-9 | 67   | 13121-70-5 | 18   | 30667-99-3 | 48   | 59669-26-0 | 69   | 96182-53-5   | 66   |
| 56-35-9  | 8    | 128-04-1 | 23   | 1007-28-9 | 14   | 2595-54-2 | 46   | 13171-21-6 | 56   | 31218-83-4 | 60   | 59756-60-4 | 37   | 96489-71-3   | 61   |
| 56-38-2  | 54   | 131-89-5 | 27   | 1014-69-3 | 23   | 2597-03-7 | 55   | 13181-17-4 | 9    | 31717-87-0 | 29   | 60168-88-9 | 8    | 97886-45-8   | 29   |
| 56-72-4  | 17   | 132-66-1 | 2    | 1014-70-6 | 64   | 2631-37-0 | 59   | 13194-48-4 | 32   | 31895-22-4 | 69   | 60207-90-1 | 70   | 98730-04-2   | 6    |
| 58-89-9  | 44   | 133-06-2 | 11   | 1022-22-6 | 22   | 2631-40-5 | 43   | 13356-08-6 | 34   | 31972-43-7 | 34   | 60207-93-4 | 32   | 98967-40-9   | 37   |
| 59-40-5  | 64   | 133-07-3 | 38   | 1024-57-3 | 40   | 2636-26-2 | 18   | 13360-45-7 | 13   | 31972-44-8 | 34   | 60238-56-4 | 16   | 99129-21-2   | 17   |
| 60-51-5  | 27   | 133-90-4 | 13   | 1031-07-8 | 31   | 2642-71-9 | 5    | 13457-16-8 | 61   | 32809-16-8 | 58   | 60568-05-0 | 39   | 101007-06-1  | 1    |
| 60-57-1  | 25   | 136-45-8 | 50   | 1066-51-9 | 3    | 2655-15-4 | 73   | 13593-03-8 | 62   | 33089-61-1 | 3    | 60825-26-5 | 72   | 101200-48-0  | 71   |
| 61-82-5  | 3    | 136-78-7 | 29   | 1071-83-6 | 39   | 2664-63-3 | 69   | 13684-56-5 | 22   | 33213-65-9 | 30   | 61213-25-0 | 37   | 101205-02-1  | 18   |
| 62-38-4  | 56   | 137-26-8 | 70   | 1085-98-9 | 24   | 2675-77-6 | 15   | 13684-63-4 | 55   | 33245-39-5 | 36   | 61252-45-8 | 7    | 101463-68-9  | 37   |
| 62-73-7  | 25   | 137-30-4 | 74   | 1113-02-6 | 53   | 2686-99-9 | 73   | 14143-55-6 | 57   | 33629-47-9 | 11   | 62610-77-9 | 47   | 102851-06-9  | 66   |
| 63-25-2  | 12   | 139-40-2 | 60   | 1114-71-2 | 70   | 2814-20-2 | 43   | 14214-32-5 | 26   | 33693-04-8 | 67   | 62924-70-3 | 37   | 103055-07-8  | 45   |
| 66-81-9  | 18   | 140-41-0 | 51   | 1129-41-5 | 49   | 2905-67-1 | 48   | 14484-64-1 | 35   | 33820-53-0 | 43   | 63284-71-9 | 73   | 103361-09-7  | 37   |
| 72-20-8  | 31   | 140-56-7 | 33   | 1134-23-2 | 18   | 2921-88-3 | 20   | 14816-18-3 | 57   | 34014-18-1 | 66   | 64529-56-2 | 32   | 104040-78-0  | 36   |
| 72-43-5  | 48   | 140-57-8 | 4    | 1194-65-6 | 24   | 2976-74-1 | 34   | 15263-53-3 | 12   | 34123-59-6 | 43   | 64628-44-0 | 73   | 104040-79-1  | 16   |
| 72-54-8  | 21   | 141-66-2 | 25   | 1216-44-0 | 37   | 3060-89-7 | 49   | 15299-99-7 | 51   | 34205-21-5 | 26   | 64700-56-7 | 72   | 105024-66-6  | 63   |
| 72-59-9  | 21   | 142-59-6 | 51   | 1330-78-5 | 72   | 3244-90-4 | 4    | 15310-01-7 | 6    | 34256-82-1 | 1    | 64902-72-3 | 16   | 107534-96-3  | 66   |
| 72-56-0  | 55   | 143-50-0 | 44   | 1332-40-7 | 17   | 3336-39-8 | 10   | 15457-05-3 | 37   | 34622-58-7 | 53   | 65907-30-4 | 38   | 110235-47-7  | 46   |
| 75-99-0  | 20   | 144-21-8 | 30   | 1420-06-0 | 72   | 3337-71-1 | 4    | 15545-48-9 | 16   | 34643-46-4 | 70   | 66063-05-6 | 55   | 110488-70-5  | 27   |
| 76-03-9  | 71   | 145-73-3 | 31   | 1420-07-1 | 28   | 3347-22-6 | 29   | 15972-60-8 | 1    | 34681-10-2 | 11   | 66215-27-8 | 19   | 11812-59-9   | 35   |
| 76-06-2  | 15   | 148-79-8 | 68   | 1469-48-3 | 68   | 3383-96-8 | 1    | 16118-49-3 | 12   | 34681-23-7 | 11   | 66230-04-4 | 31   | 11988-49-9   | 68   |
| 76-44-8  | 39   | 150-50-5 | 46   | 1532-24-7 | 17   | 3397-62-4 | 4    | 16655-82-6 | 41   | 34681-24-8 | 11   | 66246-88-6 | 55   | 11991-09-4   | 52   |
| 78-34-2  | 28   | 150-68-5 | 51   | 1563-38-8 | 26   | 3424-82-6 | 21   | 16672-87-0 | 32   | 35256-85-0 | 66   | 66332-96-5 | 38   | 11281-77-3   | 68   |
| 78-40-0  | 72   | 152-16-9 | 63   | 1563-66-2 | 12   | 3478-94-2 | 57   | 16709-30-1 | 47   | 35367-38-5 | 26   | 66441-23-4 | 34   | 112410-23-8  | 66   |
| 78-48-8  | 22   | 288-88-0 | 71   | 1582-09-8 | 73   | 3689-24-5 | 65   | 16752-77-5 | 44   | 35400-43-2 | 9    | 66840-71-9 | 29   | 113096-99-4  | 19   |
| 80-33-1  | 53   | 290-87-9 | 44   | 1596-84-5 | 2    | 3691-35-8 | 15   | 17040-19-6 | 22   | 35554-44-0 | 41   | 66841-25-6 | 70   | 114369-43-6  | 34   |
| 80-38-6  | 35   | 297-78-9 | 42   | 1610-17-9 | 39   | 3734-33-6 | 8    | 17109-49-8 | 30   | 35575-96-3 | 5    | 67129-06-2 | 47   | 115044-19-4  | 39   |
| 81-81-2  | 74   | 297-97-2 | 69   | 1610-18-0 | 59   | 3734-48-3 | 13   | 17606-31-4 | 7    | 36734-19-7 | 42   | 67375-30-8 | 19   | 116255-48-2  | 10   |
| 81-82-3  | 17   | 298-00-0 | 49   | 1634-78-2 | 45   | 3735-33-9 | 56   | 17640-02-7 | 20   | 37764-25-3 | 24   | 67485-29-4 | 40   | 116714-46-6  | 53   |
| 82-66-8  | 28   | 298-02-2 | 56   | 1646-87-3 | 2    | 3766-60-7 | 11   | 17804-35-2 | 6    | 38260-54-7 | 33   | 67564-91-4 | 35   | 117428-22-5  | 57   |
| 82-68-8  | 55   | 298-04-4 | 29   | 1646-88-4 | 2    | 3766-81-2 | 5    | 18181-70-9 | 42   | 38727-55-8 | 26   | 67747-09-5 | 58   | 118134-30-8  | 64   |
| 83-05-6  | 21   | 299-84-3 | 62   | 1689-83-4 | 42   | 3813-05-6 | 6    | 18181-80-1 | 10   | 39184-27-5 | 69   | 68359-37-5 | 18   | 118712-89-3  | 71   |
| 83-26-1  | 57   | 299-86-5 | 17   | 1689-84-5 | 9    | 4147-51-7 | 29   | 18625-12-2 | 21   | 39184-59-3 | 69   | 68694-11-1 | 73   | 119446-68-3  | 26   |
| 83-79-4  | 62   | 300-76-5 | 51   | 1689-99-2 | 10   | 4482-55-7 | 35   | 18691-97-9 | 47   | 39196-18-4 | 69   | 69327-76-0 | 10   | 120067-83-6  | 36   |
| 85-34-7  | 34   | 301-12-2 | 54   | 1698-60-8 | 61   | 4726-14-1 | 52   | 19044-88-3 | 53   | 39300-45-3 | 28   | 69377-81-7 | 37   | 120068-36-2  | 36   |
| 85-40-5  | 68   | 309-00-2 | 2    | 1702-17-6 | 45   | 4824-78-6 | 10   | 19666-30-9 | 53   | 39515-40-7 | 19   | 69806-34-4 | 39   | 120068-37-3  | 35   |
| 86-50-0  | 5    | 311-45-5 | 54   | 1746-81-2 | 51   | 4841-20-7 | 64   | 19719-28-9 | 25   | 39515-41-8 | 20   | 69806-40-2 | 39   | 120738-89-8  | 52   |
| 86-86-2  | 51   | 314-40-9 | 9    | 1770-80-5 | 23   | 4849-32-5 | 44   | 19937-59-8 | 49   | 39765-80-5 | 53   | 69806-50-4 | 36   | 120923-37-7  | 3    |
| 86-87-3  | 51   | 315-18-4 | 50   | 1825-19-0 | 49   | 5103-71-9 | 13   | 19988-24-0 | 4    | 40487-42-1 | 55   | 70124-77-5 | 36   | 120928-09-8  | 34   |
| 88-82-4  | 73   | 319-84-6 | 7    | 1825-21-4 | 55   | 5103-73-1 | 52   | 20115-23-5 | 56   | 40596-69-8 | 47   | 71283-80-2 | 34   | 121552-61-2  | 19   |
| 88-85-7  | 28   | 319-85-7 | 7    | 1836-75-5 | 52   | 5103-74-2 | 13   | 20624-25-3 | 64   | 40843-25-2 | 25   | 71561-11-0 | 61   | 122008-85-9  | 18   |
| 90-43-7  | 56   | 319-86-8 | 7    | 1861-32-1 | 20   | 5131-24-8 | 29   | 21087-64-9 | 49   | 41083-11-8 | 5    | 71626-11-4 | 6    | 122453-73-0  | 14   |
| 90-98-2  | 24   | 327-98-0 | 72   | 1861-40-1 | 6    | 5234-68-4 | 12   | 21564-17-0 | 10   | 41198-07-7 | 59   | 71751-41-2 | 1    | 122548-33-8  | 41   |
| 91-53-2  | 33   | 330-55-2 | 45   | 1897-45-6 | 15   | 5259-88-1 | 54   | 21609-90-5 | 44   | 41394-05-2 | 47   | 73250-68-7 | 46   | 122931-148-0 | 62   |
| 92-84-2  | 55   | 333-41-5 | 23   | 1910-42-5 | 54   | 5598-13-0 | 15   | 21725-46-2 | 18   | 41483-43-6 | 10   | 74051-80-2 | 63   | 123312-89-0  | 60   |
| 93-71-0  | 2    | 465-73-6 | 43   | 1912-24-9 | 4    | 5598-15-2 | 16   | 22042-59-7 | 12   | 41814-78-2 | 72   | 74115-24-5 | 17   | 124495-18-7  | 62   |
| 93-72-1  | 63   | 470-90-6 | 14   | 1912-26-1 | 72   | 5836-10-2 | 15   | 22212-55-1 | 7    | 42509-80-8 | 42   | 74222-97-2 | 65   | 125116-23-6  | 47   |
| 93-76-5  | 65   | 485-31-4 | 8    | 1918-00-9 | 23   | 5836-29-3 | 17   | 22224-92-6 | 34   | 42576-02-3 | 7    | 74223-64-6 | 47   | 126535-15-7  | 73   |
| 93-79-8  | 66   | 500-28-7 | 16   | 1918-02-1 | 67   | 5902-51-2 | 67   | 22781-23-3 | 6    | 42874-03-3 | 54   | 74782-23-3 | 53   | 126801-58-9  | 33   |
| 94-74-6  | 45   | 504-24-5 | 3    | 1918-11-2 | 57   | 5915-41-3 | 67   | 22936-75-0 | 26   | 43121-43-3 | 71   | 75736-33-3 | 25   | 126833-17-8  | 34   |
| 94-75-7  | 19   | 510-15-6 | 15   | 1918-13-4 | 16   | 6099-79-2 | 28   | 22936-86-3 | 19   | 50471-44-8 | 74   | 76578-14-8 | 62   | 131341-86-1  | 36   |
| 94-80-4  | 20   | 512-56-1 | 73   | 1918-16-7 | 59   | 6164-98-3 | 14   | 23031-36-9 | 58   | 50512-35-1 | 43   | 76674-21-0 | 38   | 131807-57-3  | 33   |
| 94-81-5  | 45   | 527-20-8 | 55   | 1918-18-9 | 65   | 6190-65-4 | 4    | 23103-98-2 | 57   | 50563-36-5 | 27   | 79138-62-0 | 9    | 131860-33-8  | 5    |
| 94-82-6  | 21   | 532-34-3 | 42   | 1928-37-6 | 65   | 6385-62-2 | 29   | 23135-22-0 | 54   | 50594-66-6 | 1    | 77182-82-2 | 39   | 131983-72-7  | 74   |
| 94-86-2  | 33   | 533-23-3 | 20   | 1928-38-7 | 20   | 6515-38-4 | 71   | 23184-66-9 | 11   | 50594-67-7 | 1    | 77458-01-6 | 60   | 135410-20-7  | 1    |
| 95-06-7  | 64   | 533-74-4 | 21   | 1928-43-4 | 20   | 6597-78-0 | 23   | 23422-53-9 | 38   | 51026-28-9 | 58   | 77732-09-3 | 54   | 138261-41-3  | 41   |
| 96-12-8  | 38   | 534-52-1 | 28   | 1929-73-3 | 20   | 6734-80-1 | 47   | 23505-41-1 | 57   | 51218-45-2 | 49   | 78587-05-0 | 40   | 140923-17-7  | 42   |
| 96-24-14 | 15   | 535-89-7 | 17   | 1929-77-7 | 74   | 6923-22-4 | 50   | 23560-59-0 | 40   | 51218-49-6 | 58   | 79122-59-3 | 35   | 141112-29-0  | 43   |
| 96-45-7  | 33   | 555-37-3 | 52   | 1929-82-4 | 52   | 6967-29-9 | 15   | 23564-05-8 | 70   | 51235-04-2 | 40   | 79241-46-6 | 36   | 141517-21-7  | 72   |
| 97-17-6  | 24   | 556-22-9 | 39   | 1967-16-4 | 13   | 6988-21-2 | 28   | 23564-06-9 | 69   | 51338-27-3 | 25   | 79270-78-3 | 30   | 141776-32-1  | 65   |
| 97-23-4  | 24   | 563-12-2 | 32   | 1982-47-4 | 15   | 7085-19-0 | 46   | 23844-56-6 | 46   | 51630-58-1 | 35   | 79277-27-3 | 69   | 143390-89-0  | 44   |
| 99-30-9  |      |          |      |           |      |           |      |            |      |            |      |            |      |              |      |





# Pesticides

## Triazines & Metabolites

### Triazines and Metabolites

| Compound                                                                   | CAS No.    | Cat. No. (Neat) | Unit  | Cat. No.  | Matrix               | Unit |
|----------------------------------------------------------------------------|------------|-----------------|-------|-----------|----------------------|------|
| 2,4-bis(Ethylamino)-6-diethylamino-s-triazine                              |            | P-536N          | 10 mg | P-536S-MC | 100 µg/mL in MC      | 1 mL |
| 2-Chloro-4-ethylamino-6-propylamino-s-triazine                             |            | P-537N          | 10 mg | P-537S-MC | 100 µg/mL in MC      | 1 mL |
| 2,4-Dichloro-6-ethylamino-s-triazine                                       |            | P-538N          | 10 mg | P-538S-MC | 100 µg/mL in MC      | 1 mL |
| 2-Chloro-4-ethylamino-6-methylethylamino-s-triazine                        |            | P-539N          | 10 mg | P-539S-MC | 100 µg/mL in MC      | 1 mL |
| 2-Chloro-4-methylamino-6-sec-butylamino-s-triazine                         |            | P-540N          | 10 mg | P-540S-MC | 100 µg/mL in MC      | 1 mL |
| 2-Chloro-4-methylamino-6-diethylamino-s-triazine                           |            | P-541N          | 10 mg | P-541S-MC | 100 µg/mL in MC      | 1 mL |
| 2,3-Diuron [3(2,3-Dichlorophenyl)]-1,1-dimethylurea                        | 10290-37-6 | P-632N          | 10 mg | P-632S    | 100 µg/mL in MeOH    | 1 mL |
| Atrazine-desethyl-2-hydroxy(4-Amino-2-hydroxy-6-isopropylamino-s-triazine) |            | -----           | ----  | P-544S-MC | 100 µg/mL in MC      | 1 mL |
| Desethyl atrazine                                                          | 6190-65-4  | P-343N          | 10 mg | P-343S    | 100 µg/mL in MeOH    | 1 mL |
| Atrazine-desisopropyl                                                      | 1007-28-9  | P-345N          | 10 mg | P-345S    | 100 µg/mL in MeOH    | 1 mL |
| Atrazine-desisopropyl-2-hydroxy                                            |            | P-344N          | 10 mg | P-344S-MC | 100 µg/mL in MC      | 1 mL |
| Atrazine                                                                   | 1912-24-9  | P-005N          | 10 mg | P-005S    | 100 µg/mL in MeOH    | 1 mL |
| Ametryn                                                                    | 834-12-8   | P-003N          | 10 mg | P-003S    | 100 µg/mL in MeOH    | 1 mL |
| Cyanazine                                                                  | 21725-46-2 | P-175N          | 10 mg | P-175S    | 100 µg/mL in MeOH    | 1 mL |
| Gesatamine                                                                 | 1610-17-9  | P-189N          | 10 mg | P-189S    | 100 µg/mL in MeOH    | 1 mL |
| 2-Hydroxyatrazine                                                          | 2163-68-0  | P-326N          | 10 mg | P-326S-MC | 100 µg/mL in MC      | 1 mL |
| Imazethapyr                                                                | 81335-77-5 | -----           | ----  | P-285S    | 100 µg/mL in MeOH    | 1 mL |
| 2-Isopropylamino-4,6-dichloro-S-triazine                                   |            | P-635N          | 10 mg | P-635S-A  | 100 µg/mL in Acetone | 1 mL |
| Lethron 2-[2-(2-Butoxyethyl)ethyl]ethane thiocyanate                       |            | -----           | ----  | P-634S    | 100 µg/mL in MeOH    | 1 mL |
| 2-Monuron [3(2-Chlorophenyl)]-1,1-dimethylurea                             |            | P-633N          | 10 mg | P-633S    | 100 µg/mL in MeOH    | 1 mL |
| Prometryne                                                                 | 7287-19-6  | P-078N          | 10 mg | P-078S    | 100 µg/mL in MeOH    | 1 mL |
| Propazine                                                                  | 139-40-2   | P-079N          | 10 mg | P-079S    | 100 µg/mL in MeOH    | 1 mL |
| Prometon                                                                   | 1610-18-0  | P-077N          | 10 mg | P-077S    | 100 µg/mL in MeOH    | 1 mL |
| Sebuthylazine                                                              | 7286-69-3  | P-432N          | 10 mg | P-432S    | 100 µg/mL in MeOH    | 1 mL |
| Simazine                                                                   | 122-34-9   | P-085N          | 10 mg | P-085S    | 100 µg/mL in MeOH    | 1 mL |
| Terbutylazine                                                              | 5915-41-3  | P-169N          | 10 mg | P-169S    | 100 µg/mL in MeOH    | 1 mL |

**Solutions:**  
-MC (in Methyl cellosolve)





# Pesticide and Herbicide Standards

## Kits & Mixtures



### Pesticide Kits and Mixtures

#### Neat Pesticide Kit \*

| Z-004-SET     | set of 20 x 10 mg       |
|---------------|-------------------------|
| Aldrin (01)   | Dieldrin (11)           |
| α-BHC (02)    | Heptachlor (12)         |
| β-BHC (03)    | Heptachlor epoxide (13) |
| δ-BHC (04)    | Lindane (γ-BHC) (14)    |
| o,p'-DDD (05) | Malathion (15)          |
| p,p'-DDD (06) | Methoxychlor (16)       |
| o,p'-DDE (07) | Mirex (17)              |
| p,p'-DDE (08) | Parathion (18)          |
| o,p'-DDT (09) | Carbaryl (19)           |
| p,p'-DDT (10) | Toxaphene (20)          |

#### Pesticide (Solid Waste) Kit \*

| Z-017-SET                                   | set of 6 x 10 mg |
|---------------------------------------------|------------------|
| 2,4-Dichlorophenoxyacetic acid (2,4-D acid) | Silvex           |
| Endrin                                      | Toxaphene        |
| Lindane                                     |                  |
| Methoxychlor                                |                  |

#### Pesticide Mixture for Evaluating GC Columns

| M-100                        | 1 x 1 mL                         |
|------------------------------|----------------------------------|
| At stated conc. in Isooctane | 13 comps.                        |
| Aldrin (0.050 µg/mL)         | p,p'-DDT (0.260 µg/mL)           |
| α-BHC (0.025 µg/mL)          | Dieldrin (0.120 µg/mL)           |
| β-BHC (0.100 µg/mL)          | Endrin (0.200 µg/mL)             |
| o,p'-DDD (0.200 µg/mL)       | Heptachlor (0.025 µg/mL)         |
| p,p'-DDD (0.190 µg/mL)       | Heptachlor epoxide (0.080 µg/mL) |
| p,p'-DDE (0.100 µg/mL)       | Lindane (γ-BHC) (0.025 µg/mL)    |
| o,p'-DDT (0.225 µg/mL)       |                                  |

#### Technical Note

Designed for evaluating the ability of a column to separate pesticides and their degradation by products.

#### Pesticides in Solutions (Individual and Kits)

| Compound (in Isooctane) | Conc.     | Cat. No. |
|-------------------------|-----------|----------|
| Aldrin                  | 200 ng/µL | P-002S-1 |
|                         | 2 ng/µL   | P-002S-2 |
| Chlordane, tech         | 200 ng/µL | P-017S-1 |
|                         | 2 ng/µL   | P-017S-2 |
| 2,4-D methyl ester      | 200 ng/µL | P-021S-1 |
| p,p'-DDE                | 200 ng/µL | P-027S-1 |
|                         | 2 ng/µL   | P-027S-2 |
| p,p'-DDT                | 200 ng/µL | P-029S-1 |
|                         | 2 ng/µL   | P-029S-2 |
| Dieldrin                | 200 ng/µL | P-037S-1 |
|                         | 2 ng/µL   | P-037S-2 |
| Endrin                  | 200 ng/µL | P-045S-1 |
|                         | 2 ng/µL   | P-045S-2 |
| Heptachlor              | 200 ng/µL | P-053S-1 |
|                         | 2 ng/µL   | P-053S-2 |
| Lindane                 | 200 ng/µL | P-059S-1 |
|                         | 2 ng/µL   | P-059S-2 |
| Methoxychlor            | 200 ng/µL | P-064S-1 |
|                         | 2 ng/µL   | P-064S-2 |
| Silvex methyl ester     | 200 ng/µL | P-115S-1 |
| Toxaphene               | 200 ng/µL | P-093S-1 |

Set of above 21 pesticides (21 x 1 mL)

At stated concentrations

Z-023-SET

#### Technical Note

Provided in convenient concentrations in isooctane for use with different GC detectors. The concentrated solutions are suited for FID & TC detectors. The diluted solutions are suited for EC detectors.

