

# TECHLAB

Matériaux de Référence Certifiés & Equipements de Laboratoire

## Pesticide Standards



TECHLAB

## Pesticide Desk Reference Guide

This guide includes the following information (if available):

- 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

### Purchased Standards versus In-house Standards

1. **Safety** - Using solutions rather than neat materials reduces the laboratory personnel's exposure to chemicals. Additionally, labs do not have to store and dispose of the neat materials.
2. **Certification** - Many laboratories are required to use independently produced reference standards. We are accredited to ISO 17034 for the preparation and certification of reference materials.
3. **Cost effective** - Purchasing bulk bottles of pesticides, making the solution and disposing of the waste is usually more expensive than using a pre-made solution.

**Some pesticides may require a ColdPAK for shipping to preserve the integrity of the product.**

Custom pesticide formulations can be prepared for residue screening and other applications.

- CAS number index
- Most individual pesticide standards are available in neat and solution
- EPA, EU and other methodologies

Contact us for Synthesis of rare Pesticides and Metabolites

#### Pesticide Name

Chemical Name

Structure

Common Names (Synonyms and/or

Common Names)

#### Property Key

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

#### Solubility Key (SOL)

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

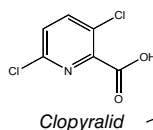
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#### Sample Individual Pesticide

##### Lontrel

3,6-Dichloropyridine-2-carboxylic acid



Clopyralid

Synonym and/or  
Common Names

**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  
**SOL** M,A,D,CN,EA,H,W

Matrix	Cat. No.	Unit
NEAT	P-224N	10 mg
100 µg/mL in MeOH	P-224S ▲	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

Information, such as physical properties, is provided for reference only. We make no warranty, representation, or guaranty as to the content, accuracy, or completeness of this data.

## Information on Pesticides Catalog Numbers

### **Pesticide Catalog Numbers have 5 parts:**

1. The initial **P-** specifies the product is a Pesticide.
2. The following 3 or 4 numbers are sequentially assigned, and are unique to the chemical.
3. The next character (**N or S**) specifies whether the product is Neat or in Solution.
4. “-” with letters specify a solvent other than Methanol (MeOH).
5. “-” with a number followed by an X specifies the concentration difference from the 100 µg/mL (ex: -10X is 1000 µg/mL). Check for availability.

Example: P-017S is Chlordane at 100 µg/mL in Methanol  
P-017N is Chlordane neat (10 mg)  
P-017S-H-10X is Chlordane at 1000 µg/mL in Hexane

### **Key to symbols appearing in the table:**

in Acetone (-A)	in Hexane (-H)	in Toluene (-T)
in Acetonitrile (-CN)	in Isooctane (-TP)	in Water (-W)
in Ethyl acetate (-EA)	in Methyl cellosolve (-MC)	in Dimethyl sulfoxide (-DMSO)

## Can't find a Pesticide?

Search by CAS number in the index

Custom concentrations and solvents available

## Purchasing Neat Pesticides

There are two ways to purchase neat standards: Nominal weight and exact weight (see box below). For your standard preparation (nominal or exact), rinse the sample out of the vial and cap with solvent and dilute to achieve the desired concentration. Unless specified, neat samples are provided with nominal weights. Typically, the vial contains approximately 10% more of the product, however, it is not known when you receive your standard what the exact amount is in the vial. Below is a standard procedure for removing all the neat material from the vial and determining the exact weight of the material in the vial.

Small amounts (5-10 mg) of powder often are spread over the surface of the vial and cap. If the chemical is a liquid, it may coat the walls as a thin layer invisible to the eye. To recover all of the contents contained in a vial of neat material, please use the procedure described below:

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 on the same analytical balance to the nearest 0.1 mg and calculate by difference the amount of material transferred.