### Herbicide Kit and Mixtures

#### Herbicide Kit

Z-031-SET  
0.1 mg/mL in MeOH  
set of 15 x 1 mL  
Individual Standards

|                  |                  |
|------------------|------------------|
| Atrazine (01)    | Prometryn (09)   |
| Dicamba (02)     | Prometon (10)    |
| Benfluralin (03) | Propanil (11)    |
| Bentazon (04) *  | Propazine (12)   |
| Dacthal (05)     | Simazine (13)    |
| Dichlobenil (06) | Tebuthiuron (14) |
| Diuron (07)      | Trifluralin (15) |
| Metolachlor (08) |                  |

\* in Acetone

#### Herbicide Mix #1

M-HERB-1  
0.1 mg/mL each in EtOAc  
1 x 1 mL  
13 comps.

|             |             |
|-------------|-------------|
| Atrazine    | Oxyfluorfen |
| Bromacil    | Sencor      |
| Cycloate    | Sutan       |
| Eptam       | Terbacil    |
| Isopropalin | Tillam      |
| Hexazinone  | Trifluralin |
| Molinate    |             |

#### Herbicide Mix #2

M-HERB-2  
0.1 mg/mL each in EtOAc  
1 x 1 mL  
9 comps.

|             |          |
|-------------|----------|
| Benfluralin | Prowl    |
| Metolachlor | Simazine |
| Oxadiazon   | Tolban   |
| Propachlor  | Vernam   |
| Propazine   |          |

### Phenylurea Pesticide Mixtures

#### Phenylurea Pesticide Mixture

PES-PU-001  
PES-PU-001-PAK **SAVE**  
200 µg/mL each in AcCN:Acetone  
1 x 1 mL  
5 x 1 mL  
8 comps.

|               |             |
|---------------|-------------|
| Diffubenzuron | Propanil    |
| Diuron        | Siduron     |
| Fluometuron   | Tebuthiuron |
| Linuron       | Thidiazuron |

#### Phenylurea Surrogate Mixture

PES-PU-SS  
PES-PU-SS-PAK **SAVE**  
500 µg/mL each in MeOH:AcCN  
1 x 1 mL  
5 x 1 mL  
2 comps.

|           |         |
|-----------|---------|
| Carbazole | Monuron |
|-----------|---------|



# EPA Pesticide Methods

## Table of Contents

| CLP                | Pesticides                                                      | 79             |
|--------------------|-----------------------------------------------------------------|----------------|
| <b>500 Series</b>  | <b>Pesticide Methods for Drinking Water</b>                     | <b>79-88</b>   |
| 505                | Organohalide Pesticides by Microextraction (GC/ECD)             | 79             |
| 507                | Nitrogen/Phosphorous Pesticides (GC/NPD)                        | 79,84          |
| 508 & 508.A        | Chlorinated Pesticides (GC/ECD)                                 | 80             |
| 508.1              | Chlorinated Pesticides, Herbicides & Organo-halides (GC/ECD)    | 80             |
| 515.1 & 515.2      | Chlorinated Acids in Water (GC/ECD)                             | 81             |
| 515.3 & 515.4      | Chlorinated Acids in Drinking Water (GC/ECD)                    | 82             |
| 525.1              | Organic Pesticides by Liquid Solid Extraction (GC/MS)           | 83             |
| 525.2              | Organic Pesticides by Liquid Solid Extraction Rev. 1 (GC/MS)    | 84-85          |
| 526                | Semi-Volatiles (GC/MS)                                          | 85             |
| 527                | Pesticides & Flame Retardants (SPE & Capillary GC/MS)           | 86             |
| 531 & 531.1        | Carbamates (HPLC)                                               | 86             |
| 532                | Phenylureas (HPLC)                                              | 86             |
| 535                | Acetamide-Herbicide Degradates (LCMS)                           | 86             |
| 547                | Glyphosate (HPLC)                                               | 87             |
| 548                | Endothall (GC/ECD)                                              | 87             |
| 548.1              | Endothall (GC/MS)                                               | 87             |
| 549.1/549.2        | Diquat & Paraquat (HPLC)                                        | 87             |
| 553                | Benzidines & Nitrogen Pesticides (HPLC/MS)                      | 87             |
| 555                | Chlorinated Pesticides (HPLC)                                   | 87             |
|                    | National Primary Drinking Water Standards                       | 88             |
| <b>600 Series</b>  | <b>Pesticide Methods for Wastewater</b>                         | <b>89-92</b>   |
| 608                | Pesticides & PCBs (GC/ECD)                                      | 89             |
| 608.1, 608.2       | Organochlorine Pesticides (GC/ECD)                              | 89             |
| 614, 614.1         | Organophosphorus Pesticides (GC/NPD)                            | 89             |
| 615                | Chlorinated Herbicides (GC/ECD)                                 | 90             |
| 617                | Chlorinated Pesticides (GC/ECD)                                 | 90             |
| 618                | Volatile Pesticides (GC/ECD)                                    | 90             |
| 619                | Triazine Herbicides (GC/NPD)                                    | 90             |
| 622                | Organophosphorus Pesticides (GC/NPD)                            | 90             |
| 622.1              | Thiophosphate Pesticides (GC/NPD)                               | 90             |
| 625                | Priority Pollutant Standards (GC/MS)                            | 91             |
| 627                | Dinitroaniline Pesticides (GC/ECD)                              | 91             |
| 632                | Carbamates & Urea Pesticides (HPLC)                             | 91             |
| 632.1              | Carbamates & Amides (HPLC)                                      | 91             |
| 633                | Organonitrogen Pesticides (GC/NPD)                              | 91             |
| 634                | Thiocarbamate Pesticides (GC/NPD)                               | 91             |
| 645                | Amino Pesticides & Lethane (GC/NPD)                             | 92             |
| 629-644            | HPLC Analysis Products                                          | 92             |
| 680                | Pesticides in Water/Soil (GC/MS)                                | 92             |
| <b>1300 Series</b> | <b>Pesticide Methods for TCLP</b>                               | <b>93</b>      |
| <b>1600 Series</b> | <b>Pesticide Methods</b>                                        | <b>94-97</b>   |
| 1618               | Organochloride & Phosphorus Pesticides (GC)                     | 94             |
| 1656               | Organo Halide Pesticides (GC/HSD)                               | 95-96          |
| 1657               | Organo Phosphorus Pesticides (GC/FID)                           | 97             |
| 1658               | Phenoyl-Acid Herbicides                                         | 96             |
| 1659               | Dazomet                                                         | 97             |
| <b>8000 Series</b> | <b>Pesticide Methods for Solid Waste</b>                        | <b>98-104</b>  |
| 8080A              | Organochlorine Pesticides                                       | 98             |
| 8080/8081A/B       | Organochlorine Pesticides (GC/ECD)                              | 98-99          |
| 8085               | Pesticides (GC/AED)                                             | 100            |
| 8140               | Organophosphorous Pesticides (GC/NPD/ELCD/FPD)                  | 101            |
| 8141A              | Additions to Method 8140                                        | 101            |
| 8150A              | Chlorinated Herbicides (GC/ECD)                                 | 102            |
| 8151/8151A         | Chlorinated Herbicides (GC/ECD)                                 | 103            |
| 8270               | Semi-Volatile Pesticides (GC/MS)                                | 104            |
| 8318               | N-Methylcarbamates (HPLC)                                       | 104            |
| 8321               | Non-Volatile Pesticides (HPLC/TSP/MS or UV Solvent Extractable) | 104            |
| 8325               | Benzidines & Nitrogen containing Pesticides (HPLC/PB/MS)        | 104            |
| <b>EU Methods</b>  | <b>European and other Methodologies</b>                         | <b>105-108</b> |

# Contract Laboratory Program (CLP) & 500 Series

## Pesticide Standards



### CLP - Pesticide Mixtures

**CLP-018-10X** 1 x 1 mL  
**CLP-018-10X-PAK** 5 x 1 mL  
*At stated conc. in Isooctane* 11 comps.

SAVE

|                               |                                |
|-------------------------------|--------------------------------|
| Aldrin (1.0 µg/mL)            | Endosulfan II (2.0 µg/mL)      |
| γ-BHC (0.5 µg/mL)             | Endrin aldehyde (2.5 µg/mL)    |
| p,p'-DDT (2.0 µg/mL)          | Heptachlor (1.0 µg/mL)         |
| Dibutylchloredate (5.0 µg/mL) | Heptachlor epoxide (1.0 µg/mL) |
| Dieldrin (1.0 µg/mL)          | Methoxychlor (10 µg/mL)        |
| Endosulfan I (1.0 µg/mL)      |                                |

**CLP-019-10X** 1 x 1 mL  
**CLP-019-10X-PAK** 5 x 1 mL  
*At stated conc. in Isooctane* 12 comps.

SAVE

|                         |                                |
|-------------------------|--------------------------------|
| Aldrin (1.0 µg/mL)      | p,p'-DDD (2.0 µg/mL)           |
| α-BHC (0.5 µg/mL)       | p,p'-DDE (1.0 µg/mL)           |
| β-BHC (1.0 µg/mL)       | Dibutylchloredate (5.0 µg/mL)  |
| δ-BHC (1.0 µg/mL)       | Endosulfan sulfate (2.0 µg/mL) |
| α-Chlordane (1.0 µg/mL) | Endrin (1.0 µg/mL)             |
| γ-Chlordane (1.0 µg/mL) | Endrin ketone (2.0 µg/mL)      |

### Pesticide Set

**CLP-018/019-10X-SET** 2 x 1 mL  
*(CLP-018-10X, CLP-019-10X)*

### CLP - Pesticide Surrogates

**CLP-032-R** 1 x 1 mL  
**CLP-032-R-PAK** 5 x 1 mL  
*200 µg/mL each in Acetone* 2 comps.

SAVE

|                    |                      |
|--------------------|----------------------|
| Decachlorobiphenyl | Tetrachloro-m-xylene |
|--------------------|----------------------|

**CLP-034** 1 x 1 mL  
**CLP-034-PAK** 5 x 1 mL  
*200 µg/mL each in Acetone* 2 comps.

SAVE

|                   |                      |
|-------------------|----------------------|
| Dibutylchloredate | Tetrachloro-m-xylene |
|-------------------|----------------------|

**CLP-PES-A** 1 x 1 mL  
**CLP-PES-A-PAK** 5 x 1 mL  
*200 µg/mL in Acetone*  
**CLP-PES-A-20X** 1 x 1 mL  
*4000 µg/mL in Acetone*

SAVE

|                   |
|-------------------|
| Dibutylchloredate |
|-------------------|

**For CLP Calibration Mixtures**  
**(Statement of Work 2/88 to 8/94)**

See page 153-154 of our Master Catalog

### Method 505 Organohalide Pesticides by Microextraction & GC/ECD

**M-505R-2** 1 x 1 mL  
**M-505R-2-PAK** 5 x 1 mL  
*At stated conc. in MeOH* 16 comps.

SAVE

|                       |                                     |
|-----------------------|-------------------------------------|
| Alachlor (10 µg/mL)   | Heptachlor epoxide (1 µg/mL)        |
| Aldrin (1 µg/mL)      | Hexachlorobenzene (1 µg/mL)         |
| Atrazine (250 µg/mL)  | Hexachlorocyclopentadiene (1 µg/mL) |
| α-Chlordane (1 µg/mL) | Lindane (1 µg/mL)                   |
| γ-Chlordane (1 µg/mL) | Methoxychlor (5 µg/mL)              |
| Dieldrin (1 µg/mL)    | cis-Nonachlor (1 µg/mL)             |
| Endrin (1 µg/mL)      | trans-Nonachlor (1 µg/mL)           |
| Heptachlor (1 µg/mL)  | Simazine (250 µg/mL)                |

### Chlordane & Toxaphene

*Each at 1,000 µg/mL in Hexane*

**AccuPAK™ (5 x 1 mL)**  
**SAVE**

|           |              |                  |
|-----------|--------------|------------------|
| Chlordane | P-017S-H-10X | P-017S-H-10X-PAK |
| Toxaphene | P-093S-H-10X | P-093S-H-10X-PAK |

### Degradation Standard

**P-045S** 1 x 1 mL  
*100 µg/mL in MeOH*

Endrin

### Method 507 Nitrogen/Phosphorus Pesticides

#### Mix G

**M-507G** 1 x 1 mL  
**M-507G-PAK** 5 x 1 mL  
*1.0 mg/mL each in MtBE* 8 comps.

SAVE

|               |             |
|---------------|-------------|
| Benefin       | Oxyfluorfen |
| Isopropalin   | Propachlor  |
| Pendimethalin | Profluralin |
| Oxadiazon     | Trifluralin |

### Performance Check Solution

**M-507-QC** 1 x 1 mL  
**M-507-QC-PAK** 5 x 1 mL  
*At stated conc. in MtBE* 6 comps.

SAVE

|                       |                      |
|-----------------------|----------------------|
| Atrazine (150 ng/mL)  | Prometon (300 ng/mL) |
| DNB (2500 ng/mL)      | TPP (2500 ng/mL)     |
| Bromacil (5000 ng/mL) | Vernolate (50 ng/mL) |

### Internal Standard

**M-507-IS** 1 x 1 mL  
**M-507-IS-PAK** 5 x 1 mL  
*0.5 mg/mL in MtBE*  
**M-507-IS-10X** 1 x 1 mL  
*5.0 mg/mL in MtBE*

SAVE

Triphenyl phosphate

### Surrogate Standard

**M-507-SS** 1 x 1 mL  
**M-507-SS-PAK** 5 x 1 mL  
*0.25 mg/mL in MtBE*  
**M-507-SS-4X NEW** 1 x 1 mL  
*1.0 mg/mL in MtBE*

SAVE

1,3-Dimethyl-2-nitrobenzene

#### Mix H

**M-507H** 1 x 1 mL  
**M-507H-PAK** 5 x 1 mL  
*1.0 mg/mL each in MtBE*

SAVE

DEF (for Merphos quantitation)

**For Complete Method 507**  
**See page 84**



# EPA Method 500 Series

## Pesticide Standards for Drinking Water

### Method 508 Chlorinated Pesticides by GC/ECD

#### Chlorinated Pesticides Mix A

|                        |                    |                    |
|------------------------|--------------------|--------------------|
| <b>M-508P-A</b>        |                    | 1 x 1 mL           |
| <b>M-508P-A-PAK</b>    | <b>SAVE</b>        | 5 x 1 mL           |
| 1.0 mg/mL each in MtBE |                    | 17 comps.          |
| Aldrin                 | 4,4'-DDE           | Endrin             |
| $\alpha$ -BHC          | 4,4'-DDT           | Endrin aldehyde    |
| $\beta$ -BHC           | Dieldrin           | Heptachlor         |
| $\delta$ -BHC          | Endosulfan I       | Heptachlor epoxide |
| $\gamma$ -BHC          | Endosulfan II      | Methoxychlor       |
| 4,4'-DDD               | Endosulfan sulfate |                    |

#### Chlorinated Pesticides Mix B

|                        |                   |                                                                   |
|------------------------|-------------------|-------------------------------------------------------------------|
| <b>M-508P-B-R</b>      |                   | 1 x 1 mL                                                          |
| <b>M-508P-B-R-PAK</b>  | <b>SAVE</b>       | 5 x 1 mL                                                          |
| 1.0 mg/mL each in MtBE |                   | 13 comps.                                                         |
| $\alpha$ -Chlordane    | Chlorpyrifos      | <i>cis</i> -Permethrin (0.5 mg/mL)                                |
| $\gamma$ -Chlordane    | DCPA              | <i>trans</i> -Permethrin (1.5 mg/mL)                              |
| Chlorobenzilate        | Etridiazole       | Propachlor                                                        |
| Chloroneb              | Hexachlorobenzene | Trifluralin                                                       |
| Chlorothalonil         |                   | Certificate will reflect actual <i>cis/trans</i> permethrin ratio |

#### Technical Note

Endrin & DDT can break down in the injection port at elevated temperatures. Breakdown can be monitored by running the Pesticide Degradation Standard (M-8081-DS). The problem can be alleviated by replacing the dirty injection port liner, or by using cool, on-column injection.

#### Internal Standard

|                         |             |          |
|-------------------------|-------------|----------|
| <b>M-508-IS</b>         |             | 1 x 1 mL |
| <b>M-508-IS-PAK</b>     | <b>SAVE</b> | 5 x 1 mL |
| 0.1 mg/mL in MtBE       |             |          |
| <b>M-508-IS-10X NEW</b> |             | 1 x 1 mL |
| 1.0 mg/mL in MtBE       |             |          |
| Pentachloronitrobenzene |             |          |

#### Surrogate Standards

|                       |             |          |
|-----------------------|-------------|----------|
| <b>M-508-SS</b>       |             | 1 x 1 mL |
| <b>M-508-SS-PAK</b>   | <b>SAVE</b> | 5 x 1 mL |
| 0.5 mg/mL in MtBE     |             |          |
| 4,4'-Dichlorobiphenyl |             |          |
| <b>M-508-SS-2</b>     |             | 1 x 1 mL |
| <b>M-508-SS-2-PAK</b> | <b>SAVE</b> | 5 x 1 mL |
| 0.5 mg/mL in MtBE     |             |          |
| Decachlorobiphenyl    |             |          |

|                        |                   |                                                                     |
|------------------------|-------------------|---------------------------------------------------------------------|
| <b>M-508P-B-R2</b>     |                   | 1 x 1 mL                                                            |
| <b>M-508P-B-R2-PAK</b> | <b>SAVE</b>       | 5 x 1 mL                                                            |
| 1.0 mg/mL each in MtBE |                   | 15 comps.                                                           |
| $\alpha$ -Chlordane    | Chlorpyrifos      | <i>cis</i> -Permethrin (0.5 mg/mL) *                                |
| $\gamma$ -Chlordane    | DCPA              | <i>trans</i> -Permethrin (1.5 mg/mL) *                              |
| Chlorobenzilate        | Etridiazole       | Propachlor                                                          |
| Chloroneb              | Hexachlorobenzene | Trifluralin                                                         |
| Chlorothalonil         | Cyanazine         | <i>trans</i> -Nonachlor                                             |
|                        |                   | * Certificate will reflect actual <i>cis/trans</i> permethrin ratio |

#### Decomposition Solution

|                          |                    |          |
|--------------------------|--------------------|----------|
| <b>M-508-DS-100X</b>     |                    | 1 x 1 mL |
| <b>M-508-DS-100X-PAK</b> | <b>SAVE</b>        | 5 x 1 mL |
| At stated conc. in MtBE  |                    | 2 comps. |
| p,p'-DDT (200 µg/mL)     | Endrin (100 µg/mL) |          |

#### Performance Check Solution

|                           |                        |          |
|---------------------------|------------------------|----------|
| <b>M-508-QC</b>           |                        | 1 x 1 mL |
| <b>M-508-QC-PAK</b>       | <b>SAVE</b>            | 5 x 1 mL |
| At stated conc. in MtBE   |                        | 4 comps. |
| $\delta$ -BHC (40 ng/mL)  | Chlorpyrifos (2 ng/mL) |          |
| Chlorothalonil (50 ng/mL) | Dacthal (50 ng/mL)     |          |

### Method 508.1 Chlorinated Pesticides, Herbicides & Organo-Halides by Liquid - Solid Extraction & ECD

#### Chlorinated Pesticide Mix #1

|                                 |                        |           |
|---------------------------------|------------------------|-----------|
| <b>M-508.1-X1</b>               |                        | 1 x 1 mL  |
| <b>M-508.1-X1-PAK</b>           | <b>SAVE</b>            | 5 x 1 mL  |
| 500 µg/mL each in Ethyl acetate |                        | 19 comps. |
| Aldrin                          | Dieldrin               |           |
| $\alpha$ -BHC                   | Endosulfan I           |           |
| $\beta$ -BHC                    | Endosulfan II          |           |
| $\delta$ -BHC                   | Endosulfan sulfate     |           |
| $\gamma$ -BHC                   | Endrin                 |           |
| $\alpha$ -Chlordane             | Endrin aldehyde        |           |
| $\gamma$ -Chlordane             | Heptachlor             |           |
| 4,4'-DDD                        | Heptachlor epoxide (B) |           |
| 4,4'-DDE                        | Methoxychlor           |           |
| 4,4'-DDT                        |                        |           |

#### Chlorinated Pesticide Mix #2

|                                 |                            |           |
|---------------------------------|----------------------------|-----------|
| <b>M-508.1-X2</b>               |                            | 1 x 1 mL  |
| <b>M-508.1-X2-PAK</b>           | <b>SAVE</b>                | 5 x 1 mL  |
| 500 µg/mL each in Ethyl acetate |                            | 17 comps. |
| Alachlor                        | Hexachlorocyclopentadiene  |           |
| Atrazine                        | Metolachlor                |           |
| Chlorobenzilate                 | Metribuzin                 |           |
| Chloroneb                       | <i>cis</i> -Permethrin *   |           |
| Chlorothalonil                  | <i>trans</i> -Permethrin * |           |
| Cyanazine                       | Propachlor                 |           |
| DCPA                            | Simazine                   |           |
| Etridiazole                     | Trifluralin                |           |
| Hexachlorobenzene               |                            |           |

#### Decomposition Solution

|                                 |             |          |
|---------------------------------|-------------|----------|
| <b>M-508.1-DS-100X</b>          |             | 1 x 1 mL |
| <b>M-508.1-DS-100X-PAK</b>      | <b>SAVE</b> | 5 x 1 mL |
| 100 µg/mL each in Ethyl acetate |             | 2 comps. |
| 4,4'-DDT                        | Endrin      |          |

#### Internal Standard Solution

|                                 |             |          |
|---------------------------------|-------------|----------|
| <b>M-508.1-IS</b>               |             | 1 x 1 mL |
| <b>M-508.1-IS-PAK</b>           | <b>SAVE</b> | 5 x 1 mL |
| 100 µg/mL each in Ethyl acetate |             |          |
| Pentachloronitrobenzene         |             |          |

#### Surrogate Standard Solution

|                                 |             |          |
|---------------------------------|-------------|----------|
| <b>M-508.1-SS</b>               |             | 1 x 1 mL |
| <b>M-508.1-SS-PAK</b>           | <b>SAVE</b> | 5 x 1 mL |
| 100 µg/mL each in Ethyl acetate |             |          |
| 4,4'-Dibromobiphenyl            |             |          |

#### Performance Check Solution

|                            |                         |          |
|----------------------------|-------------------------|----------|
| <b>M-508.1-QC</b>          |                         | 1 x 1 mL |
| <b>M-508.1-QC-PAK</b>      | <b>SAVE</b>             | 5 x 1 mL |
| At stated conc. in MtBE    |                         | 4 comps. |
| $\delta$ -BHC (400 ng/mL)  | Chlorpyrifos (20 ng/mL) |          |
| Chlorothalonil (500 ng/mL) | DCPA (500 ng/mL)        |          |

\* Certificate will reflect actual *cis/trans* permethrin ratio



### Method 515.1 Chlorinated Acids in Water by GC/ECD

#### Methyl Derivatives

**M-515-R** 1 x 1 mL  
**M-515-R-PAK** 5 x 1 mL  
*1.0 mg/mL each in MtBE as methyl derivatives* 16 comps.

SAVE

|                 |                              |
|-----------------|------------------------------|
| Acifluorfen, ME | 3,5-Dichlorobenzoic acid, ME |
| Bentazon, ME    | Dichlorprop, ME              |
| Chloramben, ME  | Dinoseb, ME                  |
| 2,4-D, ME       | 4-Nitrophenol, ME            |
| Dalapon, ME     | Pentachlorophenol, ME        |
| 2,4-DB, ME      | Picloram, ME                 |
| DCPA, Di ME     | 2,4,5-T, ME                  |
| Dicamba, ME     | 2,4,5-TP, ME                 |

#### Underivatized Analytes

**M-515A-R2** 1 x 1 mL  
**M-515A-R2-PAK** 5 x 1 mL  
*At stated conc. in MeOH* 16 comps.

SAVE

|                         |                                      |
|-------------------------|--------------------------------------|
| Acifluorfen (100 µg/mL) | 3,5-Dichlorobenzoic acid (100 µg/mL) |
| Bentazon (200 µg/mL)    | Dichlorprop (300 µg/mL)              |
| Chloramben (100 µg/mL)  | Dinoseb (200 µg/mL)                  |
| 2,4-D (200 µg/mL)       | 4-Nitrophenol (100 µg/mL)            |
| Dalapon (1300 µg/mL)    | Pentachlorophenol (100 µg/mL)        |
| 2,4-DB (800 µg/mL)      | Picloram (100 µg/mL)                 |
| DCPA acid (100 µg/mL)   | 2,4,5-T (100 µg/mL)                  |
| Dicamba (100 µg/mL)     | 2,4,5-TP (100 µg/mL)                 |

#### Technical Note

If you require the complete absence of partial esterification, we recommend M-515.4A and M-515.3A products.

#### Performance Check Solution

**M-515-QC** 1 x 1 mL  
**M-515-QC-PAK** 5 x 1 mL  
*At stated conc. in MtBE* 3 comps.

SAVE

|                                       |              |
|---------------------------------------|--------------|
| 3,5-Dichlorobenzoic acid methyl ester | (600 ng/mL)  |
| Dinoseb methyl ether                  | (4 ng/mL)    |
| 4-Nitroanisole                        | (1600 ng/mL) |

#### Performance Check Solution with ISTD & SS

**M-515-QC-R** 1 x 1 mL  
**M-515-QC-R-PAK** 5 x 1 mL  
*At stated conc. in MtBE* 5 comps.

SAVE

|                                                  |              |
|--------------------------------------------------|--------------|
| 4,4'-Dibromooctafluorobiphenyl (ISTD)            | (250 ng/mL)  |
| 3,5-Dichlorobenzoic acid methyl ester            | (600 ng/mL)  |
| 2,4-Dichlorophenyl acetic acid methyl ester (SS) | (500 ng/mL)  |
| Dinoseb methyl ether                             | (4 ng/mL)    |
| 4-Nitroanisole                                   | (1600 ng/mL) |

#### Internal Standard

**M-515-IS** 1 x 1 mL  
**M-515-IS-PAK** 1 x 1 mL  
*0.1 mg/mL in MtBE*

SAVE

4,4'-Dibromooctafluorobiphenyl

#### Surrogate Standards

**M-515-SS** 1 x 1 mL  
**M-515-SS-PAK** 5 x 1 mL  
*0.1 mg/mL in MtBE*  
**M-515-SS-50X NEW** 5 x 1 mL  
*5.0 mg/mL in MtBE*

SAVE

2,4-Dichlorophenylacetic acid methyl ester

**P-244S** 1 x 1 mL  
*0.1 mg/mL in MeOH*

2,4-Dichlorophenylacetic acid

### Method 515.2 Chlorinated Acids in Water by GC/ECD

#### Methyl Derivatives

**M-515.2-1** 1 x 1 mL  
**M-515.2-1-PAK** 5 x 1 mL  
*At stated conc. in MeOH* 6 comps.

SAVE

|                                          |                                   |
|------------------------------------------|-----------------------------------|
| DCPA, ME (100 µg/mL)                     | Dinoseb, ME (200 µg/mL)           |
| 3,5-Dichlorobenzoic acid, ME (500 µg/mL) | Pentachlorophenol, ME (100 µg/mL) |
| Dichlorprop, ME (100 µg/mL)              | 2,4,5-T, ME (100 µg/mL)           |

**M-515.2-2** 1 x 1 mL  
**M-515.2-2-PAK** 5 x 1 mL  
*At stated conc. in MeOH* 7 comps.

SAVE

|                             |                          |
|-----------------------------|--------------------------|
| Acifluorfen, ME (200 µg/mL) | Dicamba, ME (300 µg/mL)  |
| Bentazon, ME (1000 µg/mL)   | Picloram, ME (300 µg/mL) |
| 2,4-D, ME (100 µg/mL)       | 2,4,5-TP, ME (100 µg/mL) |
| 2,4-DB, ME (1000 µg/mL)     |                          |

#### Underivatized Analytes

**M-515.2A-1** 1 x 1 mL  
**M-515.2A-1-PAK** 5 x 1 mL  
*At stated conc. in MeOH* 6 comps.

SAVE

|                                      |                               |
|--------------------------------------|-------------------------------|
| DCPA acid (100 µg/mL)                | Dinoseb (200 µg/mL)           |
| 3,5-Dichlorobenzoic acid (500 µg/mL) | Pentachlorophenol (100 µg/mL) |
| Dichlorprop (100 µg/mL)              | 2,4,5-T (100 µg/mL)           |

**M-515.2A-2** 1 x 1 mL  
**M-515.2A-2-PAK** 5 x 1 mL  
*At stated conc. in MeOH* 7 comps.

SAVE

|                         |                      |
|-------------------------|----------------------|
| Acifluorfen (200 µg/mL) | Dicamba (300 µg/mL)  |
| Bentazon (1000 µg/mL)   | Picloram (300 µg/mL) |
| 2,4-D (100 µg/mL)       | 2,4,5-TP (100 µg/mL) |
| 2,4-DB (1000 µg/mL)     |                      |

### Method 515.1 & 515.2 Chlorinated Acids in Water by GC/ECD

#### Laboratory Performance Check Solution

**M-8150/51-LPC-5ML** 1 x 5 mL  
*At stated conc. in Isooctane* 5 comps.

|                                      |                  |
|--------------------------------------|------------------|
| 3,5-Dichlorobenzoic acid (600 ng/mL) | DCAA (500 ng/mL) |
| Dinoseb (4 ng/mL)                    | DBOB (250 ng/mL) |
| 4-Nitrophenol (1600 ng/mL)           |                  |



# EPA Method 500 Series

## Pesticide Standards for Drinking Water

### Method 515.3 Chlorinated Acids in Drinking Water by ECD

#### Underivatized Acids

|                                   |                                     |  |           |
|-----------------------------------|-------------------------------------|--|-----------|
| <b>M-515.3A</b>                   |                                     |  | 1 x 1 mL  |
| <b>M-515.3A-PAK</b>               | <b>SAVE</b>                         |  | 5 x 1 mL  |
| <i>At stated conc. in Acetone</i> |                                     |  | 17 comps. |
| Acifluorfen (50 µg/mL)            | 3,5-Dichlorobenzoic acid (50 µg/mL) |  |           |
| Bentazon (100 µg/mL)              | Dichlorprop (100 µg/mL)             |  |           |
| Chloramben (50 µg/mL)             | Dinoseb (100 µg/mL)                 |  |           |
| 2,4-D (100 µg/mL)                 | 4-Nitrophenol (100 µg/mL)           |  |           |
| Dalapon (100 µg/mL)               | Pentachlorophenol (10 µg/mL)        |  |           |
| 2,4-DB (100 µg/mL)                | Picloram (100 µg/mL)                |  |           |
| DCPA Diacid (50 µg/mL)            | 2,4,5-T (25 µg/mL)                  |  |           |
| DCPA monoacid (50 µg/mL)          | Silvex (25 µg/mL)                   |  |           |
| Dicamba (50 µg/mL)                |                                     |  |           |

#### Laboratory Performance Check

##### Methyl Derivatives

|                                |             |          |
|--------------------------------|-------------|----------|
| <b>M-515.3-LPC</b>             |             | 1 x 1 mL |
| <b>M-515.3-LPC-PAK</b>         | <b>SAVE</b> | 5 x 1 mL |
| <i>At stated conc. in MtBE</i> |             | 4 comps. |

|                                      |  |
|--------------------------------------|--|
| 2,4-DB methyl ester (25 µg/mL)       |  |
| Dinoseb methyl ether (25 µg/mL)      |  |
| Chloramben methyl ester (12.5 µg/mL) |  |
| 4-Nitroanisole (25 µg/mL)            |  |

#### Independent Check Standard Methyl Derivatives

|                                |             |           |
|--------------------------------|-------------|-----------|
| <b>M-515.3-ICS</b>             |             | 1 x 1 mL  |
| <b>M-515.3-ICS-PAK</b>         | <b>SAVE</b> | 5 x 1 mL  |
| <i>At stated conc. in MtBE</i> |             | 16 comps. |

|                                     |                                        |
|-------------------------------------|----------------------------------------|
| Acifluorfen methyl ester (50 µg/mL) | Methyl-3,5-Dichlorobenzoate (50 µg/mL) |
| Bentazon methyl (100 µg/mL)         | Dichlorprop methyl ester (100 µg/mL)   |
| Chloramben methyl ester (50 µg/mL)  | Dinoseb methyl ether (100 µg/mL)       |
| 2,4-D methyl ester (100 µg/mL)      | 4-Nitroanisole (100 µg/mL)             |
| Dalapon methyl ester (100 µg/mL)    | Pentachloroanisole (10 µg/mL)          |
| 2,4-DB methyl ester (100 µg/mL)     | Picloram methyl ester (100 µg/mL)      |
| Dacthal (100 µg/mL)                 | 2,4,5-T methyl ester (25 µg/mL)        |
| Dicamba methyl ester (50 µg/mL)     | Silvex methyl ester (25 µg/mL)         |

#### Internal Standard

|                          |             |          |
|--------------------------|-------------|----------|
| <b>M-515-IS</b>          |             | 1 x 1 mL |
| <b>M-515-IS-PAK</b>      | <b>SAVE</b> | 5 x 1 mL |
| <i>0.1 mg/mL in MtBE</i> |             |          |

4,4'-Dibromooctafluorobiphenyl

### Method 515.4 Chlorinated Acids in Drinking Water by ECD

#### Underivatized Acids

|                                   |                                     |           |
|-----------------------------------|-------------------------------------|-----------|
| <b>M-515.4A</b>                   |                                     | 1 x 1 mL  |
| <b>M-515.4A-PAK</b>               | <b>SAVE</b>                         | 5 x 1 mL  |
| <i>At stated conc. in Acetone</i> |                                     | 17 comps. |
| Acifluorfen (50 µg/mL)            | 3,5-Dichlorobenzoic acid (50 µg/mL) |           |
| Bentazon (100 µg/mL)              | Dichlorprop (100 µg/mL)             |           |
| Chloramben (50 µg/mL)             | Dinoseb (100 µg/mL)                 |           |
| 2,4-D (100 µg/mL)                 | Pentachlorophenol (10 µg/mL)        |           |
| Dalapon (100 µg/mL)               | Picloram (50 µg/mL)                 |           |
| 2,4-DB (100 µg/mL)                | 2,4,5-T (25 µg/mL)                  |           |
| DCPA Diacid (50 µg/mL)            | Silvex (25 µg/mL)                   |           |
| DCPA monoacid (50 µg/mL)          | Quinclorac (50 µg/mL)               |           |
| Dicamba (50 µg/mL)                |                                     |           |

#### Underivatized Surrogate

|                               |             |          |
|-------------------------------|-------------|----------|
| <b>M-8150B-SS</b>             |             | 1 x 1 mL |
| <b>M-8150B-SS-PAK</b>         | <b>SAVE</b> | 5 x 1 mL |
| <i>0.1 mg/mL in Acetone</i>   |             |          |
| 2,4-Dichlorophenylacetic acid |             |          |

#### Quality Control Sample Methyl Derivatives

|                                |             |           |
|--------------------------------|-------------|-----------|
| <b>M-515.4-QCS</b>             |             | 1 x 1 mL  |
| <b>M-515.4-QCS-PAK</b>         | <b>SAVE</b> | 5 x 1 mL  |
| <i>At stated conc. in MtBE</i> |             | 16 comps. |

|                                     |                                        |
|-------------------------------------|----------------------------------------|
| Acifluorfen methyl ester (50 µg/mL) | Methyl-3,5-Dichlorobenzoate (50 µg/mL) |
| Bentazon methyl (100 µg/mL)         | Dichlorprop methyl ester (100 µg/mL)   |
| Chloramben methyl ester (50 µg/mL)  | Dinoseb methyl ether (100 µg/mL)       |
| 2,4-D methyl ester (100 µg/mL)      | Pentachloroanisole (10 µg/mL)          |
| Dalapon methyl ester (100 µg/mL)    | Picloram methyl ester (50 µg/mL)       |
| 2,4-DB methyl ester (100 µg/mL)     | 2,4,5-T methyl ester (25 µg/mL)        |
| Dacthal (100 µg/mL)                 | Silvex methyl ester (25 µg/mL)         |
| Dicamba methyl ester (50 µg/mL)     | Quinclorac methyl ester (50 µg/mL)     |

#### Technical Note

M-515.3A and M-515.4A are to be used as procedural standards for the calibration of the method. These standards should be carried through the entire extraction and derivatization procedure associated with the samples.





### Method 525.1 Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary GC/MS

#### Pesticide Mixtures

|                           |                    |          |
|---------------------------|--------------------|----------|
| M-525-3                   |                    | 1 x 1 mL |
| M-525-3-PAK               | SAVE               | 5 x 1 mL |
| 0.1 mg/mL each in Acetone |                    |          |
| M-525-3-5X                |                    | 1 x 1 mL |
| M-525-3-5X-PAK            | SAVE               | 5 x 1 mL |
| 0.5 mg/mL each in Acetone |                    |          |
| Alachlor                  | Heptachlor         |          |
| Aldrin                    | Heptachlor epoxide |          |
| Atrazine                  | Lindane            |          |
| $\alpha$ -Chlordane       | Methoxychlor       |          |
| $\gamma$ -Chlordane       | Simazine           |          |
| Endrin                    | trans-Nonachlor    |          |

#### Multi-Component / Analyte

|                      |      |          |
|----------------------|------|----------|
| M-525-5              |      | 1 x 1 mL |
| M-525-5-PAK          | SAVE | 5 x 1 mL |
| 2.5 mg/mL in Acetone |      |          |
| Toxaphene            |      |          |





# EPA Method 500 Series

## Pesticide Standards for Drinking Water

### Method 525.2 (Revision 1.0) Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary GC/MS

All 112 analytes (excluding Disulfoton sulfoxide and Disulfoton sulfone which can be found in the individual section) listed in this revision can be found in the mixes below. We realize that many labs will not be analyzing for all of these analytes at one time since it is not practical or necessary in many instances. If all the analytes must be determined, the following multiple calibration mixes are offered to accomplish this task. Several of these mixes are from our current product line and are grouped as nitrogen/phosphorus pesticides, organochlorine pesticides, semi-volatiles, polyaromatics, PCB congeners, and individual multi-component solutions for the Aroclors and Toxaphene. **See our Master Catalog for a complete listing of Method 525.2.**

#### Nitrogen/Phosphorus Pesticides

##### M-507A

1.0 mg/mL each in MtBE

1 x 1 mL

6 comps.

Ametryn  
Cycloate  
Disulfoton

Fenamiphos  
Merphos  
Prometon

##### M-507B

1.0 mg/mL each in MtBE

1 x 1 mL

9 comps.

Atrazine  
Diphenamid  
EPTC  
Ethoprop  
Mevinphos

Prometryne  
Propazine  
Terbutryn  
Triadimefon

##### M-507C

1.0 mg/mL each in MtBE

1 x 1 mL

9 comps.

Butachlor  
Carboxin  
Diazinon  
Metolachlor  
Metribuzin

MGK-264  
Norflurazon  
Terbufos  
Vernolate

##### M-507D

1.0 mg/mL each in MtBE

1 x 1 mL

10 comps.

Alachlor  
Atraton  
Bromacil  
Butylate  
Chlorpropham

Hexazinone  
Molinate  
Pronamide  
Stirofos  
Tricyclazole

##### M-507E

1.0 mg/mL each in MtBE

1 x 1 mL

8 comps.

Dichlorvos  
Fenarimol  
Fluridone  
Napropamide

Pebulate (Tillam)  
Simetryn  
Tebuthiuron  
Terbacil

##### M-507F-R2

1.0 mg/mL each in Acetone

1 x 1 mL

2 comps.

Methyl paraoxon

Simazine

#### Auxiliary Standards

##### Internal Standard

M-525.2-IS

M-525.2-IS-PAK

0.5 mg/mL each in Acetone

SAVE

1 x 1 mL

5 x 1 mL

3 comps.

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

Phenanthrene-d<sub>10</sub>

##### Surrogate Standard

M-525.2-SS

M-525.2-SS-PAK

0.5 mg/mL each in Acetone

SAVE

1 x 1 mL

5 x 1 mL

3 comps.

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

Triphenylphosphate

##### Internal/Surrogate Standard

M-525.2-IS/SS

M-525.2-IS/SS-PAK

0.5 mg/mL each in Acetone

SAVE

1 x 1 mL

5 x 1 mL

6 comps.

Acenaphthene-d<sub>10</sub>  
Chrysene-d<sub>12</sub>  
1,3-Dimethyl-2-nitrobenzene

Perylene-d<sub>12</sub>  
Phenanthrene-d<sub>10</sub>  
Triphenylphosphate

##### Tuning Standard

M-525.2-TS

0.5 mg/mL each in CH<sub>2</sub>Cl<sub>2</sub>

1 x 1 mL

3 comps.

4,4'-DDT  
DFTPP

Endrin

#### Technical Note

Endrin & DDT can break down in the injection port at elevated temperatures. Breakdown can be monitored by running the Pesticide Degradation standard (M-8081-DS). The problem can be alleviated by replacing the dirty injection port liner, or by using cool, on-column injection.

#### Chlorinated Pesticides

##### Mix A

M-508P-A

M-508P-A-PAK

1.0 mg/mL each in MtBE

SAVE

1 x 1 mL

5 x 1 mL

17 comps.

Aldrin  
α-BHC  
β-BHC  
δ-BHC  
γ-BHC  
4,4'-DDD  
4,4'-DDE  
4,4'-DDT  
Dieldrin

Endosulfan I  
Endosulfan II  
Endosulfan sulfate  
Endrin  
Endrin aldehyde  
Heptachlor  
Heptachlor epoxide  
Methoxychlor

##### Mix B

M-508P-B-R2

M-508P-B-R2-PAK

1.0 mg/mL each in MtBE

SAVE

1 x 1 mL

5 x 1 mL

15 comps.

α-Chlordane  
γ-Chlordane  
Chlorobenzilate  
Chloroneb  
Chlorothalonil  
Chlorpyrifos  
Cyanazine  
DCPA

Etridiazole  
Hexachlorobenzene  
trans-Nonachlor  
cis-Permethrin (0.5 mg/mL) \*  
trans-Permethrin (1.5 mg/mL) \*  
Propachlor  
Trifluralin

\* Certificate will reflect actual cis/trans permethrin ratio



### Method 525.2 (Continued) Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary GC/MS

These solutions are to be used individually or combined for calibration curve development. The Nitrogen Phosphorous Pesticides typically analyzed by NPD were combined into convenient solutions for possible use in other EPA methods such as 507. The Chlorinated Pesticides typically analyzed by ECD were combined into a convenient solution for use in this method or additional methods such as 505 or 508.1.

#### Nitrogen / Phosphorus Pesticide Mixture

**M-525.2-NP1-ASL**

**M-525.2-NP1-ASL-PAK**

100 µg/mL each in Acetone

Alternate  
Source

SAVE

1 x 1 mL  
5 x 1 mL  
41 comps.

|                 |                   |
|-----------------|-------------------|
| Alachlor        | Mevinphos         |
| Ametryn         | MGK-264           |
| Atraton         | Molinate          |
| Atrazine        | Napropamide       |
| Bromacil        | Norflurazon       |
| Butachlor       | Pebulate          |
| Butylate        | Prometon          |
| Chlorpropham    | Prometryne        |
| Dursban         | Pronamide         |
| Cycloate        | Propachlor        |
| Cyanazine       | Propazine         |
| Dichlorvos      | Simetryn          |
| Diphenamid      | Tetrachlorvinphos |
| EPTC            | Tebuthiuron       |
| Ethoprop        | Terbacil          |
| Fenarimol       | Prebane           |
| Fluridone       | Triadimefon       |
| Hexazinone      | Tricyclazole      |
| Methyl paraoxon | Trifluralin       |
| Metolachlor     | Vernolate         |
| Metribuzin      |                   |

#### Organochlorine Pesticides

**M-525.2-CP-ASL**

**M-525.2-CP-ASL-PAK**

100 µg/mL each in Acetone

Alternate  
Source

SAVE

1 x 1 mL  
5 x 1 mL  
30 comps.

|                 |                               |
|-----------------|-------------------------------|
| Alachlor        | Endosulfan I                  |
| Aldrin          | Endosulfan II                 |
| Atrazine        | Endosulfan sulfate            |
| α-BHC           | Endrin                        |
| β-BHC           | Endrin aldehyde               |
| δ-BHC           | Etridiazole                   |
| γ-BHC           | α-Chlordane                   |
| Chlorobenzilate | γ-Chlordane                   |
| Chlorothalonil  | Heptachlor                    |
| Chloroneb       | Heptachlor epoxide (Isomer B) |
| Dacthal         | Methoxychlor                  |
| p,p'-DDD        | cis-Permethrin                |
| p,p'-DDE        | trans-Permethrin              |
| p,p'-DDT        | Simazine                      |
| Dieldrin        | trans-Nonachlor               |

#### Internal Standard

**M-525.2-IS**

**M-525.2-IS-PAK**

0.5 mg/mL each in Acetone

SAVE

1 x 1 mL  
5 x 1 mL  
3 comps.

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

#### Surrogate Standard

**M-525.2-SS**

0.5 mg/mL each in Acetone

1 x 1 mL  
3 comps.

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

#### Nitrogen / Phosphorus Pesticide Mixture

**M-525.2-NP2-ASL**

**M-525.2-NP2-ASL-PAK**

100 µg/mL each in Acetone

Alternate  
Source

SAVE

1 x 1 mL  
5 x 1 mL  
6 comps.

|            |            |
|------------|------------|
| Carboxin   | Fenamiphos |
| Diazinon   | Merphos    |
| Disulfoton | Terbufos   |

#### Regulated Semi-Volatiles Mixture

**M-525-REG-EA**

100 µg/mL each in Ethyl acetate

**M-525-REG-EA-5X**

500 µg/mL each in Ethyl acetate

1 x 1 mL  
25 comps.  
1 x 1 mL  
25 comps.

|                |                    |                            |
|----------------|--------------------|----------------------------|
| Alachlor       | α-Chlordane        | 2,6-Dinitrotoluene         |
| Aldrin         | γ-Chlordane        | bis(2-Ethylhexyl)adipate   |
| Atrazine       | Cyanazine          | bis(2-Ethylhexyl)phthalate |
| Benzo(a)pyrene | Dieldrin           | Endrin                     |
| Butachlor      | 2,4-Dinitrotoluene | Heptachlor                 |

|                               |                 |
|-------------------------------|-----------------|
| Heptachlor epoxide (isomer B) | Metolachlor     |
| Hexachlorobenzene             | Metribuzin      |
| Hexachlorocyclopentadiene     | trans-Nonachlor |
| Lindane                       | Propachlor      |
| Methoxychlor                  | Simazine        |

### Method 526 Semi-Volatiles by GC/MS

#### Primary Dilution Standard

**M-526-0.2X-EA**

**M-526-0.2X-EA-PAK**

200 µg/mL each in Ethyl acetate

**M-526**

**M-526-PAK**

1000 µg/mL each in Acetone

SAVE

SAVE

1 x 1 mL  
5 x 1 mL  
11 comps.  
1 x 1 mL  
5 x 1 mL  
11 comps.

|                       |                       |
|-----------------------|-----------------------|
| Acetochlor            | Dyfonate              |
| Cyanazine             | Nitrobenzene          |
| Diazinon              | Prometon              |
| 2,4-Dichlorophenol    | Terbufos              |
| 1,2-Diphenylhydrazine | 2,4,6-Trichlorophenol |
| Disulfoton            |                       |

#### Internal/Surrogate Standards

**M-526-IS/SS**

**M-526-IS/SS-PAK**

500 µg/mL each in Acetone

SAVE

1 x 1 mL  
5 x 1 mL  
5 comps.

|                              |                              |
|------------------------------|------------------------------|
| Acenaphthene-d <sub>10</sub> | Phenanthrene-d <sub>10</sub> |
| Chrysene-d <sub>12</sub>     | Triphenylphosphate           |
| 1,3-Dimethyl-2-nitrobenzene  |                              |

**M-525-TS-0.05X**

5 µg/mL in CH<sub>2</sub>Cl<sub>2</sub>

1 x 1 mL

DFTPP

#### Internal Standard

**M-525.2-IS**

**M-525.2-IS-PAK**

500 µg/mL each in Acetone

SAVE

1 x 1 mL  
5 x 1 mL  
3 comps.

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

#### Surrogate Standard

**M-526-SS**

**M-526-SS-PAK**

500 µg/mL each in Acetone

SAVE

1 x 1 mL  
5 x 1 mL  
2 comps.

|                             |                    |
|-----------------------------|--------------------|
| 1,3-Dimethyl-2-nitrobenzene | Triphenylphosphate |
|-----------------------------|--------------------|



# EPA Method 500 Series

## Pesticide Standards for Drinking Water

### Method 527 Pesticides & Flame Retardants in Drinking Water by SPE & Capillary GC/MS

#### Pesticide Mix A

##### M-527-PEST-A

500 µg/mL each in MeOH

1 x 1 mL

11 comps.

Atrazine  
Bioallethrin, S-cyclopentyl isomer  
Bromacil  
Esfenvalerate  
Fenvalerate  
Hexazinone

Kepone  
Norflurazon  
Oxychlorodane isomer  
Prometryne  
Propazine

#### Pesticide Mix B

##### M-527-PEST-B

500 µg/mL each in MeOH

1 x 1 mL

12 comps.

Bifenthrin  
Dimethoate  
Dursban  
Fenamiphos  
Malathion  
Mirex

Nitrofen  
Parathion  
Terbufos sulfone  
Thiazopyr  
Thiobencarb  
Vinclozolin

### Method 531 + 531.1 N-Methyl carbamoyl oximes & N-Methyl carbamates by HPLC

#### M-531-SET

Each at 0.1 mg/mL in AcCN

set of 11 x 1 mL

Analytes listed below

| Each at 0.1 mg/mL in AcCN | Cat. No. | 1 mL |
|---------------------------|----------|------|
| Aldicarb sulfoxide        | M-531-01 |      |
| Aldicarb sulfone          | M-531-02 |      |
| Oxamyl                    | M-531-03 |      |
| Methomyl                  | M-531-04 |      |
| 3-Hydroxycarbofuran       | M-531-05 |      |
| Aldicarb                  | M-531-06 |      |
| Propoxur                  | M-531-07 |      |
| Carbofuran                | M-531-08 |      |
| Carbaryl                  | M-531-09 |      |
| 1-Naphthol                | M-531-10 |      |
| Methiocarb                | M-531-11 |      |

#### M-531M

##### M-531M-PAK NEW

0.1 mg/mL each in AcCN

SAVE

1 x 1 mL

5 x 1 mL

11 comps.

#### Internal Standard

##### M-531-IS

0.1 mg/mL in AcCN

1 x 1 mL

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

#### Carbamate Pesticide Mix

##### M-531-REG-ASL

##### M-531-REG-ASL-PAK

100 µg/mL in MeOH

SAVE

1 x 1 mL

5 x 1 mL

2 comps.

Carbofuran

Oxamyl

#### Performance Check Solution

##### M-531-QC-R

At stated conc. in AcCN

1 x 1 mL

4 comps.

|                    |             |                     |            |
|--------------------|-------------|---------------------|------------|
| Aldicarb sulfoxide | (100 µg/mL) | 3-Hydroxycarbofuran | (2 µg/mL)  |
| BDMC               | (10 µg/mL)  | Methiocarb          | (20 µg/mL) |

### Method 532 Phenylureas by HPLC

#### Phenylurea Concentrate Standard

##### M-532-CONC1

##### M-532-CONC1-PAK

5.0 mg/mL each in MeOH

SAVE

1 x 1 mL

5 x 1 mL

6 comps.

Karmex  
Fluometuron  
Linuron

Propanil  
Siduron  
Tebuthiuron

#### Phenylurea Concentrate Standard

##### M-532-CONC2

##### M-532-CONC2-PAK

5.0 mg/mL each in Acetone

SAVE

1 x 1 mL

5 x 1 mL

2 comps.

Diflufenazuron

Thidiazuron

#### Phenylurea Primary Dilution Standard

##### M-532

##### M-532-PAK

100 µg/mL each in MeOH, except Siduron

SAVE

1 x 1 mL

5 x 1 mL

8 comps.

Diflufenazuron  
Karmex  
Fluometuron  
Linuron

Propanil  
Siduron (200 µg/mL)  
Tebuthiuron  
Thidiazuron

#### Phenylurea Surrogate Standard

##### M-532-SS

##### M-532-SS-PAK

500 µg/mL each in MeOH

SAVE

1 x 1 mL

5 x 1 mL

2 comps.

Carbazole

Monuron

### Method 535 Acetamide-Herbicide Degradates

Ethanesulfonic acid (ESA) and oxanilic acid (OA) degradation products of acetanilide/acetamide herbicides have been found in U.S. ground waters and surface waters. The substitution of the sulfonic acid or the carbonic acid for the chlorine atom greatly increases the water solubility of degradates relative to the parent compound and contributes to the increased potential for leaching into groundwater. As a result, alachlor ESA and other acetanilide degradation products were listed on the 1998 Safe Drinking Water Act Contaminant Candidate List (CCL). One acetamide and five acetanilide herbicides are currently registered for agricultural use in the U.S. The next step in the CCL-process is to collect data on the concentrations and occurrence of these compounds in the nation's drinking water supplies. However, the existing analytical methods for measuring chloroacetanilide degradates do not address issues specific to analyzing these compounds in drinking water. Because many of the methods were developed for ground water, dechlorination was not addressed nor was the method tested in all types of drinking water matrices.

In addition, existing methods do not address all twelve ESA and OA degradates of the six U.S. registered acetanilide/acetamide herbicides. The focus of this research was to develop a sensitive and specific analytical method for the analysis of alachlor ESA and other chloroacetanilide degradates in drinking water.