### **Ordering Exact Weight for neat pesticides**

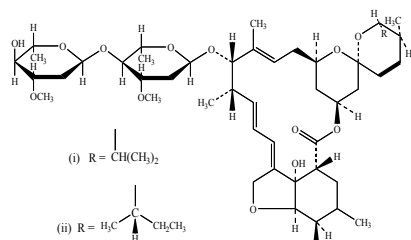
Neat pesticides are typically overfilled by approximately 10%, however, an exact weight is available for an additional charge. Specify X-WT when placing the order to take advantage of this service. A printout of the exact weight will be attached to the product label.

Rinse the pesticide out of the vial with the desired solvent and dilute to volume to get a weight/volume standard.

# Pesticide Standards

## Abamectin

Avermectin B1a & B1b



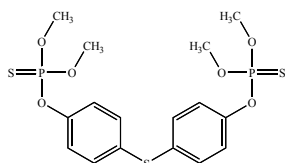
*Affirm, Avid*

**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> **PS S**  
**MW** 873.0 / 859.06 **SG** 1.18 g/cm<sup>3</sup> **MP** 150-155 °C  
**FP** >150 °C **SOL** T, A, M, EA, D, H, CN

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

## Abate

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



*Temephos*

**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**  
**SG** 1.32 g/cm<sup>3</sup> **MP** 30 °C **BP** Decomp. 120 °C  
**SOL** M, A, D, H, CN, TP, EA

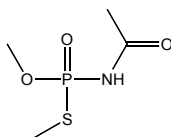
Matrix	Cat. No.	Unit
NEAT	P-101N	10 mg
100 µg/mL in MeOH	P-101S	1 mL

*Acarol, see Bromopropylate*

*Accent, see Nicosulfuron*

## Acephate

O,S-Dimethyl acetylphosphoramidothioate



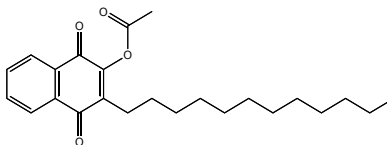
*Orthene*

**CAS** 30560-19-1 **MF** C<sub>10</sub>H<sub>10</sub>NO<sub>3</sub>PS **MW** 183.17  
**PS S** **SG** 1.35 g/cm<sup>3</sup> **MP** 88-89 °C  
**SOL** M, A, D, H, CN, TP, EA, T

Matrix	Cat. No.	Unit
NEAT	P-200N	10 mg
100 µg/mL in Acetone	P-200S-A	1 mL
1000 µg/mL in Acetone	P-200S-A-10X	1 mL

## Acequinocyl

2-(Acetoxy)-3-dodecyl-1,4-naphthalenedione

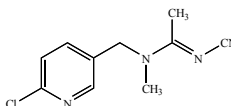


**CAS** 57960-19-7 **MF** C<sub>24</sub>H<sub>32</sub>O<sub>4</sub> **MW** 384.51 **PS S**  
**SG** 1.13 g/cm<sup>3</sup> **MP** 59-60 °C **BP** Decomp. 200 °C  
**SOL** H, T, D, A, M, EA, IPA, CN, DMSO

Matrix	Cat. No.	Unit
NEAT	P-1037N	10 mg
100 µg/mL in AcCN	P-1037S-CN	1 mL

## Acetamidrid

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

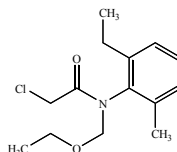


**CAS** 135410-20-7 **MF** C<sub>10</sub>H<sub>11</sub>ClN<sub>4</sub> **MW** 222.67  
**PS S** **SG** 1.33 g/cm<sup>3</sup> **MP** 98-99 °C **BP** Decomp. 200 °C  
**FP** 167 °C **SOL** M, A, D, CN, EA, H

Matrix	Cat. No.	Unit
NEAT	P-820N	10 mg
100 µg/mL in AcCN	P-820S-CN	1 mL

## Acetochlor

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

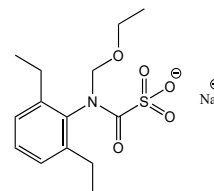


**CAS** 34256-82-1 **MF** C<sub>14</sub>H<sub>20</sub>ClNO<sub>2</sub> **MW** 269.77  
**PS L** **SG** 1.12 g/cm<sup>3</sup> **BP** 134 °C (0.4mm Hg)  
**FP** >93 °C **SOL** M, A, D, H, T, CN, EA