#### M-535-SET

At stated conc. in MeOH

14 x 1 mL

|                 |          |                              |          |
|-----------------|----------|------------------------------|----------|
| Acetochlor ESA  | 50 µg/mL | Propachlor ESA               | 20 µg/mL |
| Acetochlor OA   | 50 µg/mL | Propachlor OA                | 20 µg/mL |
| Alachlor ESA    | 50 µg/mL | Dimethenamid ESA             | 10 µg/mL |
| Alachlor OA     | 50 µg/mL | Dimethenamid OA              | 10 µg/mL |
| Flufenacet ESA  | 20 µg/mL | <b>Internal Standard</b>     |          |
| Flufenacet OA   | 20 µg/mL | Butachlor ESA sodium salt    | 20 µg/mL |
| Metolachlor ESA | 50 µg/mL | <b>Surrogate Standard</b>    |          |
| Metolachlor OA  | 50 µg/mL | Dimethachlor ESA sodium salt | 20 µg/mL |



### Method 547 Glyphosate by HPLC

|                              |          |
|------------------------------|----------|
| <b>M-547</b>                 | 1 x 1 mL |
| 0.1 mg/mL in Deionized water |          |
| <b>M-547-10X NEW</b>         | 1 x 1 mL |
| 1.0 mg/mL in Deionized water |          |

Glyphosate

### Glyphosate Metabolite

|                              |          |
|------------------------------|----------|
| <b>M-547-02</b>              | 1 x 1 mL |
| 0.1 mg/mL in Deionized water |          |

Aminomethyl phosphonic acid (AMPA)

### Method 548 Endothall by GC/ECD

|                             |          |
|-----------------------------|----------|
| <b>M-548A</b>               | 1 x 1 mL |
| 10 µg/mL in Deionized water |          |
| <b>M-548B</b>               | 1 x 1 mL |
| 50 µg/mL in Deionized water |          |

Endothall

### Internal Standard

|                  |          |
|------------------|----------|
| <b>M-548-IS</b>  | 1 x 1 mL |
| 10 µg/mL in MtBE |          |

Endosulfan I

### Calibration Standard

|                   |          |
|-------------------|----------|
| <b>M-548-CAL</b>  | 1 x 1 mL |
| 100 µg/mL in MtBE |          |

Endothall pentafluorophenyl hydrazine derivative

### Method 548.1 Endothall by GC/MS

|                   |          |
|-------------------|----------|
| <b>P-183S</b>     | 1 x 1 mL |
| 100 µg/mL in MeOH |          |

Endothall

### Internal Standard

|                   |          |
|-------------------|----------|
| <b>M-548.1-IS</b> | 1 x 1 mL |
| 500 µg/mL in MeOH |          |

Acenaphthene-d<sub>10</sub>

### Methyl Derivative

|                   |          |
|-------------------|----------|
| <b>M-548.1-ME</b> | 1 x 1 mL |
| 100 µg/mL in MeOH |          |

Dimethyl endothall

### Method 549.1/549.2 Diquat & Paraquat Liquid - Solid Extraction & HPLC

|                                                           |          |
|-----------------------------------------------------------|----------|
| <b>M-549.1</b>                                            | 1 x 1 mL |
| 1.0 mg/mL each in Deionized water as non-hydrated species | 2 comps. |

Diquat - H<sub>2</sub>O (1.97 mg/mL)  
Paraquat - 4 H<sub>2</sub>O (1.77 mg/mL)

### Method 553 Benzidines & Nitrogen containing Pesticides by L-L or L-S Extraction & RP HPLC/Particle Beam/MS

#### Analytes

|                                     |                                    |
|-------------------------------------|------------------------------------|
| <b>M-553 ‡</b>                      | 1 x 1 mL                           |
| At stated conc. in AcCN:MeOH (1:1)  | 13 comps.                          |
| Benzidine (250 µg/mL)               | 3,3'-Dimethylbenzidine (350 µg/mL) |
| Benzoylprop ethyl (350 µg/mL)       | Diuron (450 µg/mL)                 |
| Caffeine (300 µg/mL)                | Linuron (1,300 µg/mL)              |
| Carbaryl (1,000 µg/mL)              | Monuron (400 µg/mL)                |
| o-Chlorophenyl thiourea (750 µg/mL) | Rotenone (3,200 µg/mL)             |
| 3,3'-Dichlorobenzidine (250 µg/mL)  | Siduron (450 µg/mL)                |
| 3,3'-Dimethoxybenzidine (750 µg/mL) |                                    |

‡ To delay premature breakdown of thermally labile products in transit we suggest shipping with a **Cold Pack**

### Performance Check Solution

|                   |          |
|-------------------|----------|
| <b>M-553-PC</b>   | 1 x 1 mL |
| 0.1 mg/mL in AcCN |          |

DFTPPO (Decafluorotriphenylphosphine oxide)

### Method 555 Chlorinated Acids by HPLC

#### Mix A

|                        |          |
|------------------------|----------|
| <b>M-555A</b>          | 1 x 1 mL |
| 1.0 mg/mL each in AcCN | 8 comps. |

|             |             |
|-------------|-------------|
| Acifluorfen | Dicamba     |
| Bentazon    | Dichlorprop |
| Chloramben  | Picloram    |
| 2,4-D       | 2,4,5-TP    |

#### Mix B

|                        |          |
|------------------------|----------|
| <b>M-555B</b>          | 1 x 1 mL |
| 1.0 mg/mL each in AcCN | 8 comps. |

|                          |                   |
|--------------------------|-------------------|
| 2,4-DB                   | MCPP              |
| 3,5-Dichlorobenzoic acid | 4-Nitrophenol     |
| Dinoseb                  | Pentachlorophenol |
| MCPA                     | 2,4,5-T           |



# EPA Method 500 Series

## Pesticide Standards for Drinking Water

### EPA Safe Drinking Water Act (SDWA) Amendment National Primary Drinking Water Standards

#### Regulated Herbicide Mixture (Non-derivatized)

**M-515-REG** 1 x 1 mL  
At stated conc. in Acetone 8 comps.

|                           |              |                   |             |
|---------------------------|--------------|-------------------|-------------|
| Acifluorfen <sup>††</sup> | (100 µg/mL)  | Dinoseb           | (200 µg/mL) |
| 2,4-D                     | (300 µg/mL)  | Pentachlorophenol | (100 µg/mL) |
| Dalapon                   | (1000 µg/mL) | Picloram          | (100 µg/mL) |
| Dicamba <sup>††</sup>     | (100 µg/mL)  | 2,4,5-TP          | (100 µg/mL) |

#### Regulated Herbicide Mixtures (Methyl Derivatives)

**M-515-REG-ME** 1 x 1 mL  
At stated conc. MtBE 8 comps.

|                                        |              |                       |             |
|----------------------------------------|--------------|-----------------------|-------------|
| Acifluorfen methyl ester <sup>††</sup> | (250 ng/mL)  | Dinoseb methyl ether  | (500 ng/mL) |
| 2,4-D methyl ester                     | (500 ng/mL)  | Pentachloroanisole    | (100 ng/mL) |
| Dalapon methyl ester                   | (2000 ng/mL) | Picloram methyl ester | (250 ng/mL) |
| Dicamba methyl ester <sup>††</sup>     | (500 ng/mL)  | 2,4,5-TP methyl ester | (500 ng/mL) |

**M-515-REG-ME-1000X** 1 x 1 mL  
At stated conc. MtBE 8 comps.

|                                        |              |                       |             |
|----------------------------------------|--------------|-----------------------|-------------|
| Acifluorfen methyl ester <sup>††</sup> | (250 µg/mL)  | Dinoseb methyl ether  | (500 µg/mL) |
| 2,4-D methyl ester                     | (500 µg/mL)  | Pentachloroanisole    | (100 µg/mL) |
| Dalapon methyl ester                   | (2000 µg/mL) | Picloram methyl ester | (250 µg/mL) |
| Dicamba methyl ester <sup>††</sup>     | (500 µg/mL)  | 2,4,5-TP methyl ester | (500 µg/mL) |

#### Regulated Semi-Volatiles Mixture

**M-525-REG-EA** 1 x 1 mL  
0.1 mg/mL each in Ethyl Acetate 25 comps.

**M-525-REG-EA-5X** 1 x 1 mL  
0.5 mg/mL each in Ethyl Acetate 25 comps.

|                                  |                           |
|----------------------------------|---------------------------|
| Alachlor                         | Endrin                    |
| Aldrin <sup>†</sup>              | Heptachlor                |
| Atrazine                         | Heptachlor epoxide        |
| Benzo[a]pyrene                   | Hexachlorobenzene         |
| Butachlor <sup>†</sup>           | Hexachlorocyclopentadiene |
| α-Chlordane                      | Lindane                   |
| γ-Chlordane                      | Methoxychlor              |
| Cyanazine <sup>††</sup>          | Metolachlor <sup>††</sup> |
| Dieldrin <sup>†</sup>            | Metribuzin <sup>††</sup>  |
| 2,4-Dinitrotoluene <sup>††</sup> | trans-Nonachlor           |
| 2,6-Dinitrotoluene <sup>††</sup> | Propachlor <sup>†</sup>   |
| bis(2-Ethylhexyl)adipate         | Simazine                  |
| bis(2-Ethylhexyl)phthalate       |                           |

<sup>†</sup> Unregulated Additions  
<sup>††</sup> Proposed Phase VIB Additions

#### Regulated Pesticide Mixture

**M-531-REG** 1 x 1 mL  
0.1 mg/mL each in Acetonitrile 8 comps.

|                       |                                |
|-----------------------|--------------------------------|
| Aldicarb              | Carbofuran                     |
| Aldicarb sulfone      | 3-Hydrocarbofuran <sup>†</sup> |
| Aldicarb sulfoxide    | Methomyl <sup>††</sup>         |
| Carbaryl <sup>†</sup> | Oxamyl                         |

#### Alternate Source

##### Validates Analytical Results, while Saving Time and Money

The Alternate Source Line (ASL) is AccuStandard products that exactly match another vendor's products. These Alternate Source products can be used as independent standards for your primary supplier and are also useful for validation.

For additional Cross Referencing, visit our Website

#### Regulated Pesticide Mixture

**M-508.1-ASL** 1 x 1 mL  
**M-508.1-ASL-PAK** 5 x 1 mL  
100 µg/mL each in MtBE 17 comps.

Alternate  
Source

SAVE

|             |                               |
|-------------|-------------------------------|
| Alachlor    | Heptachlor epoxide (Isomer B) |
| Aldrin      | Hexachlorobenzene             |
| Atrazine    | Hexachlorocyclopentadiene     |
| γ-BHC       | Methoxychlor                  |
| α-Chlordane | Metolachlor                   |
| γ-Chlordane | Metribuzin                    |
| Dieldrin    | Propachlor                    |
| Endrin      | Simazine                      |
| Heptachlor  |                               |

#### Carbamate Pesticide Mixture

**M-531-REG-ASL** 1 x 1 mL  
**M-531-REG-ASL-PAK** 5 x 1 mL  
100 µg/mL each in MeOH 2 comps.

Alternate  
Source

SAVE

|            |        |
|------------|--------|
| Carbofuran | Oxamyl |
|------------|--------|



# EPA Method 600 Series

## Pesticide Standards for Waste Water



### Method 608 Pesticides and PCBs by GC/ECD

#### Pesticides and PCBs Set

**M-608-SET** 4 x 1 mL  
(M-001H, M-001J, M-001K, M-001L)

**M-001H** 1 x 1 mL  
At stated conc. in MeOH 16 comps.

|                      |                                |
|----------------------|--------------------------------|
| Aldrin (0.1 mg/mL)   | Dieldrin (0.2 mg/mL)           |
| α-BHC (0.1 mg/mL)    | Endosulfan I (0.2 mg/mL)       |
| β-BHC (0.1 mg/mL)    | Endosulfan II (0.2 mg/mL)      |
| δ-BHC (0.1 mg/mL)    | Endosulfan sulfate (0.6 mg/mL) |
| γ-BHC (0.1 mg/mL)    | Endrin (0.2 mg/mL)             |
| 4,4'-DDD (0.6 mg/mL) | Endrin aldehyde (0.6 mg/mL)    |
| 4,4'-DDE (0.2 mg/mL) | Heptachlor (0.1 mg/mL)         |
| 4,4'-DDT (0.6 mg/mL) | Heptachlor epoxide (0.1 mg/mL) |

**M-001J** 1 x 1 mL  
At stated conc. in MeOH 2 comps.

|                        |                        |
|------------------------|------------------------|
| Chlordane (0.02 mg/mL) | Toxaphene (0.20 mg/mL) |
|------------------------|------------------------|

**M-001K** 1 x 1 mL  
0.2 mg/mL each in MeOH 4 comps.

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

**M-001L** 1 x 1 mL  
0.2 mg/mL each in MeOH 3 comps.

|              |              |
|--------------|--------------|
| Aroclor 1221 | Aroclor 1254 |
| Aroclor 1242 |              |

### Performance Check Solution

**M-608-QC** 1 x 1 mL  
**M-608-QC-PAK** 5 x 1 mL  
At stated conc. in MeOH 17 comps. **SAVE**

|                       |                                 |
|-----------------------|---------------------------------|
| Aldrin (0.02 mg/mL)   | Endosulfan I (0.02 mg/mL)       |
| α-BHC (0.02 mg/mL)    | Endosulfan II (0.10 mg/mL)      |
| β-BHC (0.02 mg/mL)    | Endosulfan sulfate (0.10 mg/mL) |
| δ-BHC (0.02 mg/mL)    | Endrin (0.10 mg/mL)             |
| γ-BHC (0.02 mg/mL)    | Endrin aldehyde (0.02 mg/mL)    |
| 4,4'-DDD (0.10 mg/mL) | Heptachlor (0.02 mg/mL)         |
| 4,4'-DDE (0.02 mg/mL) | Heptachlor epoxide (0.02 mg/mL) |
| 4,4'-DDT (0.10 mg/mL) | Methoxychlor (0.02 mg/mL)       |
| Dieldrin (0.02 mg/mL) |                                 |

### Pesticides

**M-608-ASL** 1 x 1 mL  
**M-608-ASL-PAK** 5 x 1 mL  
20 µg/mL each in MeOH 16 comps. **SAVE**

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

### Method 608.1 & 608.2 Organochlorine Pesticides in Municipal & Industrial Wastewater by GC/ECD

**M-608.1** 1 x 1 mL  
**M-608.1-PAK** 5 x 1 mL  
100 µg/mL each in Isooctane **SAVE** 7 comps.

|                      |            |
|----------------------|------------|
| Chlorobenzilate      | Ethion     |
| Chloroneb            | PCNB       |
| Chloropropylate      | Propachlor |
| Dibromochloropropane |            |

**M-608.2** 1 x 1 mL  
**M-608.2-PAK** 5 x 1 mL  
100 µg/mL each in Isooctane **SAVE** 6 comps.

|                |                    |
|----------------|--------------------|
| Chlorothalonil | Methoxychlor       |
| DCPA           | cis-Permethrin *   |
| Dichloram      | trans-Permethrin * |

\* Actual concentrations stated on Certificate of Product Data

### Method 614 & 614.1 Organophosphorus Pesticides by GC/NPD

**M-614** 1 x 1 mL  
1,000 µg/mL each in Acetone:Hexane (1:1) 8 comps.

|                                |                  |
|--------------------------------|------------------|
| Azinphos methyl                | Ethion           |
| Demeton (mix of O & S isomers) | Malathion        |
| Diazinon                       | Parathion        |
| Disulfoton                     | Parathion methyl |

**M-614.1** 1 x 1 mL  
1,000 µg/mL each in Acetone:Hexane (1:1) 4 comps.

|            |          |
|------------|----------|
| Dioxathion | Ethion   |
| EPN        | Terbufos |

**M-614.1-ASL** 1 x 1 mL  
At stated conc. in Hexane 4 comps. **Alternate Source**

|                       |                    |
|-----------------------|--------------------|
| Dioxathion (10 µg/mL) | Ethion (100 µg/mL) |
| EPN (200 µg/mL)       | Terbufos (4 µg/mL) |



# EPA Method 600 Series

## Pesticide Standards for Waste Water

### Method 615 Chlorinated Herbicides

#### Chlorinated Herbicides

| Each at 0.2 mg/mL *                              | Herbicide Acids    | Methyl Derivatives | 1 mL           |
|--------------------------------------------------|--------------------|--------------------|----------------|
|                                                  | In MeOH            | In Hexane          |                |
| Compound                                         | Cat. No.           | Cat. No.           |                |
| 2,4-D                                            | M-8150S-A-01       | M-8150-01          |                |
| 2,4-DB                                           | M-8150S-A-02       | M-8150-02          |                |
| 2,4,5-T                                          | M-8150S-A-03       | M-8150-03          |                |
| 2,4,5-TP                                         | M-8150S-A-04       | M-8150-04          |                |
| Dalapon                                          | M-8150S-A-05       | M-8150-05          |                |
| Dicamba                                          | M-8150S-A-06       | M-8150-06          |                |
| Dichlorprop                                      | M-8150S-A-07       | M-8150-07          |                |
| Dinoseb                                          | M-8150S-A-08       | M-8150-08          |                |
| MCPA (2.0 mg/mL) *                               | M-8150S-A-09       | M-8150-09          |                |
| MCPP (2.0 mg/mL) *                               | M-8150S-A-10       | M-8150-10          |                |
| <b>Set of 10 x 1 mL</b>                          | <b>M-8150A-SET</b> | <b>M-8150-SET</b>  |                |
| * Each Solution at 0.2 mg/mL, except MCPA & MCPP |                    |                    | Above analytes |

#### Underivatized

**M-8150A** 1 x 1 mL  
0.1 mg/mL in MEOH, except MCPA and MCPP 10 comps.

|             |                 |
|-------------|-----------------|
| 2,4-D       | Dinoseb         |
| Dalapon     | MCPA (10 mg/mL) |
| 2,4-DB      | MCPP (10 mg/mL) |
| Dicamba     | 2,4,5-TP        |
| Dichlorprop | 2,4,5-T         |

#### Methyl Derivatives

**M-8150** 1 x 1 mL  
0.1 mg/mL in MEOH, except MCPA and MCPP 10 comps.

|             |                 |
|-------------|-----------------|
| 2,4-D       | Dinoseb         |
| Dalapon     | MCPA (10 mg/mL) |
| 2,4-DB      | MCPP (10 mg/mL) |
| Dicamba     | 2,4,5-TP        |
| Dichlorprop | 2,4,5-T         |

### Method 617 Chlorinated Pesticides & PCBs by GC/ECD

#### Mix #1 - Analytes

**Z-014C-R2** 1 x 1 mL  
**Z-014C-R2-PAK** 5 x 1 mL  
2.0 mg/mL each in Hexane : Toluene (1:1) 18 comps.

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

#### Mix #2 - Analytes

**M-617-2** 1 x 1 mL  
2.0 mg/mL each in Hexane : Toluene (1:1) 9 comps.

|                 |         |             |
|-----------------|---------|-------------|
| Captan          | Dicofol | PCNB        |
| Carbophenothion | Isodrin | Perthane    |
| Dichloran       | Mirex   | Trifluralin |

#### Chlordane

**P-017S-20X** 1 x 1 mL  
2.0 mg/mL in MeOH

#### Toxaphene

**P-093S-40X** 1 x 1 mL  
4.0 mg/mL in MeOH

### Method 618 Volatile Pesticides by GC/ECD

#### Volatile Pesticides

**M-618** 1 x 1 mL  
20 mg/mL each in Isooctane 2 comps.

|              |                    |
|--------------|--------------------|
| Chloropicrin | Ethylene dibromide |
|--------------|--------------------|

#### Internal Standard

**M-618-IS** 1 x 1 mL  
20 mg/mL in Isooctane

Bromoform

### Method 619 Triazine Herbicides by GC/NPD

#### Triazine Herbicides

Each at 0.1 mg/mL in MeOH

| Compound  | Cat. No. | 1 mL | Compound       | Cat. No. | 1 mL |
|-----------|----------|------|----------------|----------|------|
| Ametryn   | M-619-01 |      | Secbumeton     | M-619-07 |      |
| Atraton   | M-619-02 |      | Simetryn       | M-619-08 |      |
| Atrazine  | M-619-03 |      | Simazine       | M-619-09 |      |
| Prometon  | M-619-04 |      | Terbuthylazine | M-619-10 |      |
| Prometryn | M-619-05 |      | Terbutryn      | M-619-11 |      |
| Propazine | M-619-06 |      |                |          |      |

**M-619-SET** 11 x 1 mL  
Each at 0.1 mg/mL in MeOH Above 11 compounds

**M-619M** 1 x 1 mL  
0.1 mg/mL each in MeOH Above 11 compounds

### Method 622 Organophosphorus Pesticides by GC/NPD

#### Organophosphorus Pesticides

**M-622-SET** 27 x 1 mL  
1000 µg/mL each in Hexane

|                                   |                       |
|-----------------------------------|-----------------------|
| Azinphos methyl (01)              | Merphos (15)          |
| Bolstar ( <i>Sulprofos</i> ) (02) | Mevinphos (16)        |
| Chlorpyrifos (03)                 | Monocrotophos (17)    |
| Coumaphos (04)                    | Naled (18)            |
| Demeton, O & S (05)               | Parathion ethyl (19)  |
| Diazinon (06)                     | Parathion methyl (20) |
| Dichlorvos (07)                   | Phorate (21)          |
| Dimethoate (08)                   | Ronnel (22)           |
| Disulfoton (09)                   | Stirophos (23)        |
| EPN (10)                          | Sulfotep (24)         |
| Ethoprop (11)                     | TEPP (25)             |
| Fensulfthion (12)                 | Tokuthion (26)        |
| Fenthion (13)                     | Trichloronate (27)    |
| Malathion (14)                    |                       |

### Method 622.1 Thiophosphate Pesticides by GC/NPD

#### Thiophosphate Pesticides

**M-622.1** 1 x 1 mL  
1.0 mg/mL each in MtBE 7 comps.

|                |           |
|----------------|-----------|
| Aspon          | Fonophos  |
| Dichlofenthion | Phosmet   |
| Famphur        | Thionazin |
| Fenitrothion   |           |



### Method 625 Priority Pollutant Standards

#### Pesticide Extractables Mixture

M-625P 1 x 1 mL  
M-625P-PAK 5 x 1 mL  
20 µg/mL each in MeOH 11 comps.

SAVE

|          |                    |
|----------|--------------------|
| Aldrin   | Dieldrin           |
| β-BHC    | Endosulfan sulfate |
| δ-BHC    | Endrin aldehyde    |
| 4,4'-DDD | Heptachlor         |
| 4,4'-DDE | Heptachlor epoxide |
| 4,4'-DDT |                    |

#### Chlordane and Toxaphene

M-001J 1 x 1 mL  
M-001J-PAK 5 x 1 mL  
At stated conc. in MeOH 2 comps.

SAVE

Chlordane (0.02 mg/mL) Toxaphene (0.20 mg/mL)

#### Pesticides - Mix #1

Z-014C 1 x 1 mL  
Z-014C-PAK 5 x 1 mL  
2.0 mg/mL each in Toluene : Hexane (1:1) 16 comps.

SAVE

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

#### Pesticides - Mix #2

Z-014C-R 1 x 1 mL  
Z-014C-R-PAK 5 x 1 mL  
2.0 mg/mL each in Toluene : Hexane (1:1) 20 comps.

SAVE

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

#### Pesticides - Mix #3

Z-014C-R2 1 x 1 mL  
Z-014C-R2-PAK 5 x 1 mL  
2.0 mg/mL each in Toluene : Hexane (1:1) 18 comps.

SAVE

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

### Method 627 Dinitroaniline Pesticides by GC/ECD

#### Dinitroaniline Pesticide Mixes

M-627 1 x 1 mL  
1.0 mg/mL each in MeOH 4 comps.

|                       |                      |
|-----------------------|----------------------|
| Ethalfuralin          | Tolban (Profluralin) |
| Paarlan (Isopropalin) | Trifluralin          |

M-627-R 1 x 1 mL  
1.0 mg/mL each in MeOH 5 comps.

|                       |                      |
|-----------------------|----------------------|
| Benfluralin           | Tolban (Profluralin) |
| Ethalfuralin          | Trifluralin          |
| Paarlan (Isopropalin) |                      |

### Method 632 Carbamates & Urea Pesticides in Waste Water by HPLC

#### Carbamates & Urea Pesticides in Waste Water

M-632-SET set of 21 x 1 mL

Individual Solutions, in 0.1 mg/mL in AcCN

M-632M 1 x 1 mL

Mixture containing the 21 analytes @ 0.1 mg/mL each in AcCN

M-632M-10X 1 x 1 mL

Mixture containing the 21 analytes @ 1.0 mg/mL each in AcCN

| Compound     | Cat. No. | Compound    | Cat. No. |
|--------------|----------|-------------|----------|
| Aminocarb    | M-632-01 | Methomyl    | M-632-12 |
| Barban       | M-632-02 | Mexacarbate | M-632-13 |
| Carbaryl     | M-632-03 | Monuron     | M-632-14 |
| Carbofuran   | M-632-04 | Monuron-TCA | M-632-15 |
| Chlorpropham | M-632-05 | Neburon     | M-632-16 |
| Diuron       | M-632-06 | Oxamyl      | M-632-17 |
| Fenuron      | M-632-07 | Propham     | M-632-18 |
| Fenuron-TCA  | M-632-08 | Propoxur    | M-632-19 |
| Fluometuron  | M-632-09 | Siduron     | M-632-20 |
| Linuron      | M-632-10 | Swep        | M-632-21 |
| Methiocarb   | M-632-11 |             |          |

### Method 632.1 Carbamates & Amides in Waste Water by HPLC

#### Carbamates & Amides in Waste Water

M-632.1-SET set of 4 x 1 mL

Each in 0.1 mg/mL in AcCN

|          |           |             |           |
|----------|-----------|-------------|-----------|
| Vacor    | M-632.1-1 | Napropamide | M-632.1-3 |
| Propanil | M-632.1-2 | Carbaryl    | M-632.1-4 |

### Method 633 Organonitrogen Pesticides by GC/NPD

#### Organonitrogen Pesticides Mix

M-633 1 x 1 mL  
0.1 mg/mL each in MeOH 6 comps.

|          |            |             |
|----------|------------|-------------|
| Bromacil | Hexazinone | Terbacil    |
| Deet     | Metribuzin | Triadimefon |

### Method 634 Thiocarbamate Pesticides by GC/NPD

#### Thiocarbamate Pesticides Mix

M-634 1 x 1 mL  
1.0 mg/mL each in MeOH 6 comps.

|          |          |           |
|----------|----------|-----------|
| Butylate | EPTC     | Pebulate  |
| Cycloate | Molinate | Vernolate |

#### Internal Standard

M-634-IS 1 x 1 mL  
1.0 mg/mL in MeOH

Carbazole



# EPA Method 600 Series

## Pesticide Standards for Waste Water

### Method 645 Amino Pesticides & Lethane by GC/NPD

#### Amino Pesticides Mix

M-645

1.0 mg/mL each in Hexane

1 x 1 mL

6 comps.

|           |            |             |
|-----------|------------|-------------|
| Alachlor  | Diphenamid | Lethane     |
| Butachlor | Fluridone  | Norflurazon |

### HPLC 600's Additional Methods for Pesticides in Waste Water by HPLC

| Method | Solutions at 0.1 mg/mL in AcCN  | Cat. No. |
|--------|---------------------------------|----------|
| 604.1  | Hexachlorophene & Dichlorophene | M-604.1  |
| 629    | Cyanazine                       | M-629    |
| 631    | Carbendazim                     | M-631    |
| 635    | Rotenone                        | M-635    |
| 636    | Bensulide                       | M-636    |
| 638    | Oryzalin                        | M-638    |

| Method | Solutions at 0.1 mg/mL in AcCN | Cat. No. |
|--------|--------------------------------|----------|
| 639    | Bendiocarb                     | M-639    |
| 640    | Mercaptobenzothiazole          | M-640    |
| 641    | Thiabendazole                  | M-641    |
| 642    | Biphenyl & o-Phenylphenol      | M-642    |
| 643    | Bentazon ( <i>Basagran</i> )   | M-643    |
| 644    | Picloram                       | M-644    |

### Method 680 Determination of Pesticides in Water & Soil/Sediment by GC/MS

#### Pesticide Mix

M-680P

M-680P-PAK

At stated conc. in Toluene : Hexane (1:1)

SAVE

1 x 1 mL

5 x 1 mL

22 comps.

|             |               |                               |               |
|-------------|---------------|-------------------------------|---------------|
| Aldrin      | (1,000 µg/mL) | Endosulfan I                  | (2,000 µg/mL) |
| α-BHC       | (1,000 µg/mL) | Endosulfan II                 | (2,000 µg/mL) |
| β-BHC       | (1,000 µg/mL) | Endosulfan sulfate            | (1,000 µg/mL) |
| γ-BHC       | (1,000 µg/mL) | Endrin                        | (1,000 µg/mL) |
| δ-BHC       | (1,000 µg/mL) | Endrin aldehyde               | (1,000 µg/mL) |
| α-Chlordane | (1,000 µg/mL) | Endrin ketone                 | (1,000 µg/mL) |
| γ-Chlordane | (1,000 µg/mL) | Heptachlor                    | (1,000 µg/mL) |
| 4,4'-DDD    | (1,000 µg/mL) | Heptachlor epoxide (Isomer B) | (1,000 µg/mL) |
| 4,4'-DDE    | (1,000 µg/mL) | Methoxychlor                  | (1,000 µg/mL) |
| 4,4'-DDT    | (1,000 µg/mL) | cis-Nonachlor                 | (1,000 µg/mL) |
| Dieldrin    | (1,000 µg/mL) | trans-Nonachlor               | (1,000 µg/mL) |

#### Pesticide Mid-Level Check

M-680P-MLC

M-680P-MLC-PAK

At stated conc. Toluene : Hexane (1:1)

SAVE

1 x 1 mL

5 x 1 mL

21 comps.

|             |               |                               |               |
|-------------|---------------|-------------------------------|---------------|
| Aldrin      | (1,000 µg/mL) | Endosulfan I                  | (2,000 µg/mL) |
| α-BHC       | (1,000 µg/mL) | Endosulfan II                 | (2,000 µg/mL) |
| β-BHC       | (1,000 µg/mL) | Endosulfan sulfate            | (1,000 µg/mL) |
| γ-BHC       | (1,000 µg/mL) | Endrin                        | (1,000 µg/mL) |
| δ-BHC       | (1,000 µg/mL) | Endrin ketone                 | (1,000 µg/mL) |
| α-Chlordane | (1,000 µg/mL) | Heptachlor                    | (1,000 µg/mL) |
| γ-Chlordane | (1,000 µg/mL) | Heptachlor epoxide (Isomer B) | (1,000 µg/mL) |
| 4,4'-DDD    | (1,000 µg/mL) | Methoxychlor                  | (1,000 µg/mL) |
| 4,4'-DDE    | (1,000 µg/mL) | cis-Nonachlor                 | (1,000 µg/mL) |
| 4,4'-DDT    | (1,000 µg/mL) | trans-Nonachlor               | (1,000 µg/mL) |
| Dieldrin    | (1,000 µg/mL) |                               |               |





### Method 1311 Toxicity Characteristic Leaching Procedure (TCLP)

#### Pesticide Spiking Mix

|                                          |                       |          |
|------------------------------------------|-----------------------|----------|
| TCLP-PES                                 |                       | 1 x 1 mL |
| TCLP-PES-PAK                             | SAVE                  | 5 x 1 mL |
| 2.0 mg/mL each in MeOH, except Toxaphene |                       | 7 comps. |
| Chlordane                                | Lindane               |          |
| Endrin                                   | Methoxychlor          |          |
| Heptachlor                               | Toxaphene (4.0 mg/mL) |          |
| Heptachlor epoxide                       |                       |          |

#### Pesticide Spiking Set

|                        |              |                                               |
|------------------------|--------------|-----------------------------------------------|
| TCLP-PES-1/2-SET       |              | set of 2 x 1 mL<br>(CLP-PES-1 and TCLP-PES-2) |
| TCLP-PES-1             |              | 1 x 1 mL                                      |
| TCLP-PES-1-PAK         | SAVE         | 5 x 1 mL                                      |
| 2.0 mg/mL each in MeOH |              | 5 comps.                                      |
| Endrin                 | Lindane      |                                               |
| Heptachlor             | Methoxychlor |                                               |
| Heptachlor epoxide     |              |                                               |

|                         |                       |          |
|-------------------------|-----------------------|----------|
| TCLP-PES-2              |                       | 1 x 1 mL |
| TCLP-PES-2-PAK          | SAVE                  | 5 x 1 mL |
| At stated conc. in MeOH |                       | 2 comps. |
| Chlordane (2.0 mg/mL)   | Toxaphene (4.0 mg/mL) |          |

#### Herbicide, PFB Derivative Mixture

|                        |              |          |
|------------------------|--------------|----------|
| TCLP-HERB-PFB          |              | 1 x 1 mL |
| 0.1 mg/mL each in MtBE |              | 2 comps. |
| 2,4-D-PFB              | 2,4,5-TP-PFB |          |

#### Herbicide, PFB Derivatives

|                   |  |          |
|-------------------|--|----------|
| M-8150-02-PFB     |  | 1 x 1 mL |
| 0.1 mg/mL in MtBE |  |          |
| 2,4-D-PFB         |  |          |

|                   |  |          |
|-------------------|--|----------|
| M-8150-04-PFB     |  | 1 x 1 mL |
| 0.1 mg/mL in MtBE |  |          |
| 2,4,5-TP-PFB      |  |          |

#### Herbicide Spiking Mixtures

|                        |          |          |
|------------------------|----------|----------|
| TCLP-HERB              |          | 1 x 1 mL |
| TCLP-HERB-PAK          | SAVE     | 5 x 1 mL |
| 2.0 mg/mL each in MeOH |          | 2 comps. |
| 2,4-D                  | 2,4,5-TP |          |

|                        |              |          |
|------------------------|--------------|----------|
| TCLP-HERB-ME           |              | 1 x 1 mL |
| TCLP-HERB-ME-PAK       | SAVE         | 5 x 1 mL |
| 2.0 mg/mL each in MeOH |              | 2 comps. |
| 2,4-D, Me              | 2,4,5-TP, Me |          |

### Method 1311 TCLP Regulatory Level Mixtures

#### Pesticides

|                                            |  |                 |
|--------------------------------------------|--|-----------------|
| TCLP-PES-1/2-QC-SET                        |  | set of 2 x 1 mL |
| (includes TCLP-PEST-1-QC & TCLP-PEST-2-QC) |  |                 |

|                         |      |          |
|-------------------------|------|----------|
| TCLP-PES-1-QC           |      | 1 x 1 mL |
| TCLP-PES-1-QC-PAK       | SAVE | 5 x 1 mL |
| At stated conc. in MeOH |      | 5 comps. |

|                    |              |              |             |
|--------------------|--------------|--------------|-------------|
| Endrin             | (0.2 µg/mL)  | Lindane      | (4.0 µg/mL) |
| Heptachlor         | (0.4 µg/mL)  | Methoxychlor | (100 µg/mL) |
| Heptachlor epoxide | (0.04 µg/mL) |              |             |

|                         |      |          |
|-------------------------|------|----------|
| TCLP-PES-2-QC           |      | 1 x 1 mL |
| TCLP-PES-2-QC-PAK       | SAVE | 5 x 1 mL |
| At stated conc. in MeOH |      | 2 comps. |

|                       |                       |
|-----------------------|-----------------------|
| Chlordane (0.3 µg/mL) | Toxaphene (5.0 µg/mL) |
|-----------------------|-----------------------|

#### Herbicides

|                         |      |          |
|-------------------------|------|----------|
| TCLP-HERB-ME-QC         |      | 1 x 1 mL |
| TCLP-HERB-ME-QC-PAK     | SAVE | 5 x 1 mL |
| At stated conc. in MeOH |      | 2 comps. |

| Concentration as Methyl Derivative |               | as Acid     |
|------------------------------------|---------------|-------------|
| 2,4-D, ME                          | (106.3 µg/mL) | (100 µg/mL) |
| 2,4,5-TP, ME                       | (10.5 µg/mL)  | (10 µg/mL)  |



# EPA Method 1600 Series

## Pesticide Standards

### Method 1618 Organo-halide, Organo-phosphorus Pesticides and Phenoxyacid Herbicides by Wide Bore Capillary Column GC

Method 1618 was developed by the Industrial Technology Division (ITD) within the United States Environmental Protection Agency's (US EPA) Office of Water Regulations and Standards (OWRS) to provide improved precision and accuracy of analysis of pollutants in aqueous and solid matrices in order to determine the level of these pollutants in industrial discharges. Method 1618 is used with wide bore GC columns to analyze for organo-halide and organo-phosphorus pesticides, phenoxy-acid herbicides and herbicide esters, polychlorinated biphenyls (PCBs) and other compounds amenable to extraction and analysis by wide bore capillary column gas chromatography with halogen-specific and organo-phosphorus detectors.

The chemical compounds in the AccuStandard mixtures that follow may be determined in waters, soils, sediments and sludges by this method. The method is a consolidation of EPA Methods 608, 608.1, 614, 615, 617, 622 and 701.

#### Organochlorine Pesticides

| M-1618-1                     |             | 1 x 1 mL           |             |
|------------------------------|-------------|--------------------|-------------|
| M-1618-1-PAK                 |             | 5 x 1 mL           |             |
| At stated conc. in Isooctane |             | 14 comps.          |             |
| Aldrin                       | (100 ng/mL) | Endosulfan II      | (200 ng/mL) |
| Captan                       | (200 ng/mL) | Endrin aldehyde    | (100 ng/mL) |
| Chlorobenzilate              | (500 ng/mL) | Heptachlor         | (100 ng/mL) |
| Diallate                     | (250 ng/mL) | Heptachlor epoxide | (100 ng/mL) |
| p,p'-DDE                     | (200 ng/mL) | Lindane            | (100 ng/mL) |
| p,p'-DDT                     | (200 ng/mL) | Methoxychlor       | (200 ng/mL) |
| Endosulfan I                 | (200 ng/mL) | Isodrin            | (100 ng/mL) |

| M-1618-2                     |              | 1 x 1 mL           |             |
|------------------------------|--------------|--------------------|-------------|
| At stated conc. in Isooctane |              | 16 comps.          |             |
| α-BHC                        | (100 ng/mL)  | Dichlone           | (100 ng/mL) |
| β-BHC                        | (100 ng/mL)  | Dieldrin           | (100 ng/mL) |
| δ-BHC                        | (100 ng/mL)  | Endrin             | (100 ng/mL) |
| α-Chlordane                  | (100 ng/mL)  | Endosulfan sulfate | (100 ng/mL) |
| γ-Chlordane                  | (100 ng/mL)  | Endrin ketone      | (100 ng/mL) |
| Carbophenothion              | (1000 ng/mL) | Mirex              | (100 ng/mL) |
| Captafol                     | (200 ng/mL)  | PCNB               | (100 ng/mL) |
| p,p'-DDD                     | (100 ng/mL)  | Trifluralin        | (200 ng/mL) |

#### Organophosphate Pesticides

| M-1618-3                     |             | 1 x 1 mL          |             |
|------------------------------|-------------|-------------------|-------------|
| At stated conc. in Isooctane |             | 19 comps.         |             |
| Azinphos methyl              | (100 ng/mL) | Merphos           | (200 ng/mL) |
| Coumaphos                    | (50 ng/mL)  | Methyl parathion  | (100 ng/mL) |
| Diazinon                     | (100 ng/mL) | Malathion         | (100 ng/mL) |
| Dichlorvos                   | (50 ng/mL)  | Phorate           | (100 ng/mL) |
| Dimethoate                   | (100 ng/mL) | Ronnel            | (100 ng/mL) |
| EPN                          | (100 ng/mL) | Sulprofos         | (50 ng/mL)  |
| Ethyl parathion              | (100 ng/mL) | Terbufos          | (100 ng/mL) |
| Ethoprop                     | (100 ng/mL) | Tetrachlorvinphos | (100 ng/mL) |
| Ethyl azinphos               | (100 ng/mL) | Trichlorofon      | (100 ng/mL) |
| Fensulfothion                | (200 ng/mL) |                   |             |

| M-1618-4                     |             | 1 x 1 mL  |             |
|------------------------------|-------------|-----------|-------------|
| At stated conc. in Isooctane |             | 16 comps. |             |
| Chlorfenvinphos              | (50 ng/mL)  | Ethion    | (100 ng/mL) |
| Chlorpyrifos                 | (50 ng/mL)  | Famphur   | (200 ng/mL) |
| Chlorpyrifos methyl          | (100 ng/mL) | Fenthion  | (100 ng/mL) |
| Crotoxyphos                  | (200 ng/mL) | Leptophos | (100 ng/mL) |
| Dichlorofenthion             | (100 ng/mL) | Mevinphos | (100 ng/mL) |
| Demeton                      | (400 ng/mL) | Naled     | (100 ng/mL) |
| Dioxathion                   | (600 ng/mL) | Phosmet   | (200 ng/mL) |
| Disulfoton                   | (100 ng/mL) | Sulfotep  | (50 ng/mL)  |

#### Phenoxyacid Herbicides

| M-8150M                 |  | 1 x 1 mL    |  |
|-------------------------|--|-------------|--|
| M-8150M-PAK             |  | 5 x 1 mL    |  |
| 20 µg/mL each in Hexane |  | 8 comps.    |  |
| 2,4-D                   |  | Dalapon     |  |
| 2,4-DB                  |  | Dicamba     |  |
| 2,4,5-T                 |  | Dichlorprop |  |
| 2,4,5-TP                |  | Dinoseb     |  |

| M-8150M-2           |  | 1 x 1 mL |  |
|---------------------|--|----------|--|
| M-8150M-2-PAK       |  | 5 x 1 mL |  |
| 2.0 mg/mL in Hexane |  | 2 comps. |  |
| MCPA                |  | MCPP     |  |

#### Surrogate Standards

| Organochlorine Pesticide |  |          |  |
|--------------------------|--|----------|--|
| M-1618-SS                |  | 1 x 1 mL |  |
| M-1618-SS-PAK            |  | 5 x 1 mL |  |
| 2 µg/mL in Acetone       |  |          |  |
| Dibutylchlorendate       |  |          |  |

#### Organophosphate Pesticide

| M-1618-SP               |  | 1 x 1 mL            |  |
|-------------------------|--|---------------------|--|
| 2 µg/mL each in Acetone |  | 2 comps.            |  |
| Tributyl phosphate      |  | Triphenyl phosphate |  |

#### Phenoxyacid Herbicide

| M-1618-SA                      |  | 1 x 1 mL |  |
|--------------------------------|--|----------|--|
| 2 µg/mL in Acetone             |  |          |  |
| 2,4-Dichlorophenyl acetic acid |  |          |  |

#### Decomposition Solution

| M-1618D                    |  | 1 x 1 mL           |  |
|----------------------------|--|--------------------|--|
| M-1618D-PAK                |  | 5 x 1 mL           |  |
| At stated conc. in Acetone |  | 2 comps.           |  |
| p,p'-DDT (2.0 µg/mL)       |  | Endrin (1.0 µg/mL) |  |

#### GPC Calibration Solution

| M-1618-GP-5ML              |               | 1 x 5 mL |             |
|----------------------------|---------------|----------|-------------|
| At stated conc. in Acetone |               | 5 comps. |             |
| Corn oil                   | (300.0 mg/mL) | Perylene | (0.1 mg/mL) |
| bis(2-Ethylhexyl)phthalate | (15.0 mg/mL)  | Sulfur   | (0.5 mg/mL) |
| Pentachlorophenol          | (1.4 mg/mL)   |          |             |

#### SPE Cartridge Calibration Solution

| M-1618-SE             |  | 1 x 1 mL |  |
|-----------------------|--|----------|--|
| M-1618-SE-PAK         |  | 5 x 1 mL |  |
| 0.1 µg/mL in Acetone  |  |          |  |
| 2,4,6-Trichlorophenol |  |          |  |





### Method 1656 Organo-Halide Pesticides in Municipal & Industrial Wastewater by HSD

Method 1656 is a consolidation of several EPA wastewater methods used to determine the organo-halide pesticides and polychlorinated biphenyls (PCBs) associated with the Clean Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation and Liability Act; and other compounds amenable to extraction and analysis by wide-bore capillary column GC with a HSD.

#### GPC Calibration Solution

##### M-1600-GPC-5ML

At stated conc. in  $CH_2Cl_2$

1 x 5 mL  
5 comps.

|                            |             |          |             |
|----------------------------|-------------|----------|-------------|
| Corn oil                   | (300 mg/mL) | Perylene | (0.1 mg/mL) |
| bis(2-Ethylhexyl)phthalate | (15 mg/mL)  | Sulfur   | (0.5 mg/mL) |
| Pentachlorophenol          | (1.4 mg/mL) |          |             |

#### Surrogate Spiking Solutions

##### CLP-PES-A

0.2 mg/mL in Acetone

1 x 1 mL

Dibutylchloroendate

##### CLP-032-R

0.2 mg/mL each in Acetone

1 x 1 mL  
2 comps.

Decachlorobiphenyl

Tetrachloro-*m*-xylene

##### CLP-034

0.2 mg/mL each in Acetone

1 x 1 mL  
2 comps.

Dibutylchloroendate

Tetrachloro-*m*-xylene

#### Solid-phase Extraction Cartridge Calibration Solution

##### M-1600-SPE

0.1 mg/mL in Acetone

1 x 1 mL

2,4,6-Trichlorophenol

#### Decomposition Test Solution

##### M-1656-DS

At stated conc. in Isooctane

1 x 1 mL  
2 comps.

4,4'-DDT (2 µg/mL)

Endrin (1 µg/mL)

### Calibration Solutions and Suggested Calibration Groups

#### M-1656-CAL-SET

7 x ( 3 x 1 mL ) (contains all 7 calibration groups at respective low, medium and igh ranges)

#### Calibration Group 1

##### M-1656-01-CAL-SET

All solutions in Isooctane

3 x 1 mL  
14 comps.

| Components<br>(units in ng/mL) | Low<br>( 1X ) | Medium<br>( 5X ) | High<br>( 20X ) |
|--------------------------------|---------------|------------------|-----------------|
| Acephate                       | 2,000         | 10,000           | 40,000          |
| Alachlor                       | 20            | 100              | 400             |
| Atrazine                       | 1,000         | 5,000            | 20,000          |
| b-BHC                          | 10            | 50               | 200             |
| Bromoxynil octanoate           | 50            | 250              | 1,000           |
| Captafol                       | 200           | 1,000            | 4,000           |
| Diallate                       | 200           | 1,000            | 4,000           |
| Decachlorobiphenyl             | 10            | 50               | 200             |
| Endosulfan sulfate             | 10            | 50               | 200             |
| Endrin                         | 20            | 100              | 400             |
| Isodrin                        | 10            | 50               | 200             |
| Pendimethalin                  | 50            | 250              | 1,000           |
| Permethrin (cis & trans) *200  | 1,000         | 4,000            |                 |
| Tetrachloro- <i>m</i> -xylene  | 5             | 25               | 100             |

\* Actual isomer concentration is stated  
on certificate of product data

#### Calibration Group 2

##### M-1656-02-CAL-SET

All solutions in Isooctane

3 x 1 mL  
11 comps.

| Components<br>(units in ng/mL) | Low<br>( 1X ) | Medium<br>( 5X ) | High<br>( 20X ) |
|--------------------------------|---------------|------------------|-----------------|
| α-BHC                          | 5             | 25               | 100             |
| DCPA                           | 5             | 25               | 100             |
| 4,4'-DDE                       | 10            | 50               | 200             |
| 4,4'-DDT                       | 10            | 50               | 200             |
| Decachlorobiphenyl             | 10            | 50               | 200             |
| Dichloro                       | 20            | 100              | 400             |
| Ethalfuralin                   | 10            | 50               | 200             |
| Fenarimol                      | 20            | 100              | 400             |
| Methoxychlor                   | 20            | 100              | 400             |
| Metribuzin                     | 10            | 50               | 200             |
| Tetrachloro- <i>m</i> -xylene  | 5             | 25               | 100             |

#### Calibration Group 3

##### M-1656-03-CAL-SET

All solutions in Isooctane

3 x 1 mL  
10 comps.

| Components<br>(units in ng/mL) | Low<br>( 1X ) | Medium<br>( 5X ) | High<br>( 20X ) |
|--------------------------------|---------------|------------------|-----------------|
| γ-BHC                          | 5             | 25               | 100             |
| γ-Chlordane                    | 5             | 25               | 100             |
| Decachlorobiphenyl             | 10            | 50               | 200             |
| Endrin ketone                  | 10            | 50               | 200             |
| Heptachlor epoxide             | 5             | 25               | 100             |
| Isopropalin                    | 20            | 100              | 400             |
| Nitrofen                       | 20            | 100              | 400             |
| PCNB                           | 5             | 25               | 100             |
| Tetrachloro- <i>m</i> -xylene  | 5             | 25               | 100             |
| Trifluralin                    | 10            | 50               | 200             |

Continued on next page



# EPA Method 1600 Series

## Pesticide Standards

### Method 1656 Calibration Solutions & Suggested Calibration Groups (continued)

#### Calibration Group 4

M-1656-04-CAL-SET

All solutions in Isooctane

3 x 1 mL

10 comps.

| Components<br>(units in ng/mL) | Low<br>( 1X ) | Medium<br>( 5X ) | High<br>( 20X ) |
|--------------------------------|---------------|------------------|-----------------|
| Benfluralin                    | 20            | 100              | 400             |
| Chlorobenzilate                | 50            | 250              | 1,000           |
| Decachlorobiphenyl             | 10            | 50               | 200             |
| Dieldrin                       | 5             | 25               | 100             |
| Endosulfan I                   | 10            | 50               | 200             |
| Mirex                          | 20            | 100              | 400             |
| Terbacil                       | 200           | 1,000            | 4,000           |
| Terbutylazine                  | 500           | 2,500            | 10,000          |
| Tetrachloro-m-xylene           | 5             | 25               | 100             |
| Triadimefon                    | 100           | 500              | 2,000           |

#### Calibration Group 5

M-1656-05-CAL-SET

All solutions in Isooctane

3 x 1 mL

8 comps.

| Components<br>(units in ng/mL) | Low<br>( 1X ) | Medium<br>( 5X ) | High<br>( 20X ) |
|--------------------------------|---------------|------------------|-----------------|
| Benfluralin                    | 20            | 100              | 400             |
| Captan                         | 100           | 500              | 2,000           |
| Chlorothalonil                 | 20            | 100              | 400             |
| 4,4'-DDD                       | 20            | 100              | 400             |
| Decachlorobiphenyl             | 10            | 50               | 200             |
| Norflurazon                    | 100           | 500              | 2,000           |
| Simazine                       | 800           | 4,000            | 16,000          |
| Tetrachloro-m-xylene           | 5             | 25               | 100             |

#### Calibration Group 6

M-1656-06-CAL-SET

All solutions in Isooctane

3 x 1 mL

9 comps.

| Components<br>(units in ng/mL) | Low<br>( 1X ) | Medium<br>( 5X ) | High<br>( 20X ) |
|--------------------------------|---------------|------------------|-----------------|
| Aldrin                         | 20            | 100              | 400             |
| d-BHC                          | 5             | 25               | 100             |
| Bromacil                       | 100           | 500              | 2,000           |
| Butachlor                      | 50            | 250              | 1,000           |
| Decachlorobiphenyl             | 10            | 50               | 200             |
| Endosulfan II                  | 10            | 50               | 200             |
| Heptachlor                     | 10            | 50               | 200             |
| Kepone                         | 100           | 500              | 2,000           |
| Tetrachloro-m-xylene           | 5             | 25               | 100             |

#### Calibration Group 7

M-1656-07-CAL-SET

All solutions in Isooctane

3 x 1 mL

13 comps.

| Components<br>(units in ng/mL) | Low<br>( 1X ) | Medium<br>( 5X ) | High<br>( 20X ) |
|--------------------------------|---------------|------------------|-----------------|
| Carbophenothion                | 80            | 400              | 1,600           |
| Chloroneb                      | 300           | 1,500            | 6,000           |
| Chloropropylate                | 200           | 1,000            | 4,000           |
| DBCP                           | 25            | 125              | 500             |
| Decachlorobiphenyl             | 10            | 50               | 200             |
| Dicofol                        | 300           | 1,500            | 6,000           |
| Endrin aldehyde                | 80            | 400              | 1,600           |
| Etridiazole                    | 80            | 400              | 1,600           |
| Perthane                       | 1,000         | 5,000            | 20,000          |
| Propachlor                     | 500           | 2,500            | 10,000          |
| Propanil                       | 200           | 1,000            | 4,000           |
| Propazine                      | 1,000         | 5,000            | 20,000          |
| Tetrachloro-m-xylene           | 5             | 25               | 100             |

### Method 1658 Phenoxy-Acid Herbicides

Method 1658 consolidates several EPA wastewater methods used to determine Phenoxy-Acid Herbicides & Herbicide esters associated with the CWA, RCRA, & CERCLA; & other compounds amenable to extraction & analysis by wide-bore capillary column GC/ECD.

M-1658-CAL-SET

All solutions in Isooctane

3 x 1 mL

12 comps.

| Components<br>(units in ng/mL)               | Low<br>( 1X ) | Medium<br>( 10X ) | High<br>( 100X ) |
|----------------------------------------------|---------------|-------------------|------------------|
| 2,4-D                                        | 100           | 1,000             | 10,000           |
| Dalapon                                      | 50            | 500               | 5,000            |
| 2,4-DB                                       | 200           | 2,000             | 20,000           |
| 2,4-Dichlorophenylacetic acid<br>(Surrogate) | 10            | 100               | 1,000            |
| Dicamba                                      | 20            | 200               | 2,000            |
| Dichlorprop                                  | 100           | 1,000             | 10,000           |
| Dinoseb                                      | 50            | 500               | 5,000            |
| MCPA                                         | 5,000         | 50,000            | 500,000          |
| MCPP                                         | 5,000         | 50,000            | 500,000          |
| Picloram                                     | 50            | 500               | 5,000            |
| 2,4,5-T                                      | 20            | 200               | 2,000            |
| 2,4,5-TP                                     | 20            | 200               | 2,000            |



### Method 1657 Organo-Phosphorus Pesticides in Municipal & Industrial Wastewater by FPD

Method 1657 is a consolidation of several EPA wastewater methods used to determine the organo-phosphorus pesticides associated with the Clean Water Act, the Resource and Conservation and Recovery Act, & the Comprehensive Environmental Response, Compensation and Liability Act; and other compounds amenable to extraction and analysis by wide-bore capillary column gas chromatography with a flame photometric detector (FPD).