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

## Acetochlor ESA sodium salt

Sodium 2-[(ethoxymethyl)(2-ethyl-6-methylphenyl)amino]-2-oxo-ethanesulfonate

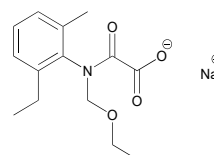


**CAS** 187022-11-3 **MF** C<sub>13</sub>H<sub>18</sub>NNaO<sub>5</sub>S **MW** 323  
**PS S** **SOL** A, CN, M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-911S	1 mL

## Acetochlor OA sodium salt

Sodium [(ethoxymethyl)(2-ethyl-6-methylphenyl)amino]-oxo-acetate

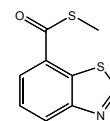


**CAS** N/A **MF** C<sub>14</sub>H<sub>20</sub>NNaO<sub>5</sub>S **MW** 337.37 **SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-912S	1 mL

## Acibenzolar-S-methyl

1,2,3-Benzothiadiazole-7-carbothioicacid, S-methyl ester



**CAS** 135158-54-2 **MF** C<sub>8</sub>H<sub>6</sub>N<sub>2</sub>OS<sub>2</sub> **MW** 210.28  
**PS S** **SG** 1.54 g/cm<sup>3</sup> **MP** 133 °C **BP** 267 °C  
**SOL** M, EA, H, T, A, D, CN

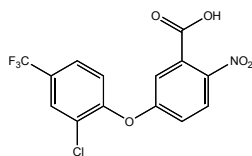
Matrix	Cat. No.	Unit
NEAT	P-895N	10 mg
100 µg/mL in MeOH	P-895S	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## Acifluorfen

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

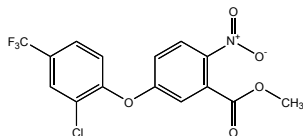


**CAS** 50594-66-6 **MF** C<sub>14</sub>H<sub>7</sub>ClF<sub>3</sub>NO<sub>5</sub> **MW** 361.7  
**PS S SG** 1.57 g/cm<sup>3</sup> **MP** 150 °C  
**BP** Decomp. 235 °C **FP** 209 °C **SOL** M,A,CN,D,H

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
1000 µg/mL in MeOH	P-245S-10X ▲	1 mL

## Acifluorfen methyl ester

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

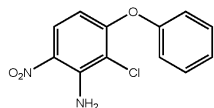


**CAS** 50594-67-7 **MF** C<sub>15</sub>H<sub>9</sub>ClF<sub>3</sub>NO<sub>5</sub> **MW** 375.69  
**PS S SG** 1.47 g/cm<sup>3</sup> **MP** 53-54 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-246N	10 mg
100 µg/mL in MeOH	P-246S	1 mL
1000 µg/mL in MeOH	P-246S-10X	1 mL

## Aclonifen

2-Chloro-6-nitro-3-phenoxyaniline

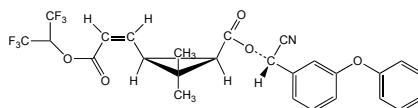


**CAS** 74070-46-5 **MF** C<sub>12</sub>H<sub>9</sub>ClN<sub>2</sub>O<sub>3</sub> **MW** 264.66  
**PS S SG** 1.45 g/cm<sup>3</sup> **MP** 80-81 °C  
**BP** Decomp. 297 °C **SOL** H,T,M,A

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-890S-CN	1 mL

## Acrinathrin

(S)-(alpha)-Cyano-3-phenoxybenzyl (Z)-(1R)-2,2-dimethyl-3-[2-(2,2,2-trifluoro-1-trifluoromethylethoxycarbonyl)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 SG** 1.38 g/cm<sup>3</sup> **MP** 81 °C  
**BP** Decomp. 230 °C **SOL** H,A,T,CN