#### GPC Calibration Solution

**M-1600-GPC-5ML** 1 x 5 mL  
At stated conc. in CH<sub>2</sub>Cl<sub>2</sub> 5 comps.

|                            |             |
|----------------------------|-------------|
| Corn oil                   | (300 mg/mL) |
| bis(2-Ethylhexyl)phthalate | (15 mg/mL)  |
| Pentachlorophenol          | (1.4 mg/mL) |
| Perylene                   | (0.1 mg/mL) |
| Sulfur                     | (0.5 mg/mL) |

#### Solid-phase Extraction Cartridge Calibration Solution

**M-1600-SPE** 1 x 1 mL

0.1 mg/mL in Acetone  
2,4,6-Trichlorophenol

#### Surrogate Spiking Solution

**M-1657-SS** 1 x 1 mL  
0.2 mg/mL each in Acetone 2 comps.

Tributyl phosphate  
Triphenyl phosphate

### Calibration Solutions and Suggested Calibration Groups

#### M-1657-CAL-SET

4 x (3 x 1 mL)

Contains all 4 calibration groups at the respective Low, Medium and High Ranges

#### Calibration Group 1

**M-1657-01-R1-CAL-SET** 3 x 1 mL  
All solutions in Isooctane 9 comps.

| Components<br>(units in ng/mL) | Low<br>(1X) | Medium<br>(5X) | High<br>(20X) |
|--------------------------------|-------------|----------------|---------------|
| Azinphos methyl                | 100         | 500            | 2,000         |
| Dichlorvos                     | 500         | 2,500          | 10,000        |
| Disulfoton                     | 200         | 1,000          | 4,000         |
| Fenthion                       | 200         | 1,000          | 4,000         |
| Merphos (A + B)                | 400         | 2,000          | 8,000         |
| Ronnel                         | 200         | 1,000          | 4,000         |
| Sulprofos                      | 200         | 1,000          | 4,000         |
| Tributyl phosphate             | 200         | 1,000          | 4,000         |
| Triphenyl phosphate            | 200         | 1,000          | 4,000         |

#### Calibration Group 2

**M-1657-02-CAL-SET** 3 x 1 mL  
All solutions in Isooctane 12 comps.

| Components<br>(units in ng/mL) | Low<br>(1X) | Medium<br>(5X) | High<br>(20X) |
|--------------------------------|-------------|----------------|---------------|
| Chlorfenvinphos                | 200         | 1,000          | 4,000         |
| Chlorpyrifos                   | 200         | 1,000          | 4,000         |
| Demeton (O + S)                | 400         | 2,000          | 8,000         |
| Dichlofenthion                 | 200         | 1,000          | 4,000         |
| Dimethoate                     | 100         | 500            | 2,000         |
| Famphur                        | 500         | 2,500          | 10,000        |
| Leptophos                      | 200         | 1,000          | 4,000         |
| Methyl parathion               | 200         | 1,000          | 4,000         |
| Tributyl phosphate             | 200         | 1,000          | 4,000         |
| Trichlorofon                   | 500         | 2,500          | 10,000        |
| Tricresylphosphate             | 100         | 500            | 2,000         |
| Triphenyl phosphate            | 200         | 1,000          | 4,000         |

#### Calibration Group 3

**M-1657-03-CAL-SET** 3 x 1 mL  
All solutions in Isooctane 14 comps.

| Components<br>(units in ng/mL) | Low<br>(1X) | Medium<br>(5X) | High<br>(20X) |
|--------------------------------|-------------|----------------|---------------|
| Azinphos ethyl                 | 200         | 1,000          | 4,000         |
| Crotoxypfos                    | 500         | 2,500          | 10,000        |
| DEF                            | 200         | 1,000          | 4,000         |
| Fensulfthion                   | 500         | 2,500          | 10,000        |
| Methyl chlorpyrifos            | 200         | 1,000          | 4,000         |
| Mevinphos                      | 500         | 2,500          | 10,000        |
| Naled                          | 500         | 2,500          | 10,000        |
| Parathion                      | 200         | 1,000          | 4,000         |
| Phosmet                        | 500         | 2,500          | 10,000        |
| Phosphamidon (E + Z)           | 100         | 500            | 2,000         |
| Sulfotepp                      | 200         | 1,000          | 4,000         |
| Terbufos                       | 200         | 1,000          | 4,000         |
| Tributyl phosphate             | 200         | 1,000          | 4,000         |
| Triphenyl phosphate            | 200         | 1,000          | 4,000         |

#### Calibration Group 4

**M-1657-04-CAL-SET** 3 x 1 mL  
All solutions in Isooctane 11 comps.

| Components<br>(units in ng/mL) | Low<br>(1X) | Medium<br>(5X) | High<br>(20X) |
|--------------------------------|-------------|----------------|---------------|
| Coumaphos                      | 500         | 2,500          | 10,000        |
| Diazinon                       | 200         | 1,000          | 4,000         |
| EPN                            | 200         | 1,000          | 4,000         |
| Ethion                         | 200         | 1,000          | 4,000         |
| Ethoprop                       | 200         | 1,000          | 4,000         |
| Malathion                      | 200         | 1,000          | 4,000         |
| Phorate                        | 200         | 1,000          | 4,000         |
| Tetrachlorvinphos              | 200         | 1,000          | 4,000         |
| Tributyl phosphate             | 200         | 1,000          | 4,000         |
| Trichloronate                  | 200         | 1,000          | 4,000         |
| Triphenyl phosphate            | 200         | 1,000          | 4,000         |

### Method 1659 Dazomet in Municipal & Industrial Wastewater by NPD

Method 1659 is used to determine Dazomet by base hydrolysis to Methyl Isothiocyanate (MITC) and subsequent determination of MITC by wide-bore fused-silica capillary column gas chromatography with a Nitrogen Phosphorus Detector (NPD).

#### Recovery & Precision Solution

**M-1659-RPS** 1 x 1 mL  
25 µg/mL in Acetone

Methyl isothiocyanate (MITC)

#### Matrix Spiking Solution

**M-1659-MS** 1 x 1 mL  
25 µg/mL in Acetone

Dazomet

#### Calibration Solutions

**M-1659-CAL-SET** 3 x 1 mL  
**M-1659-CAL-1X** 0.2 mg/mL in Acetone 1 mL  
**M-1659-CAL-5X** 1.0 mg/mL in Acetone 1 mL  
**M-1659-CAL-25X** 5.0 mg/mL in Acetone 1 mL

Methyl isothiocyanate (MITC)



# EPA Method 8000 Series

## Pesticide Standards for Solid Waste

### Method 8080A Organochlorine Pesticides and PCBs by GC/ECD

#### Organochlorine Pesticides

M-8080

M-8080-PAK

2.0 mg/mL each in Acetone

SAVE

1 x 1 mL  
5 x 1 mL  
17 comps.

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

#### Organochlorine Pesticide QC Standard

M-8080-QC-R

M-8080-QC-R-PAK

At stated conc. in Acetone

SAVE

1 x 1 mL  
5 x 1 mL  
17 comps.

|                       |                                 |
|-----------------------|---------------------------------|
| Aldrin (0.02 mg/mL)   | Endosulfan I (0.02 mg/mL)       |
| α-BHC (0.02 mg/mL)    | Endosulfan II (0.1 mg/mL)       |
| β-BHC (0.02 mg/mL)    | Endosulfan sulfate (0.1 mg/mL)  |
| δ-BHC (0.02 mg/mL)    | Endrin (0.1 mg/mL)              |
| γ-BHC (0.02 mg/mL)    | Endrin aldehyde (0.02 mg/mL)    |
| 4,4'-DDD (0.1 mg/mL)  | Heptachlor (0.02 mg/mL)         |
| 4,4'-DDE (0.02 mg/mL) | Heptachlor epoxide (0.02 mg/mL) |
| 4,4'-DDT (0.1 mg/mL)  | Methoxychlor (0.02 mg/mL)       |
| Dieldrin (0.02 mg/mL) |                                 |

#### Internal Standard

M-508-IS

M-508-IS-PAK

0.1 mg/mL in MtBE

SAVE

1 x 1 mL  
5 x 1 mL

Pentachloronitrobenzene

#### Surrogate Standard

CLP-032-R

CLP-032-R-PAK

0.2 mg/mL each in Acetone

SAVE

1 x 1 mL  
5 x 1 mL  
2 comps.

Decachlorobiphenyl Tetrachloro-*m*-xylene

#### Multi-Component Analytes

#### Polychlorinated Biphenyls, Chlordane & Toxaphene

Each at 1,000 µg/mL in Hexane

AccuPAK™ (5 x 1 mL)

SAVE

| Aroclors® #       | Cat. No.     | 1 mL | Cat. No.         | PAK |
|-------------------|--------------|------|------------------|-----|
| Aroclor 1016      | C-216S-H-10X |      | C-216S-H-10X-PAK |     |
| Aroclor 1221      | C-221S-H-10X |      | C-221S-H-10X-PAK |     |
| Aroclor 1232      | C-232S-H-10X |      | C-232S-H-10X-PAK |     |
| Aroclor 1242      | C-242S-H-10X |      | C-242S-H-10X-PAK |     |
| Aroclor 1248      | C-248S-H-10X |      | C-248S-H-10X-PAK |     |
| Aroclor 1254      | C-254S-H-10X |      | C-254S-H-10X-PAK |     |
| Aroclor 1260      | C-260S-H-10X |      | C-260S-H-10X-PAK |     |
| Aroclor 1262      | C-262S-H-10X |      | C-262S-H-10X-PAK |     |
| Aroclor 1268      | C-268S-H-10X |      | C-268S-H-10X-PAK |     |
| <b>Pesticides</b> |              |      |                  |     |
| Chlordane         | P-017S-H-10X |      | P-017S-H-10X-PAK |     |
| Toxaphene         | P-093S-H-10X |      | P-093S-H-10X-PAK |     |

#### Decomposition Solution

M-1618D

M-1618D-PAK

At stated conc. in Acetone

SAVE

1 x 1 mL  
5 x 1 mL  
2 comps.

p,p'-DDT (2 µg/mL) Endrin (1 µg/mL)

#### o,p-DDT and Metabolites

M-8080-OP

M-8080-OP-PAK

0.25 mg/mL each in Hexane : Toluene (1:1)

SAVE

1 x 1 mL  
5 x 1 mL  
3 comps.

o,p-DDD o,p-DDT  
o,p-DDE

#### Organochlorine Pesticide Mixture

Alternate Source

M-8080A-ASL

M-8080A-ASL-PAK

250 µg/mL each in Hexane : Toluene (1:1)

SAVE

1 x 1 mL  
5 x 1 mL  
17 comps.

|          |                               |
|----------|-------------------------------|
| Aldrin   | Endosulfan I                  |
| α-BHC    | Endosulfan II                 |
| β-BHC    | Endosulfan sulfate            |
| δ-BHC    | Endrin                        |
| γ-BHC    | Endrin aldehyde               |
| p,p'-DDD | Heptachlor                    |
| p,p'-DDE | Heptachlor epoxide (Isomer B) |
| p,p'-DDT | Methoxychlor (1000 µg/mL)     |
| Dieldrin |                               |

### Method 8080/8081 Matrix Spike Solutions & Surrogates at Working Level

#### Matrix Spiking Solutions

##### For Water Samples

CLP-014-5ML

CLP-014-25ML

At stated conc. in MeOH

1 x 5 mL  
1 x 25 mL  
6 comps.

|                      |                        |
|----------------------|------------------------|
| Aldrin (200 ng/mL)   | Endrin (500 ng/mL)     |
| 4,4'-DDT (500 ng/mL) | Heptachlor (200 ng/mL) |
| Dieldrin (500 ng/mL) | Lindane (200 ng/mL)    |

##### For Waste Samples

CLP-014-5X-5ML

CLP-014-5X-25ML

At stated conc. in MeOH

1 x 5 mL  
1 x 25 mL  
6 comps.

|                        |                          |
|------------------------|--------------------------|
| Aldrin (1,000 ng/mL)   | Endrin (2,500 ng/mL)     |
| 4,4'-DDT (2,500 ng/mL) | Heptachlor (1,000 ng/mL) |
| Dieldrin (2,500 ng/mL) | Lindane (1,000 ng/mL)    |

#### Surrogate Solutions

##### For Water Samples

CLP-032R-WL-10ML

CLP-032R-WL-50ML

CLP-032R-WL-100ML

1 µg/mL each in Acetone

1 x 10 mL  
1 x 50 mL  
1 x 100 mL  
2 comps.

Decachlorobiphenyl Tetrachloro-*m*-xylene

##### For Waste Samples

CLP-032R-WL-5X-10ML

CLP-032R-WL-5X-50ML

CLP-032R-WL-5X-100ML

5 µg/mL each in Acetone

1 x 10 mL  
1 x 50 mL  
1 x 100 mL  
2 comps.

Decachlorobiphenyl Tetrachloro-*m*-xylene

For Method 8080/8081 Working Level Standards(7 Point Working Level Pesticide Curve)  
See page 225 of our Master Catalog



### Method 8080/8081A/8081B Organochlorine Pesticides by Capillary Column GC/ECD

#### Single/Dual Column Organochlorine Pesticides

|                                          |                    |           |
|------------------------------------------|--------------------|-----------|
| <b>M-8081-SC</b>                         |                    | 1 x 1 mL  |
| <b>M-8081-SC-PAK</b>                     | SAVE               | 5 x 1 mL  |
| 1.0 mg/mL each in Toluene : Hexane (1:1) |                    |           |
| Aldrin                                   | Dieldrin           | 20 comps. |
| α-BHC                                    | Endosulfan I       |           |
| β-BHC                                    | Endosulfan II      |           |
| γ-BHC                                    | Endosulfan sulfate |           |
| δ-BHC                                    | Endrin             |           |
| α-Chlordane                              | Endrin aldehyde    |           |
| γ-Chlordane                              | Endrin ketone      |           |
| 4,4'-DDD                                 | Heptachlor         |           |
| 4,4'-DDE                                 | Heptachlor epoxide |           |
| 4,4'-DDT                                 | Methoxychlor       |           |

#### Technical Note

M-8081A-SC was formulated for use in combination with M-8081-SC when performing single or dual column pesticide analysis. These two product formulations provide the typically analyzed pesticides in one core mixture (M-8081-SC) with the additional 7 analytes (M-8081A-SC) to meet the 27 analytes listed in Method 8081 (January 1995).

#### Organochlorine Pesticide Mixtures

|                                        |                           |          |
|----------------------------------------|---------------------------|----------|
| <b>M-8081A-SC</b>                      |                           | 1 x 1 mL |
| <b>M-8081A-SC-PAK</b>                  | SAVE                      | 5 x 1 mL |
| 1.0 mg/mL each in Hexane:Toluene (1:1) |                           |          |
| Chlorobenzilate                        | Hexachlorocyclopentadiene |          |
| DBCP                                   | Isodrin                   |          |
| Diallate                               | Kepone                    |          |
| Hexachlorobenzene                      |                           |          |

|                                          |                           |          |
|------------------------------------------|---------------------------|----------|
| <b>M-8081A-SC-R</b>                      |                           | 1 x 1 mL |
| <b>M-8081A-SC-R-PAK</b>                  | SAVE                      | 5 x 1 mL |
| 1.0 mg/mL each in Hexane : Toluene (1:1) |                           |          |
| Chlorobenzilate                          | Hexachlorobenzene         |          |
| 1,2-Dibromo-3-chloropropane              | Hexachlorocyclopentadiene |          |
| Diallate                                 | Isodrin                   |          |

#### Dual Column Organochlorine Pesticides

|                                          |                            |          |
|------------------------------------------|----------------------------|----------|
| <b>M-8081-DC</b>                         |                            | 1 x 1 mL |
| 1.0 mg/mL each in Hexane : Toluene (1:1) |                            |          |
| Alachlor                                 | Etridiazole                |          |
| Captafol                                 | Hexachlorobenzene          |          |
| Captan                                   | Hexachlorocyclopentadiene  |          |
| Chlorobenzilate                          | Isodrin                    |          |
| Chloroneb                                | Mirex                      |          |
| Chloropropylate                          | trans-Nonachlor            |          |
| Chlorothalonil                           | PCNB                       |          |
| DBCP                                     | Perthane                   |          |
| DCPA                                     | Propachlor                 |          |
| Diallate                                 | Permethrin * (cis & trans) |          |
| Dicofol                                  | Trifluralin                |          |

\* isomer concentration as stated on certificate of product data

#### Tailing Test Standard

|                                          |          |          |
|------------------------------------------|----------|----------|
| <b>M-8081-T</b>                          |          | 1 x 1 mL |
| 1.0 mg/mL each in Hexane : Toluene (1:1) |          |          |
| Carbophenothion                          | Kepone   |          |
| Dichlone                                 | Nitrofen |          |

|                                          |          |          |
|------------------------------------------|----------|----------|
| <b>M-8081-T-R</b>                        |          | 1 x 1 mL |
| 1.0 mg/mL each in Hexane : Toluene (1:1) |          |          |
| Carbophenothion                          | Nitrofen |          |
| Dichlone                                 |          |          |

#### Surrogate Standards

|                           |      |          |
|---------------------------|------|----------|
| <b>CLP-032-R</b>          |      | 1 x 1 mL |
| <b>CLP-032-R-PAK</b>      | SAVE | 5 x 1 mL |
| 0.2 mg/mL each in Acetone |      |          |

Decachlorobiphenyl      Tetrachloro-*m*-xylene

|                           |      |          |
|---------------------------|------|----------|
| <b>CLP-034</b>            |      | 1 x 1 mL |
| <b>CLP-034-PAK</b>        | SAVE | 5 x 1 mL |
| 0.2 mg/mL each in Acetone |      |          |

Dibutylchloroendate      Tetrachloro-*m*-xylene

|                        |      |          |
|------------------------|------|----------|
| <b>M-8081-SS-X</b>     |      | 1 x 1 mL |
| <b>M-8081-SS-X-PAK</b> | SAVE | 5 x 1 mL |
| 1.0 mg/mL in Acetone   |      |          |

2-Bromobiphenyl

#### For Dual Column

|                         |      |          |
|-------------------------|------|----------|
| <b>M-8081-SS-DC</b>     |      | 1 x 1 mL |
| <b>M-8081-SS-DC-PAK</b> | SAVE | 5 x 1 mL |
| 1.0 mg/mL in Acetone    |      |          |

4-Chloro-3-nitrobenzotrifluoride

#### Internal Standards

|                      |      |          |
|----------------------|------|----------|
| <b>M-8081-IS</b>     |      | 1 x 1 mL |
| <b>M-8081-IS-PAK</b> | SAVE | 5 x 1 mL |
| 1.0 mg/mL in Acetone |      |          |

Pentachloronitrobenzene (PCNB)

|                        |      |          |
|------------------------|------|----------|
| <b>M-8081-IS-X</b>     |      | 1 x 1 mL |
| <b>M-8081-IS-X-PAK</b> | SAVE | 5 x 1 mL |
| 1.0 mg/mL in Acetone   |      |          |

α,α-Dibromo-*m*-xylene

#### For Dual Column

|                         |      |          |
|-------------------------|------|----------|
| <b>M-8081-IS-DC</b>     |      | 1 x 1 mL |
| <b>M-8081-IS-DC-PAK</b> | SAVE | 5 x 1 mL |
| 1.0 mg/mL in Acetone    |      |          |

1-Bromo-2-nitrobenzene

#### Decomposition Standard

|                          |      |          |
|--------------------------|------|----------|
| <b>M-8081-DS</b>         |      | 1 x 1 mL |
| <b>M-8081-DS-PAK</b>     | SAVE | 5 x 1 mL |
| 0.2 mg/mL each in Hexane |      |          |

4,4'-DDT      Endrin



# EPA Method 8000 Series

## Pesticide Standards for Solid Waste

### Method 8085 Pesticides by GC/AED

#### Nitrogen Containing Pesticides Mix #1

M-8085-N1

At stated conc. in MtBE

1 x 5 mL

20 comps.

|              |             |               |             |
|--------------|-------------|---------------|-------------|
| Alachlor     | (18 µg/mL)  | Norflurazon   | (10 µg/mL)  |
| Atrazine     | (5 µg/mL)   | Oxyfluorfen   | (20 µg/mL)  |
| Bromacil     | (20 µg/mL)  | Pendimethalin | (7.5 µg/mL) |
| Dichlobenil  | (10 µg/mL)  | Prometryne    | (5 µg/mL)   |
| Diphenamid   | (15 µg/mL)  | Pronamide     | (20 µg/mL)  |
| Ethalfuralin | (7.5 µg/mL) | Propachlor    | (12 µg/mL)  |
| Fluridone    | (30 µg/mL)  | Simazine      | (5 µg/mL)   |
| Metolachlor  | (20 µg/mL)  | Tebuthiuron   | (7.5 µg/mL) |
| Metribuzin   | (5 µg/mL)   | Terbacil      | (15 µg/mL)  |
| Napropamide  | (15 µg/mL)  | Trifluralin   | (7.5 µg/mL) |

#### Mix #2

M-8085-N2

At stated conc. in MtBE

1 x 5 mL

18 comps.

|                |             |             |            |
|----------------|-------------|-------------|------------|
| Ametryn        | (5 µg/mL)   | Molinate    | (10 µg/mL) |
| Benfluralin    | (7.5 µg/mL) | Prebane     | (5 µg/mL)  |
| Butylate       | (10 µg/mL)  | Profluralin | (12 µg/mL) |
| Chlorpropham   | (20 µg/mL)  | Prometon    | (5 µg/mL)  |
| Chlorothalonil | (12 µg/mL)  | Propargite  | (10 µg/mL) |
| Cyanazine      | (7.5 µg/mL) | Propazine   | (5 µg/mL)  |
| Cycloate       | (10 µg/mL)  | Tillam      | (10 µg/mL) |
| EPTC           | (10 µg/mL)  | Triallate   | (13 µg/mL) |
| Hexazinone     | (7.5 µg/mL) | Vernolate   | (10 µg/mL) |

#### Mix #3

M-8085-N3

At stated conc. in MtBE

1 x 5 mL

15 comps.

|             |             |                |            |
|-------------|-------------|----------------|------------|
| Butachlor   | (30 µg/mL)  | Metalaxyl      | (30 µg/mL) |
| Carboxin    | (30 µg/mL)  | MGK-264        | (40 µg/mL) |
| Diallate    | (35 µg/mL)  | cis-Permethrin | (10 µg/mL) |
| Fenarimol   | (15 µg/mL)  | Resmethrin     | (10 µg/mL) |
| Fenvalerate | (20 µg/mL)  | Sumithrin      | (10 µg/mL) |
| Gesatamine  | (7.5 µg/mL) | Triadimefon    | (13 µg/mL) |
| Hexazinone  | (7.5 µg/mL) | Triallate      | (15 µg/mL) |
| Karmex      | (30 µg/mL)  |                |            |

#### Chlorinated Pesticides

##### Mix #1

M-8085-C1

2.5 µg/mL each in Hexane

1 x 5 mL

23 comps.

|              |                               |
|--------------|-------------------------------|
| Aldrin       | Endosulfan II                 |
| α-BHC        | Endosulfan sulfate            |
| β-BHC        | Endrin                        |
| γ-BHC        | Endrin aldehyde               |
| δ-BHC        | Endrin ketone                 |
| γ-Chlordane  | Heptachlor                    |
| α-Chlordane  | Heptachlor epoxide (Isomer B) |
| p,p'-DDD     | Methoxychlor                  |
| p,p'-DDE     | cis-nonachlor                 |
| p,p'-DDT     | Oxychlordane                  |
| Dieldrin     | Pentachloroanisole            |
| Endosulfan I |                               |

##### Mix #2

M-8085-C2

At stated conc. in Hexane

1 x 5 mL

9 comps.

|          |              |                   |             |
|----------|--------------|-------------------|-------------|
| Captan   | (6.75 µg/mL) | Hexachlorobenzene | (2.5 µg/mL) |
| Captafol | (12.5 µg/mL) | Kelthane          | (10 µg/mL)  |
| o,p'-DDE | (2.5 µg/mL)  | Mirex             | (2.5 µg/mL) |
| o,p'-DDD | (2.5 µg/mL)  | trans-Nonachlor   | (2.5 µg/mL) |
| o,p'-DDT | (2.5 µg/mL)  |                   |             |

#### Organo Phosphorous Pesticides Mix #1

M-8085-P1

At stated conc. in MtBE

1 x 5 mL

14 comps.

|                           |           |              |             |
|---------------------------|-----------|--------------|-------------|
| Azinphos ethyl            | (8 µg/mL) | EPN          | (5 µg/mL)   |
| Carbophenothion           | (5 µg/mL) | Ethion       | (3.5 µg/mL) |
| Chlorpyrifos methyl ester | (4 µg/mL) | Fenamiphos   | (5 µg/mL)   |
| Demeton (mixed isomers)   | (7 µg/mL) | Fenitrothion | (3.5 µg/mL) |
| Disulfoton                | (3 µg/mL) | Malathion    | (4 µg/mL)   |
| Dursban                   | (4 µg/mL) | Merphos      | (6 µg/mL)   |
| Dyfonate                  | (3 µg/mL) | Sulfotep     | (3 µg/mL)   |

#### Mix #2

M-8085-P2

At stated conc. in MtBE

1 x 5 mL

12 comps.

|                 |             |                  |             |
|-----------------|-------------|------------------|-------------|
| Azinphos methyl | (8 µg/mL)   | Fenthion         | (3.5 µg/mL) |
| Bolstar         | (3.5 µg/mL) | Imidan           | (5.5 µg/mL) |
| Diazinon        | (4 µg/mL)   | Methyl parathion | (3.5 µg/mL) |
| Dimethoate      | (4 µg/mL)   | Parathion        | (4 µg/mL)   |
| Ethoprop        | (4 µg/mL)   | Phorate          | (3.5 µg/mL) |
| Fensulfotthion  | (5 µg/mL)   | Ronnel           | (3.5 µg/mL) |

#### Herbicides as Methyl Derivatives Mix #1

M-8085-H1-M

At stated conc. in MtBE

1 x 5 mL

13 comps.

|                          |             |                            |              |
|--------------------------|-------------|----------------------------|--------------|
| Acifluorfen methyl ester | (20 µg/mL)  | 4-Nitroanisole             | (10 µg/mL)   |
| Bentazon methyl ester    | (7.5 µg/mL) | Pentachloroanisole         | (2.5 µg/mL)  |
| Bromoxynil methyl ether  | (5 µg/mL)   | 2,3,4,5-Tetrachloroanisole | (2.75 µg/mL) |
| Chloramben methyl ester  | (5 µg/mL)   | 2,3,4,6-Tetrachloroanisole | (2.75 µg/mL) |
| Dinoseb methyl ether     | (7.5 µg/mL) | 2,4,5-Trichloroanisole     | (3 µg/mL)    |
| MCPA methyl ester        | (10 µg/mL)  | 2,4,6-Trichloroanisole     | (3 µg/mL)    |
| MCPP methyl ester        | (10 µg/mL)  |                            |              |

#### Mix #2

M-8085-H2-M

At stated conc. in MtBE

1 x 5 mL

13 comps.

|                          |             |                             |           |
|--------------------------|-------------|-----------------------------|-----------|
| Dalapon methyl ester     | (4 µg/mL)   | loxynil methyl ether        | (5 µg/mL) |
| 2,4-D methyl ester       | (5 µg/mL)   | Methyl 3,5-Dichlorobenzoate | (5 µg/mL) |
| 2,4-DB methyl ester      | (6 µg/mL)   | Picloram methyl ester       | (5 µg/mL) |
| DCPA methyl ester        | (4 µg/mL)   | Silvex methyl ester         | (4 µg/mL) |
| Dicamba methyl ester     | (5 µg/mL)   | 2,4,5-T methyl ester        | (4 µg/mL) |
| Dichlorprop methyl ester | (5.5 µg/mL) | Triclopyr methyl ester      | (4 µg/mL) |
| Diclofop methyl          | (7.5 µg/mL) |                             |           |

#### Surrogates

M-8085-PEST-SS

At stated conc. in MtBE

1 x 5 mL

4 comps.

|                                |            |                             |            |
|--------------------------------|------------|-----------------------------|------------|
| Decachlorobiphenyl             | (10 µg/mL) | 1,3-Dimethyl-2-nitrobenzene | (20 µg/mL) |
| 4,4'-Dibromooctafluorobiphenyl | (20 µg/mL) | Triphenylphosphate          | (20 µg/mL) |

#### Alternate Surrogates

M-8085-PEST-SS2

20 µg/mL each in MtBE

1 x 5 mL

2 comps.

|                    |      |
|--------------------|------|
| Dibutylchlorendate | TCMX |
|--------------------|------|

#### Herbicide Surrogate

M-8085-HERB-SS

20 µg/mL in MtBE

1 x 5 mL

|                      |
|----------------------|
| 2,4,6-Tribromophenol |
|----------------------|

#### Compound Independent Calibration (CIC) Mix

M-8085-CIC

At stated conc. in MtBE

1 x 5 mL

15 comps.

|                                |              |                         |               |
|--------------------------------|--------------|-------------------------|---------------|
| Decachlorobiphenyl             | (492 ng/mL)  | Pentachloronitrobenzene | (1690 ng/mL)  |
| Diazinon                       | (9800 ng/mL) | Phorate                 | (2100 ng/mL)  |
| 4,4'-Dibromooctafluorobiphenyl | (1000 ng/mL) | Silvex methyl ester     | (400 ng/mL)   |
| Dichlobenil                    | (6140 ng/mL) | Terbufos                | (7600 ng/mL)  |
| Dursban                        | (5680 ng/mL) | 2,4,6-Tribromoanisole   | (2870 ng/mL)  |
| Ethoprop                       | (391 ng/mL)  | 1,2,3-Trichlorobenzene  | (6810 ng/mL)  |
| loxynil methyl ether           | (500 ng/mL)  | Trifluralin             | (16000 ng/mL) |
| Malathion                      | (1070 ng/mL) |                         |               |



# EPA Method 8000 Series

## Pesticide Standards for Solid Waste



### Method 8140 Organophosphorous Pesticides by GC/NPD/ELCD/FPD

#### Organophosphorous Pesticides

|                                         |      |           |
|-----------------------------------------|------|-----------|
| <b>M-8140M</b>                          |      | 1 x 1 mL  |
| <b>M-8140M-PAK</b>                      | SAVE | 5 x 1 mL  |
| 0.04 mg/mL each in Hexane               |      |           |
| <b>M-8140M-5X</b>                       |      | 1 x 1 mL  |
| <b>M-8140M-5X-PAK</b>                   | SAVE | 5 x 1 mL  |
| 0.2 mg/mL each in Hexane:Acetone (19:1) |      |           |
|                                         |      | 20 comps. |

Azinphosmethyl (*Guthion*) (01)  
Bolstar (02)  
Chlorpyrifos (03)  
Coumaphos (04)  
Demeton (05)

Diazinon (06)  
Dichlorovos (07)  
Disulfoton (*Di-Syston*) (08)  
Ethoprop (09)  
Fensulfthion (10)

Fenthion (11)  
Merphos (12)  
Methyl parathion (13)  
Mevinphos (*Phosdrin*) (14)  
Naled (*Dibrom*) (15)

Phorate (*Thimet*) (16)  
Ronnel (17)  
Stirophos (18)  
Tokuthion (19)  
Trichloronate (*Agritox*) (20)

#### Organophosphorous Pesticide Set

**M-8140-SET** 20 x 1 mL  
Individual solutions listed below, each at 1.0 mg/mL in Hexane

### Method 8141A Additions to Method 8140 Organophosphorus Pesticides by GC/NPD

#### Mix #1

|                                                                                          |      |          |
|------------------------------------------------------------------------------------------|------|----------|
| <b>M-8141M</b>                                                                           |      | 1 x 1 mL |
| <b>M-8141M-PAK</b>                                                                       | SAVE | 5 x 1 mL |
| Mixture, 0.2 mg/mL each in Hexane                                                        |      |          |
| <b>M-8141-SET</b>                                                                        |      | 7 x 1 mL |
| Individual solutions, Each at 1.0 mg/mL in Hexane, Dimethoate is in Hexane:Acetone (9:1) |      |          |

| Compound        | Cat. No.  | 1 mL |
|-----------------|-----------|------|
| Dimethoate      | M-8141-01 |      |
| EPN             | M-8141-02 |      |
| Malathion       | M-8141-03 |      |
| Monocrotophos   | M-8141-04 |      |
| Ethyl parathion | M-8141-05 |      |
| Sulfotep        | M-8141-06 |      |
| TEPP            | M-8141-07 |      |

#### Mix #2

|                                                   |           |
|---------------------------------------------------|-----------|
| <b>M-8141A-1M</b>                                 | 1 x 1 mL  |
| Mixture, 0.2 mg/mL each in Hexane                 |           |
| <b>M-8141A-1-SET</b>                              | 10 comps. |
| Individual solutions, Each at 1.0 mg/mL in Hexane |           |
|                                                   | 10 x 1 mL |

| Compound        | Cat. No.     | 1 mL |
|-----------------|--------------|------|
| Azinphos ethyl  | M-8141A-1-01 |      |
| Carbophenothion | M-8141A-1-02 |      |
| Chlorfenvinphos | M-8141A-1-03 |      |
| Dioxathion      | P-129S-H-10X |      |
| Ethion          | P-148S-H-10X |      |
| Famphur         | M-8141A-1-06 |      |
| Leptophos       | P-206S-H-10X |      |
| Phosmet         | M-8141A-1-08 |      |
| Phosphamidon    | M-8141A-1-09 |      |
| Terbuphos       | P-208S-H-10X |      |

#### Mix #3

|                                                   |          |
|---------------------------------------------------|----------|
| <b>M-8141A-2M</b>                                 | 1 x 1 mL |
| Mixture, 0.2 mg/mL each in Hexane                 |          |
| <b>M-8141A-2-SET</b>                              | 9 comps. |
| Individual solutions, Each at 1.0 mg/mL in Hexane |          |
|                                                   | 9 x 1 mL |

Aspon (01)  
Chlorpyrifos methyl ester (02)  
Crotoxyphos (03)  
Dichlofenthion (04)  
Dicrotophos (05)

Fenitrothion (06)  
Fonophos (07)  
Thionazin (08)  
Trichlorfon (09)

#### Internal Standard for NPD

|                       |      |          |
|-----------------------|------|----------|
| <b>M-8141A-IS</b>     |      | 1 x 1 mL |
| <b>M-8141A-IS-PAK</b> | SAVE | 5 x 1 mL |
| 1.0 mg/mL in Acetone  |      |          |

1-Bromo-2-nitrobenzene

#### Industrial Chemicals & Triazine Herbicides

|                          |          |
|--------------------------|----------|
| <b>M-8141A-IC</b>        | 1 x 1 mL |
| 0.2 mg/mL each in Hexane |          |
|                          | 2 comps. |

Hexamethylphosphoramide (*HMPA*)      Tri-o-cresylphosphate (*TOCP*)

|                           |      |          |
|---------------------------|------|----------|
| <b>M-8141A-TH</b>         |      | 1 x 1 mL |
| <b>M-8141A-TH-PAK</b>     | SAVE | 5 x 1 mL |
| 0.2 mg/mL each in Acetone |      |          |
|                           |      | 2 comps. |

Atrazine      Simazine

|                          |      |          |
|--------------------------|------|----------|
| <b>M-8141B-HSD</b>       |      | 1 x 1 mL |
| <b>M-8141B-HSD-PAK</b>   | SAVE | 5 x 1 mL |
| 0.2 mg/mL each in Hexane |      |          |
|                          |      | 9 comps. |

Chlorpyrifos      Ronnel  
Coumaphos      Stirophos  
Dichlorvos      Trichloronate  
EPN      Tokuthion  
Naled

#### Technical Note

For use with a halogen-specific detector (i.e., electrolytic conductivity or microcoulometry). ECD should only be used when previous analyses have demonstrated that interferences do not adversely affect quantitation.

#### Surrogate Standard for NPD & FPD

|                           |      |          |
|---------------------------|------|----------|
| <b>M-8141A-SS</b>         |      | 1 x 1 mL |
| <b>M-8141A-SS-PAK</b>     | SAVE | 5 x 1 mL |
| 1.0 mg/mL each in Acetone |      |          |
|                           |      | 2 comps. |

Tributylphosphate      Triphenylphosphate

#### Surrogate Standard for NPD only

|                         |      |          |
|-------------------------|------|----------|
| <b>M-8141A-SS-X</b>     |      | 1 x 1 mL |
| <b>M-8141A-SS-X-PAK</b> | SAVE | 5 x 1 mL |
| 1.0 mg/mL in Acetone    |      |          |

4-Chloro-3-nitrobenzotrifluoride



# EPA Method 8000 Series

## Pesticide Standards for Solid Waste

### Method 8150A Chlorinated Herbicides by GC/ECD

#### Chlorinated Herbicides in Ground Water (Rev. 1, July 1992) & their Methyl Derivatives

| (mg/mL)  |       | Herbicides Acids<br>(in MeOH) | Methyl Derivative<br>(in Hexane) |
|----------|-------|-------------------------------|----------------------------------|
| Compound | Conc. | Cat. No.                      | Cat. No.                         |
| 2,4-D    | 0.2   | M-8150S-A-01                  | M-8150-01                        |
| 2,4-DB   | 0.2   | M-8150S-A-02                  | M-8150-02                        |
| 2,4,5-T  | 0.2   | M-8150S-A-03                  | M-8150-03                        |
| 2,4,5-TP | 0.2   | M-8150S-A-04                  | M-8150-04                        |
| Dalapon  | 0.2   | M-8150S-A-05                  | M-8150-05                        |
| Dicamba  | 0.2   | M-8150S-A-06                  | M-8150-06                        |

| (mg/mL)     |       | Herbicides Acids<br>(in MeOH) | Methyl Derivative<br>(in Hexane) |
|-------------|-------|-------------------------------|----------------------------------|
| Compound    | Conc. | Cat. No.                      | Cat. No.                         |
| Dichlorprop | 0.2   | M-8150S-A-07                  | M-8150-07                        |
| Dinoseb     | 0.2   | M-8150S-A-08                  | M-8150-08                        |
| MCPA        | 2.0   | M-8150S-A-09                  | M-8150-09                        |
| MCPP        | 2.0   | M-8150S-A-10                  | M-8150-10                        |

|                  |             |            |
|------------------|-------------|------------|
| Set of 10 x 1 mL | M-8150A-SET | M-8150-SET |
|------------------|-------------|------------|

#### Underivatized Solution (Varied Concentration)

**M-8150A** 1 x 1 mL  
**M-8150A-PAK** 5 x 1 mL  
0.1 mg/mL in MeOH, except MCPA and MCPP 10 comps.

SAVE

|             |                 |
|-------------|-----------------|
| 2,4-D       | Dinoseb         |
| Dalapon     | MCPA (10 mg/mL) |
| 2,4-DB      | MCPP (10 mg/mL) |
| Dicamba     | 2,4,5-TP        |
| Dichlorprop | 2,4,5-T         |

#### Methyl Derivatives Solutions (Varied Concentration)

**M-8150** 1 x 1 mL  
0.1 mg/mL in MeOH, except MCPA and MCPP 10 comps.

|                |                    |
|----------------|--------------------|
| 2,4-D ME       | Dinoseb ME         |
| Dalapon ME     | MCPA ME (10 mg/mL) |
| 2,4-DB ME      | MCPP ME (10 mg/mL) |
| Dicamba ME     | 2,4,5-TP ME        |
| Dichlorprop ME | 2,4,5-T ME         |

#### Underivatized Solution (Equal Concentration)

**M-8150M-A** 1 x 1 mL  
**M-8150M-A-PAK** 5 x 1 mL  
0.2 mg/mL each in MeOH 10 comps.

SAVE

|             |          |
|-------------|----------|
| 2,4-D       | Dinoseb  |
| Dalapon     | MCPA     |
| 2,4-DB      | MCPP     |
| Dicamba     | 2,4,5-TP |
| Dichlorprop | 2,4,5-T  |

#### Methyl Derivatives Solutions (Equal Concentration)

**M-8150M-SET** 2 x 1 mL  
(M-8150M, M-8150M-2)  
**M-8150M** 1 x 1 mL  
**M-8150M-PAK** 5 x 1 mL  
20 µg/mL each in Hexane 8 comps.

SAVE

|            |                |
|------------|----------------|
| 2,4-D ME   | Dichlorprop ME |
| Dalapon ME | Dinoseb ME     |
| 2,4-DB ME  | 2,4,5-TP ME    |
| Dicamba ME | 2,4,5-T ME     |

#### Underivatized Surrogate Standards

**M-8150B-SS** 1 x 1 mL  
**M-8150B-SS-PAK** 5 x 1 mL  
0.1 mg/mL in Acetone  
**M-8150B-SS-10X** 1 x 1 mL  
1.0 mg/mL in Acetone

SAVE

2,4-Dichlorophenylacetic acid

**M-8150M-2** 1 x 1 mL  
**M-8150M-2-PAK** 5 x 1 mL  
2,000 µg/mL each in Hexane 2 comps.

|         |         |
|---------|---------|
| MCPA ME | MCPP ME |
|---------|---------|

#### Methyl Derivative Surrogate Standard

**M-515-SS** 1 x 1 mL  
**M-515-SS-PAK** 5 x 1 mL  
0.1 mg/mL in MtBE

SAVE

2,4-Dichlorophenylacetic acid methyl ester

#### Internal Standard

**M-8151-IS** 1 x 1 mL  
**M-8151-IS-PAK** 5 x 1 mL  
0.25 mg/mL in Acetone

SAVE

4,4'-Dibromooctafluorobiphenyl

For Method 8150/8151 Working Level Standards  
(7 Point Working Level Phenoyl-Herbicide Methyl Derivative Curve)

See page 235 of our Master Catalog



### Method 8151/8151A Chlorinated Herbicides by GC/ECD

#### Methyl Derivatives

##### M-8151

0.1 mg/mL each in MtBE, except MCPA & MCPP

1 x 1 mL  
18 comps.

|                          |                   |
|--------------------------|-------------------|
| Acifluorfen              | Dichlorprop       |
| Bentazon                 | Dinoseb           |
| Chloramben               | MCPA (10 mg/mL)   |
| 2,4-D                    | MCPP (10 mg/mL)   |
| Dalapon                  | 4-Nitrophenol     |
| 2,4-DB                   | Pentachlorophenol |
| DCPA                     | Picloram          |
| Dicamba                  | 2,4,5-TP          |
| 3,5-Dichlorobenzoic acid | 2,4,5-T           |

#### Internal Standards

##### M-8151-IS

##### M-8151-IS-PAK

0.25 mg/mL in Acetone

SAVE

1 x 1 mL  
5 x 1 mL

4,4'-Dibromooctafluorobiphenyl

##### M-8151-IS-2

##### M-8151-IS-2-PAK

0.25 mg/mL in Acetone

SAVE

1 x 1 mL  
5 x 1 mL

1,4-Dichlorobenzene

#### Underivatized

##### M-8151A

##### M-8151A-PAK

0.1 mg/mL each in Acetone, except MCPA & MCPP

SAVE

1 x 1 mL  
5 x 1 mL  
18 comps.

|                          |                   |
|--------------------------|-------------------|
| Acifluorfen              | Dichlorprop       |
| Bentazon                 | Dinoseb           |
| Chloramben               | MCPA (10 mg/mL)   |
| 2,4-D                    | MCPP (10 mg/mL)   |
| Dalapon                  | 4-Nitrophenol     |
| 2,4-DB                   | Pentachlorophenol |
| DCPA diacid              | Picloram          |
| Dicamba                  | 2,4,5-TP          |
| 3,5-Dichlorobenzoic acid | 2,4,5-T           |

#### Surrogate Standards

##### M-515-SS

##### M-515-SS-PAK

0.1 mg/mL in MtBE

SAVE

1 x 1 mL  
5 x 1 mL

2,4-Dichlorophenylacetic acid methyl ester

##### M-8150B-SS

##### M-8150B-SS-PAK

0.1 mg/mL in Acetone

SAVE

1 x 1 mL  
5 x 1 mL

##### M-8150B-SS-10X

1.0 mg/mL in Acetone

1 x 1 mL

2,4-Dichlorophenylacetic acid

‡ To delay premature breakdown of thermally labile products in transit we suggest shipping with a **Cold Pack**

#### PFB Derivatized Chlorinated Herbicides

##### M-8150-02-PFB

0.1 mg/mL in MtBE

1 x 1 mL

2,4-D-PFB

##### M-8150-04-PFB

0.1 mg/mL in MtBE

1 x 1 mL

2,4,5-TP-PFB





# EPA Method 8000 Series

## Pesticide Standards for Solid Waste

### ASL Method 8270C/D Semi-Volatiles by GC/MS ASL

These additional formulations, used in conjunction with the ASL 8270C/D formulations and designed on a functional group basis, will allow the chemist to analyze a complete method 8270C/D analyte list.

Alternate Source

#### Organophosphorous Pesticide Mix

##### M-8270-09-ASL

2.0 mg/mL each in  $CH_2Cl_2$

1 x 1 mL  
9 comps.

|            |                                |
|------------|--------------------------------|
| Dimethoate | o,o,o-Triethylphosphorothioate |
| Disulfoton | Methyl parathion               |
| Famphur    | Parathion                      |
| Thionazin  | Phorate                        |
| Sulfotep   |                                |

#### Pesticide Mix

##### M-8270-10-ASL

2.0 mg/mL each in  $CH_2Cl_2$

1 x 1 mL  
6 comps.

|                 |           |
|-----------------|-----------|
| Aramite         | Isodrin   |
| Chlorobenzilate | Kepone    |
| Diallate        | Pronamide |

#### Organochlorine Pesticide Mix

##### M-8270-14-ASL

2.0 mg/mL each in Acetone

1 x 1 mL  
17 comps.

|               |                    |                    |
|---------------|--------------------|--------------------|
| Aldrin        | 4,4'-DDE           | Endrin             |
| $\alpha$ -BHC | 4,4'-DDT           | Endrin aldehyde    |
| $\beta$ -BHC  | Dieldrin           | Heptachlor         |
| $\delta$ -BHC | Endosulfan I       | Heptachlor epoxide |
| $\gamma$ -BHC | Endosulfan II      | Methoxychlor       |
| 4,4'-DDD      | Endosulfan sulfate |                    |

##### M-8270-16

1000  $\mu$ g/mL each in  $CH_2Cl_2$

1 x 1 mL  
10 comps.

|                         |            |             |
|-------------------------|------------|-------------|
| Anilazine               | Dichlone   | Sulfoxide   |
| Azinphos methyl         | Dioxathion | Sulfallate  |
| Barbamate               | Mirex      | Trifluralin |
| Demeton (mixed isomers) |            |             |

##### M-8270-17

1000  $\mu$ g/mL each in  $CH_2Cl_2$

1 x 1 mL  
7 comps.

|          |         |              |
|----------|---------|--------------|
| Brominal | Dinex   | Fluchloralin |
| Captafol | Dinocap | Nitrofen     |
| Captan   |         |              |

##### M-8270-19

1000  $\mu$ g/mL each in  $CH_2Cl_2$

1 x 1 mL  
12 comps.

|                 |               |                   |
|-----------------|---------------|-------------------|
| Carbophenothion | Fensulfothion | Phosalone         |
| Coumaphos       | Fenthion      | Imidan (Phosmet)  |
| EPN             | Leptophos     | Terbufos          |
| ETHION          | Malathion     | Tetrachlorvinphos |

##### M-8270-20

1000  $\mu$ g/mL each in  $CH_2Cl_2$

1 x 1 mL  
9 comps.

|                       |               |                                 |
|-----------------------|---------------|---------------------------------|
| Chlorfenvinphos       | Dicrotophos   | Naled                           |
| Ciodrin (Crotoxyphos) | Mevinphos     | Phosphamidon                    |
| Dichlorvos            | Monocrotophos | TEPP (Tetraethyl pyrophosphate) |

##### M-8270-21

2.0 mg/mL each in Acetone

1 x 1 mL  
3 comps.

|                     |               |
|---------------------|---------------|
| $\alpha$ -Chlordane | Endrin ketone |
| $\gamma$ -Chlordane |               |

##### M-8270-07

2.0 mg/mL each in  $CH_2Cl_2$

1 x 1 mL  
15 comps.

|                 |                  |                   |
|-----------------|------------------|-------------------|
| Aramite         | Dinoseb          | Parathion         |
| Chlorobenzilate | Disulfoton       | Phorate           |
| Diallate        | Famphur          | Silvex (2,4,5-TP) |
| 2,4-D           | Kepone           | Sulfotep          |
| Dimethoate      | Methyl parathion | Thionazin         |

#### Carbamates/Pesticides

##### M-8270-18

1000  $\mu$ g/mL each in  $CH_2Cl_2$

1 x 1 mL  
6 comps.

|                 |                                          |
|-----------------|------------------------------------------|
| Carbaryl        | Mexacarbate                              |
| Carbofuran      | Schradan (Octamethylpyrophosphoramidate) |
| Ethyl carbamate | Phenobarbital                            |

### Method 8318 N-Methylcarbamates by HPLC

#### N-Methylcarbamates

##### M-8318-SET

Each at 0.1 mg/mL in MeOH

10 x 1 mL

##### M-8318M

Mixture, 0.1 mg/mL each in MeOH

1 x 1 mL  
10 comps.

|                       |                          |
|-----------------------|--------------------------|
| Aldicarb (01)         | 3-Hydroxycarbofuran (06) |
| Aldicarb sulfone (02) | Methiocarb (07)          |
| Carbaryl (03)         | Methomyl (08)            |
| Carbofuran (04)       | Promecarb (09)           |
| Dioxacarb (05)        | Propoxur (10)            |

### Method 8321 Non-Volatile Compounds by HPLC/TSP/MS or UV Solvent Extractable

#### Chlorinated Phenoxyacid Herbicide Mix

##### M-8321-HERB

0.1 mg/mL each in AcCN

1 x 1 mL  
14 comps.

|                            |                              |
|----------------------------|------------------------------|
| Dalapon                    | Dinoseb                      |
| Dicamba                    | MCPA                         |
| 2,4-D                      | MCPP                         |
| 2,4-D, butoxyethanol ester | Silvex (2,4,5-TP)            |
| 2,4-D, ethylhexyl ester    | 2,4,5-T                      |
| 2,4-DB                     | 2,4,5-T, butyl ester         |
| Dichlorprop                | 2,4,5-T, butoxyethanol ester |

#### Organophosphorus Pesticide Mix

##### M-8321-OP

0.1 mg/mL each in AcCN

1 x 1 mL  
15 comps.

|               |                                  |
|---------------|----------------------------------|
| Asulam        | Methyl parathion                 |
| Dichlorvos    | Monocrotophos                    |
| Dimethoate    | Naled                            |
| Disulfoton    | Phorate                          |
| Famphur       | Thiofanox                        |
| Fensulfothion | Trichlorfon                      |
| Merphos       | Tris(2,3-Dibromopropyl)phosphate |
| Methomyl      |                                  |

### Method 8325 Benzidines & Nitrogen containing Pesticides by L-L or L-S Extraction & RP HPLC/Particle Beam/MS

#### Benzidine/Pesticide Mix

##### M-553

At stated conc. in AcCN : MeOH (1:1)

1 x 1 mL  
13 comps.

|                                          |                                         |
|------------------------------------------|-----------------------------------------|
| Benzidine (250 $\mu$ g/mL)               | 3,3'-Dimethylbenzidine (350 $\mu$ g/mL) |
| Benzoylprop ethyl (350 $\mu$ g/mL)       | Diuron (450 $\mu$ g/mL)                 |
| Caffeine (300 $\mu$ g/mL)                | Linuron (1,300 $\mu$ g/mL)              |
| Carbaryl (1,000 $\mu$ g/mL)              | Monuron (400 $\mu$ g/mL)                |
| o-Chlorophenyl thiourea (750 $\mu$ g/mL) | Rotenone (3,200 $\mu$ g/mL)             |
| 3,3'-Dichlorobenzidine (250 $\mu$ g/mL)  | Siduron (450 $\mu$ g/mL)                |
| 3,3'-Dimethoxybenzidine (750 $\mu$ g/mL) |                                         |

#### Performance Check Solution

##### M-553-PC

0.1 mg/mL in AcCN

1 x 1 mL

DFTPPO (Decafluorotriphenylphosphine oxide)



### Pesticide Standards

The following Pesticide Standards are for German Regulations - For residue thresholds. Swiss Regulations - For components and contaminants in food. DFG collected methods.

#### Pesticide / Congener Mix #1

**AE-00010** 1 x 1 mL  
**AE-00010-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Toluene 31 comps.

|                                      |    |
|--------------------------------------|----|
| 2,4,4'-Trichlorobiphenyl             | 1  |
| 2,2',5,5'-Tetrachlorobiphenyl        | 1  |
| 2,2',4,5,5'-Pentachlorobiphenyl      | 1  |
| 2,2',3,4,4',5'-Hexachlorobiphenyl    | 1  |
| 2,2',4,4',5,5'-Hexachlorobiphenyl    | 1  |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 1  |
| Aldrine                              | 10 |
| cis-Chlordane                        | 10 |
| trans-Chlordane                      | 10 |
| oxy-Chlordane                        | 10 |
| o,p'-DDD                             | 10 |
| p,p'-DDD                             | 10 |
| o,p'-DDE                             | 10 |
| p,p'-DDE                             | 10 |
| o,p'-DDT                             | 10 |
| p,p'-DDT                             | 10 |
| Dieldrine                            | 10 |
| Endosulfan I                         | 10 |
| Endosulfan II                        | 10 |
| Endrine                              | 10 |
| α-HCH                                | 10 |
| β-HCH                                | 10 |
| γ-HCH                                | 10 |
| δ-HCH                                | 10 |
| Heptachlor                           | 10 |
| cis-Heptachlorepoxide                | 10 |
| trans-Heptachlorepoxide              | 10 |
| Hexachlorbenzene                     | 10 |
| Isodrin                              | 10 |
| Methoxychlor                         | 10 |
| Mirex                                | 10 |

#### Pesticide Mix #2

**AE-00011** 1 x 1 mL  
**AE-00011-10ML** 1 x 10 mL  
 10 µg/mL each in Toluene 22 comps.

|                     |                    |
|---------------------|--------------------|
| Anilazine           | Tecnacene          |
| Captan              | Tetradifon         |
| Chlorthalonil       | Tetrasul           |
| Clorfenson          | Tridiameton        |
| Dichlofluanid       | Tridiamenol        |
| Dicofol             | Trifluarin         |
| Endosulfane-sulfate | Pentachloroaniline |
| Fenson              | Procymidon         |
| Folpet              | Propyzamid         |
| Imazalil            | Quintozen          |
| Iprodion            | Vinclozolin        |

#### Pesticide Mix #3

**AE-00012** 1 x 1 mL  
**AE-00012-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Toluene 10 comps.

|                           |     |
|---------------------------|-----|
| Captafol                  | 200 |
| Captan                    | 100 |
| Demethon-S-methyl         | 500 |
| Demethon-S-methyl-sulfone | 500 |
| Dicofol                   | 200 |
| Pentachlorophenol         | 100 |
| Tetrachlorvinphos         | 10  |
| Trichlorfon               | 100 |
| Tolyfluanid               | 100 |
| Vamidithion               | 200 |

#### Pesticide Mix #4

**AE-00013** 1 x 1 mL  
**AE-00013-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Toluene 5 comps.

|                   |     |
|-------------------|-----|
| Cyproconazole     | 500 |
| Hexaconazole      | 500 |
| Penconazole       | 500 |
| Tebuconazole      | 500 |
| Tetrachlorvinphos | 10  |

#### Pesticide Mix #5

**AE-00014** 1 x 1 mL  
**AE-00014-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Ethyl acetate 8 comps.

|                   |     |
|-------------------|-----|
| Atrazine          | 200 |
| Cyanazine         | 200 |
| Desmertryn        | 500 |
| Metribuzin        | 500 |
| Prometryne        | 500 |
| Simazine          | 200 |
| Terbutryn         | 500 |
| Tetrachlorvinphos | 10  |

#### Tetrachlorvinphos Surrogate / Internal Standard

**AE-00047** 1 x 1 mL  
 1000 µg/mL in Acetonitrile

|                   |
|-------------------|
| Tetrachlorvinphos |
|-------------------|

#### Pesticide Mix #6

**AE-00015** 1 x 1 mL  
**AE-00015-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Toluene 8 comps.

|                     |     |
|---------------------|-----|
| Chlorpyrifos-methyl | 100 |
| Diazinon            | 100 |
| Ethion              | 100 |
| Etrimfos            | 50  |
| Iodofenphos         | 200 |
| Malathion           | 100 |
| Phosphamidon        | 200 |
| Tetrachlorvinphos   | 10  |

#### Pesticide Mix #7

**AE-00016** 1 x 1 mL  
**AE-00016-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Toluene 8 comps.

|                  |     |
|------------------|-----|
| Bromophos-methyl | 100 |
| Bromophos-ethyl  | 150 |
| Fenitrothion     | 200 |
| Methacryfos      | 150 |
| Omethoate        | 150 |
| Phosalone        | 100 |
| Tetrachlorvinfos | 10  |
| Tolclofos-methyl | 100 |

#### Pesticide Mix #8

**AE-00017** 1 x 1 mL  
**AE-00017-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Toluene:Acetone:Hexane (18:1:1) 6 comps.

|                                 |     |
|---------------------------------|-----|
| Chlorbufam                      | 500 |
| Chlorpropham                    | 500 |
| Dichlobenil                     | 200 |
| Imazalil                        | 500 |
| Pyrazon                         | 500 |
| 2,3,5,6-Tetrachloronitrobenzene | 100 |

#### Pesticide Mix #9

**AE-00018** 1 x 1 mL  
**AE-00018-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Toluene 9 comps.

|                   |     |
|-------------------|-----|
| Azinophos-ethyl   | 100 |
| Fenchlorvos       | 100 |
| Fonophos          | 150 |
| Methidathion      | 100 |
| Mevinphos         | 200 |
| Parathion-ethyl   | 150 |
| Parathion-methyl  | 100 |
| Pirimiphos-methyl | 100 |
| Tetrachlorvinphos | 10  |

#### Pesticide Mix #10

**AE-00019** 1 x 1 mL  
**AE-00019-10ML** 1 x 10 mL  
 At stated conc. (µg/mL) in Toluene 7 comps.

|                   |     |
|-------------------|-----|
| Benalaxyl         | 500 |
| Carbaryl          | 500 |
| Oxadixyl          | 500 |
| Terbutylazine     | 250 |
| Tetrachlorvinphos | 10  |
| Triadimefon       | 500 |
| Triadimenol       | 500 |

Pesticide Standards continued on next page



# Regional Standards

## European Methodologies

### Pesticide Standards (Continued)

The following Pesticide Standards are for German Regulations - For residue thresholds. Swiss Regulations - For components and contaminants in food. DFG collected methods.

#### Pesticide Mix #11

**AE-00020** 1 x 1 mL  
**AE-00020-10ML** 1 x 10 mL  
10 µg/mL each in Toluene 19 comps.

|             |                         |
|-------------|-------------------------|
| Aldrin      | β-HCH                   |
| Chloridazon | γ-HCH                   |
| o,p'-DDD    | δ-HCH                   |
| p,p'-DDD    | Heptachlor              |
| o,p'-DDE    | cis-Heptachlorepoxyde   |
| p,p'-DDE    | trans-Heptachlorepoxyde |
| o,p'-DDT    | Hexachlorobenzene       |
| p,p'-DDT    | Tecnacene               |
| Endrin      | Tetrachlorvinphos       |
| α-HCH       |                         |

#### Pesticide Mix #12

**AE-00021** 1 x 1 mL  
**AE-00021-10ML** 1 x 10 mL  
At stated conc. (µg/mL) in Toluene 9 comps.

|                   |     |
|-------------------|-----|
| Carbophenothion   | 100 |
| Disulfoton        | 150 |
| Fenthion          | 100 |
| Methamidophos     | 100 |
| Phorate           | 150 |
| Phorate-sulfatone | 100 |
| Phorate-sulfone   | 150 |
| Tetrachlorvinphos | 10  |
| Thiomethon        | 100 |

#### Pesticide Mix #13

**AE-00022** 1 x 1 mL  
**AE-00022-10ML** 1 x 10 mL  
At stated conc. (µg/mL) in Toluene 8 comps.

|                        |     |
|------------------------|-----|
| Chlorfenvinphos (CFVP) | 100 |
| Chlorpyrifos           | 100 |
| Dichlorvos             | 100 |
| Dimethoate             | 100 |
| Heptenophos            | 100 |
| Quinalphos             | 100 |
| Tetrachlorvinphos      | 10  |
| Triazophos             | 100 |

#### Pesticide Mix #14

**AE-00023** 1 x 1 mL  
**AE-00023-10ML** 1 x 10 mL  
At stated conc. (µg/mL) in Toluene 10 comps.

|                   |     |
|-------------------|-----|
| Cyfluthrin        | 500 |
| λ-Cyhalothrin     | 500 |
| Cypermethrin      | 500 |
| Deltamethrin      | 500 |
| Dichloran         | 100 |
| Fenvalerate       | 500 |
| Pendimethalin     | 100 |
| Permethrin        | 500 |
| Tefluthrin        | 100 |
| Tetrachlorvinphos | 10  |

Regulations for drinking water and water used in food manufacturing, May 27, 1986, BGBl, I, S. 760.

#### Pesticide Mix #15

**AE-00024** 1 x 1 mL  
**AE-00024-10ML** 1 x 10 mL  
0.02 µg/mL each in Ethyl acetate 33 comps.

|                       |                    |
|-----------------------|--------------------|
| Atrazine              | Linuron            |
| Bifenox               | Pencycuron         |
| Bromacil              | Pendimethalin      |
| Carbetamide           | Prometryne         |
| Chloridazo            | Propazine          |
| Chloroxuron           | Metamitron         |
| Chlorpropham          | Metazachlor        |
| Chlortoluron          | Methabenzthiazuron |
| Crimidine             | Methoprotryne      |
| Cyanazine             | Metobromuron       |
| Desethylatrazine      | Metolachlor        |
| Desisopropylatrazine  | Monolinuron        |
| Desethylterbutylazine | Sebutylazin        |
| Dimefuron             | Simazine           |
| Diuron                | Terbutryn          |
| Isoproturon           | Terbutylazine      |
| Karbutilate           |                    |

Regulations for drinking water analysis, (E-DIN 38407-F-18, E-DIN 38414-F-21)  
Regulations for sediment and sludge.

#### Pesticide Mix #16

**AE-00030** 1 x 1 mL  
**AE-00030-10ML** 1 x 10 mL  
10 µg/mL each in Ethyl acetate 20 comps.

|                     |                 |
|---------------------|-----------------|
| Aldicarb            | Lindane         |
| Atrazine            | MCPA *          |
| Bentazone *         | Mecoprop *      |
| Chlortofuron        | Metazachlor     |
| Cyanazine           | Metobromuron    |
| 2,4-D *             | Metoxuron       |
| Dichlorprop *       | Sebutylazin     |
| 1,3-Dichloropropene | Simazine        |
| Endosulfan I        | Terbutylazine   |
| Endosulfan II       |                 |
| Isoproturon         | * Underivatized |

#### Pesticide Mix #20

**AE-00050** 1 x 1 mL  
**AE-00050-10ML** 1 x 10 mL  
10 µg/mL each in Ethyl acetate 20 comps.

|                     |               |
|---------------------|---------------|
| Aldicarb            | Isoproturon   |
| Atrazine            | γ-BHC         |
| Bentazon            | MCPA          |
| Chlortoluron        | MCPP acid     |
| Cyanazine           | Metazachlor   |
| 2,4-D               | Metobromuron  |
| Dichlorprop         | Metoxuron     |
| 1,1-Dichloropropene | Sebutylazin   |
| Endosulfan I        | Simazine      |
| Endosulfan II       | Terbutylazine |

#### Pesticide Mix #21

**AE-00051** 1 x 1 mL  
10 µg/mL each in Cyclohexane 16 comps.

|               |                               |
|---------------|-------------------------------|
| Aldrin        | Endrin                        |
| p,p'-DDD      | Heptachlor                    |
| p,p'-DDE      | Heptachlor epoxide (isomer B) |
| o,p'-DDT      | Hexachlorobenzene             |
| p,p'-DDT      | α-BHC                         |
| Dieldrin      | β-BHC                         |
| Endosulfan I  | γ-BHC                         |
| Endosulfan II | Methoxychlor                  |

Regulations - Test methods for organochlorine and organophosphorus compounds and pyrethroids  
Current Science and Technology, German Book of Medicine (1996).

#### Pesticide Mix #17

**AE-00027** 1 x 1 mL  
**AE-00027-10ML** 1 x 10 mL  
10 µg/mL each in Toluene 14 comps.

|                     |                                  |
|---------------------|----------------------------------|
| Alachlor            | Methyl pentachlorophenyl sulfide |
| Bromopropylate      | Pentachloraniline                |
| Carbophenothion     | cis-Permethrin                   |
| Cypermethrin        | trans-Permethrin                 |
| Deltamethrin        | Piperonyl butoxide               |
| Endosulfane sulfate | Pyrethrins                       |
| Fenvalerate         | Quintozene                       |

#### Pesticide Mix #18

**AE-00028** 1 x 1 mL  
**AE-00028-10ML** 1 x 10 mL  
10 µg/mL each in Toluene 16 comps.

|                     |                   |
|---------------------|-------------------|
| Azinphos-methyl     | Ethyl parathion   |
| Carbophenothion     | Fenitrothion      |
| Chlorfenvinphos     | Fonofos           |
| Chlorpyrifos-ethyl  | Methyl parathion  |
| Chlorpyrifos-methyl | Malathion         |
| Diazinon            | Methidathion      |
| Dichlorphos         | Phosalone         |
| Ethion              | Pirimiphos-methyl |

#### Pesticide Mix #19

**AE-00029** 1 x 1 mL  
**AE-00029-10ML** 1 x 10 mL  
10 µg/mL each in Toluene 13 comps.

|                     |                  |
|---------------------|------------------|
| Chlorpyrifos-methyl | Fenitrothion     |
| p,p'-DDT            | Lindane          |
| Deltamethrin        | Methyl parathion |
| Dichlorvos          | Phosalone        |
| Dieldrin            | Quintozene       |
| Endosulfan sulfate  | Tecnacene        |
| Ethion              |                  |

#### Pesticide Mix #20

Regulation DIN V 38407 Part 12 Method F12  
**AE-00031** 1 x 1 mL  
**AE-00031-10ML** 1 x 10 mL  
10 µg/mL each in Ethyl acetate 17 comps.

|                   |                    |
|-------------------|--------------------|
| Atrazine          | Methabenzthiazuron |
| Chlortoluron      | Metobromuron       |
| Cyanazine         | Metolachlor        |
| Desethyl atrazine | Metoxuron          |
| Hexazinone        | Monolinuron        |
| Isoproturon       | Sebutylazin        |
| Karmex            | Simazine           |
| Linuron           | Terbutylazine      |
| Metazachlor       |                    |

#### Pesticide Mix #22

**AE-00052** 1 x 1 mL  
**AE-00052-10ML** 1 x 10 mL  
10 µg/mL each in Acetonitrile 8 comps.

|                   |               |
|-------------------|---------------|
| Atrazine          | Metoxuron     |
| Desethyl atrazine | Propazine     |
| Bromacil          | Simazine      |
| Chloridazon       | Terbutylazine |





### Pesticide Standards (Continued)

#### Pesticide Mix #23

AE-00053 1 x 1 mL  
AE-00053-10ML 1 x 10 mL  
10 µg/mL each in Acetonitrile 6 comps.

|             |           |
|-------------|-----------|
| 2,4-D       | MCPA      |
| 2,4-DB      | MCPB      |
| Dichlorprop | MCPB acid |

#### Pesticide Mix #24

AE-00054 1 x 1 mL  
AE-00054-10ML 1 x 10 mL  
At stated conc. (µg/mL) in Cyclohexane 6 comps.

|          |     |            |      |
|----------|-----|------------|------|
| Aldrin   | 0.2 | α-BHC      | 0.15 |
| p,p'-DDT | 0.4 | γ-BHC      | 0.15 |
| Dieldrin | 0.3 | Heptachlor | 0.2  |

#### Pesticide Mix #25

AE-00055 1 x 1 mL  
AE-00055-10ML 1 x 10 mL  
10 µg/mL each in Cyclohexane 4 comps.

|       |       |
|-------|-------|
| α-BHC | γ-BHC |
| β-BHC | δ-BHC |

#### Pesticide Mix #26

AE-00056 1 x 1 mL  
AE-00056-10ML 1 x 10 mL  
1.0 µg/mL each in Cyclohexane 5 comps.

|       |       |
|-------|-------|
| α-BHC | δ-BHC |
| β-BHC | ε-BHC |
| γ-BHC |       |

#### Pesticide Mix #27

AE-00057 1 x 1 mL  
AE-00057-10ML 1 x 10 mL  
1.0 µg/mL each in Isooctane 13 comps.

|          |                               |
|----------|-------------------------------|
| α-BHC    | p,p'-DDE                      |
| β-BHC    | Dieldrin                      |
| γ-BHC    | Endrin                        |
| δ-BHC    | Heptachlor epoxide (isomer B) |
| o,p'-DDD | Methoxychlor                  |
| p,p'-DDD | Mirex                         |
| o,p'-DDE |                               |

### EN / DIN / ISO Pesticide Standards

#### ISO 6468 Pesticide Standard

Water quality determination of certain organochlorine insecticides, polychlorine biphenyls and chlorobenzenes by GC after liquid-liquid extraction.

ISO6468-PEST 1 x 1 mL  
10 µg/mL each in n-Hexane 19 comps.

|          |                               |
|----------|-------------------------------|
| α-BHC    | Methoxychlor                  |
| β-BHC    | Aldrin                        |
| γ-BHC    | Dieldrin                      |
| δ-BHC    | Endrin                        |
| o,p'-DDE | Heptachlor                    |
| p,p'-DDE | Heptachlor epoxide (isomer A) |
| o,p'-DDD | Heptachlor epoxide (isomer B) |
| p,p'-DDD | Endosulfan I                  |
| o,p'-DDT | Endosulfan II                 |
| p,p'-DDT |                               |

#### EN ISO 10695 Pesticide Mix

Water quality determination of selected organic nitrogen and phosphorous compound by GC.

ENISO10695-PEST 1 x 1 mL  
10 µg/mL each in Acetone 12 comps.

|                  |               |
|------------------|---------------|
| Atrazine         | Propazine     |
| Cyanazine        | Sebuthylazin  |
| Metazachlor      | Simazine      |
| Parathion        | Terbutylazine |
| Methyl parathion | Trifluralin   |
| Pendimethalin    | Vinclozolin   |

#### DIN 38407-2 Pesticide Standard

Determination of water, waste water and sludge for low volatile halogenated hydrocarbons by GC.

DIN38407-2-PEST 1 x 1 mL  
10 µg/mL each in n-Hexane 17 comps.

|               |                               |
|---------------|-------------------------------|
| Aldrin        | Endrin                        |
| p,p'-DDD      | Heptachlor                    |
| o,p'-DDE      | Heptachlor epoxide (isomer A) |
| p,p'-DDE      | Heptachlor epoxide (isomer B) |
| o,p'-DDT      | α-BHC                         |
| p,p'-DDT      | β-BHC                         |
| Dieldrin      | γ-BHC                         |
| Endosulfan I  | Methoxychlor                  |
| Endosulfan II |                               |

#### EN ISO 11369 Pesticide Mix 20

Regulation DIN V 38407 Part 12 Method F12

AE-00031 1 x 1 mL  
AE-00031-10ML 1 x 10 mL  
10 µg/mL each in Ethyl acetate 17 comps.

|                   |                    |
|-------------------|--------------------|
| Atrazine          | Methabenzthiazuron |
| Chlortoluron      | Metobromuron       |
| Cyanazine         | Metolachlor        |
| Desethyl atrazine | Metoxuron          |
| Hexazinone        | Monolinuron        |
| Isoproturon       | Sebuthylazin       |
| Karmex (Diuron)   | Simazine           |
| Linuron           | Terbutylazine      |
| Metazachlor       |                    |

#### DIN V 38407-11 Pesticide Mix

Scope: Determination of plant protection agents in water, wastewater and sludge.

DINV38407-11-PST 1 x 1 mL  
DINV38407-11-PST-PAK 5 x 1 mL  
5 µg/mL each in Acetonitrile 21 comps.

|                 |               |
|-----------------|---------------|
| Alachlor        | Monuron       |
| Atrazine        | Parathion     |
| Chlorfenvinphos | Pendimethalin |
| Chlortoluron    | Propazine     |
| Cyanazine       | Sebuthylazin  |
| 2,4-D           | Simazine      |
| MCPA acid       | 2,4,5-T       |
| Metazachlor     | Terbutylazine |
| Metobromuron    | Trifluralin   |
| Metolachlor     | Vinclozolin   |
| Metoxuron       |               |

#### DIN 38407-14 Methyl Esters Mix

Examination of water, wastewater and sludge for phenoxyalkyl carbonic acids by GC and MS detection after solid-liquid extraction and derivatization.

DIN38407-14-ME 1 x 1 mL  
500 µg/mL each in n-Hexane 8 comps.

Mecoprop methyl ester  
MCPA methyl ester  
Dichlorprop methyl ester  
2,4-D methyl ester  
Fenoprop methyl ester  
MCPB methyl ester  
2,4,5-T methyl ester  
2,4-DB methyl ester

#### DIN 38407-22 Glyphosate & AMPA

Examination of water, wastewater, and sludge for Glyphosate and Aminomethyl phosphonic acid (AMPA)

DIN38407-22 1 x 1 mL  
100 µg/mL each in Water 2 comps.

Glyphosate  
Aminomethylphosphonic acid

#### Pesticide Mix 16

Regulations for drinking water analysis, (E-DIN 38407-F-18, E-DIN 38414-F-21) Regulations for sediment and sludge.

AE-00030 1 x 1 mL  
AE-00030-10ML 1 x 10 mL  
10 µg/mL each in Ethyl acetate 20 comps.

|                     |                 |
|---------------------|-----------------|
| Aldicarb            | MCPA *          |
| Atrazine            | Mecoprop *      |
| Bentazone *         | Metazachlor     |
| Chlortoluron        | Metobromuron    |
| Cyanazine           | Metoxuron       |
| 2,4-D *             | Sebuthylazine   |
| Dichlorprop *       | Simazine        |
| 1,3-Dichloropropene | Terbutylazine   |
| Endosulfan I        |                 |
| Endosulfan II       | * Underivatized |
| Isoproturon         |                 |
| Lindane             |                 |

#### DIN 38407-14 Acid Mix

Examination of water, wastewater and sludge for phenoxyalkyl carbonic acids by GC and MS detection after solid-liquid extraction and derivatization.

DIN38407-14-ACID 1 x 1 mL  
500 µg/mL each in n-Hexane 8 comps.

Mecoprop acid  
MCPA acid  
Dichlorprop acid  
2,4-D acid  
Fenoprop acid  
MCPB acid  
2,4,5-T acid  
2,4-DB acid



# Regional Standards

## Korean Drinking Water Regulation

### Pesticide Mix

KDWR-003

KDWR-003-PAK **SAVE**

1000 µg/mL each in MeOH

1 x 1 mL

5 x 1 mL

5 comps.

Carbaryl  
Diazinon  
Fenitrothion  
Malathion  
Parathion

## Canadian Drinking Water Brownfield Regulation

### Phenoxyacid Herbicides Mix

CCME-CDW-PHERB

1000 µg/mL each in Acetone

1 x 1 mL

11 comps.

|                    |                           |
|--------------------|---------------------------|
| Bromoxynil         | Pentachlorophenol         |
| 2,4-D              | Picloram                  |
| Dicamba            | 2,4,5-T                   |
| 2,4-Dichlorophenol | 2,3,4,6-Tetrachlorophenol |
| Diclofop methyl    | 2,4,6-Trichlorophenol     |
| Dinoseb            |                           |

### Carbamates Mix

CCME-CDW-CARB

100 µg/mL each in AcCN

1 x 1 mL

5 comps.

|            |            |
|------------|------------|
| Aldicarb   | Carbofuran |
| Bendiocarb | Triallate  |
| Carbaryl   |            |

### Chlorinated Pesticide Mix

CCME-CDW-CPEST

200 µg/mL each in Hexane:Toluene (1:1)

1 x 1 mL

14 comps.

|             |                               |
|-------------|-------------------------------|
| Aldrin      | 4,4'-DDT                      |
| g-BHC       | Dieldrin                      |
| a-Chlordane | Heptachlor                    |
| g-Chlordane | Heptachlor epoxide (Isomer B) |
| 2,4'-DDE    | Methoxychlor                  |
| 4,4'-DDE    | Oxychlordane Isomer           |
| 2,4'-DDT    | Trifluralin                   |





# CERTIFICATE OF ACCREDITATION

**ANSI-ASQ National Accreditation Board/AClass**  
500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

**AccuStandard, Inc.**  
**125 Market Street**  
**New Haven, CT 06513**

has been assessed by AClass  
and meets the requirements of international standard

**ISO Guide 34:2009**

while demonstrating technical competence in the field(s) of

**Reference Material Producer**

Refer to the accompanying Scope(s) of Accreditation for information regarding the  
types of materials to which this accreditation applies.

AR-1463

Certificate Number

AClass Approval



Certificate Valid 06/30/2012-06/30/2014  
Version No. 002 Issued: 07/11/2012



# ANSI-ASQ National Accreditation Board/ACCLASS

## SCOPE OF ACCREDITATION TO ISO GUIDE 34:2009

### AccuStandard, Inc.

125 Market Street, New Haven, CT 06513  
Sue Powell Phone: 203-786-5290 ext 131

### REFERENCE MATERIAL PRODUCER

Valid to: June 30, 2014

Certificate Number: AR-1463

| Category and Sub-Category of Reference Material                                             | Class or Type of Reference Materials Produced (include range where applicable)                                                                                                                                                                                                                                                                                  | Methods or Techniques Utilized in the RMP Laboratory if appropriate                                                                                             |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Certified Reference Material (CRM) <ul style="list-style-type: none"><li>Chemical</li></ul> | <ul style="list-style-type: none"><li>Single and multi-component organic and inorganic materials either neat or in solution</li></ul> <p>CRM Categories :</p> <ul style="list-style-type: none"><li>PCBs</li><li>Pesticides</li><li>Explosives</li><li>VOCs</li><li>Semivolatiles</li><li>Metals</li><li>Anions / Cations</li><li>Sulfur</li><li>PBDE</li></ul> | <ul style="list-style-type: none"><li>GC/FID</li><li>GC/ECD</li><li>GC/MS</li><li>ICP</li><li>Ion Chromatography</li><li>HPLC</li><li>UV Fluorescence</li></ul> |

**Notes:**

1. This scope is part of and must be included with the Certificate of Accreditation No. AR-1463

Vice President

# Placement of Orders

|                        |                                                                    |                                                            |
|------------------------|--------------------------------------------------------------------|------------------------------------------------------------|
| <b>Tel</b>             | 800-442-5290 (Toll Free) or<br>203-786-5290                        | 8:00 AM - 5:30 PM EST Weekdays<br>24 Hours Voice Messaging |
| <b>Fax</b>             | 877-786-5287 (Toll Free) or<br>203-786-5287                        | Place orders 24/7                                          |
| <b>Technical Dept.</b> | 203-786-5290                                                       | 8:00 AM - 5:30 PM EST Weekdays                             |
| <b>Web</b>             | AccuStandard.com                                                   | 24/7                                                       |
| <b>Email</b>           | orders@accustandard.com                                            | 24/7                                                       |
| <b>Mail</b>            | AccuStandard, Inc.<br>125 Market Street<br>New Haven, CT 06513 USA |                                                            |

## We Accept



## Shipments

Orders are shipped via UPS, Federal Express, DSL or US Postal Service. Where applicable, other methods of transportation will be used in accordance with DOT regulations. A handling fee is associated with each order. Hazardous Shipping charges may apply.

## Conditions of Sale

Net 30 Days - FOB New Haven, Connecticut. Prices are in US dollars and are subject to change without notice. 1.5 % finance charge on overdue accounts will be applied. Our products are not for resale unless prior explicit approval has been granted.

## Liability

Products listed in this catalog are for research use only. No warranty for any particular application is expressed or implied. Due to their hazardous nature, they should only be handled by trained personnel. AccuStandard's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

**Over 40,000 Standards, just a click away**  
(Over 10,000 listed and over 30,000 formulated custom standards)



**AccuStandard.com**

## Online MSDSs, Certificate of Analyses, EPA Methods and EU Directives on Demand 24/7

**Tired of searching for MSDSs, COAs and EPA Methods?**

**All Documents** are available on our website as downloads in PDF format  
(to view or print at your convenience).

**Discounted Shipping** on orders placed through our website,  
(see AccuStandard.com for details).







# AccuStandard<sup>®</sup>

ISO  
**34**  
GUIDE

ISO 9001  
Certified

ISO 17025  
Accredited

Phone: 203-786-5290  
Toll Free: 800-442-5290

Fax: 203-786-5287  
Fax Toll Free: 877-786-5287

Email: [usa@accustandard.com](mailto:usa@accustandard.com)  
Website: [AccuStandard.com](http://AccuStandard.com)