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

**Admiral**, see *Pyriproxyfen*

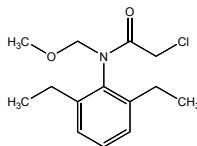
**Affirm**, see *Abamectin*

**Agritox**, see *Trichloronate*

**Aim**, see *Chlorfluazuron*

## Alachlor

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



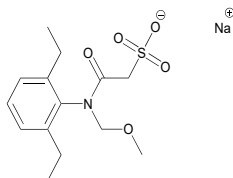
Lasso

**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** 100 °C  
(0.02mm Hg) **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-102N	10 mg
100 µg/mL in MeOH	P-102S	1 mL
1000 µg/mL in MeOH	P-102S-10X	1 mL

## Alachlor ESA sodium salt

Sodium 2-[(2,6-diethylphenyl)(methoxymethyl)amino]-2-oxo-ethanesulfonate

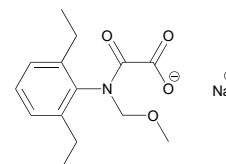


**CAS** 140939-15-7 **MF** C<sub>14</sub>H<sub>20</sub>NNaO<sub>5</sub>S **PS S**  
**MW** 337.37 **SOL** A,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-909S	1 mL

## Alachlor OA sodium salt

Sodium [(2,6-diethylphenyl)(methoxymethyl)amino]-oxo-acetate

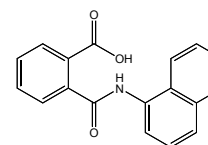


**CAS** N/A **MF** C<sub>14</sub>H<sub>18</sub>NO<sub>4</sub>Na **MW** 287 **PS S**  
**MP** 215 °C **SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-910S	1 mL

## Alanap

N-(1-Naphthyl)phthalamic acid



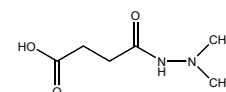
Naptalam

**CAS** 132-66-1 **MF** C<sub>18</sub>H<sub>13</sub>NO<sub>3</sub> **MW** 291.32 **PS S**  
**SG** 1.40 g/cm<sup>3</sup> **MP** 185 °C **SOL** M,A,H

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

## Alar (SADH)

N-Dimethylaminosuccinamic acid



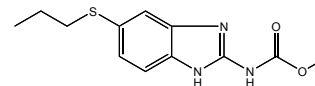
Daminozide, SADH

**CAS** 1596-84-5 **MF** C<sub>8</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub> **MW** 160.2 **PS S**  
**SG** 1.18 g/cm<sup>3</sup> **MP** 154-156 °C **BP** Decomp.  
**SOL** M,A,D,CN,W

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

## Albendazole

Methyl-5-(propylthio)-2-benzimidazolecarbamate



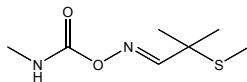
**CAS** 54965-21-8 **MF** C<sub>14</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub>S **MW** 265.33  
**PS S SG** 1.30 g/cm<sup>3</sup> **MP** 209 °C **SOL** M,CN

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

# Pesticide Standards

## Aldicarb

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



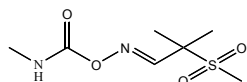
*Temik*

**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  
**SG** 1.20 g/cm<sup>3</sup> **MP** 99 °C **BP** Decomp. **FP** >100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-001N	10 mg
100 µg/mL in MeOH	P-001S	1 mL
1000 µg/mL in MeOH	P-001S-10X	1 mL

## Aldicarb sulfone

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



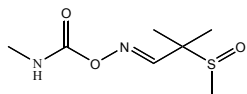
*Aldoxycarb*

**CAS** 1646-88-4 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 222.26  
**PS** S **SG** 1.23 g/cm<sup>3</sup> **MP** 140-142 °C **SOL** M,A,CN

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

## Aldicarb sulfoxide

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



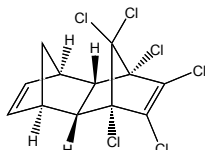
**CAS** 1646-87-3 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 206.26  
**PS** S **SG** 1.21 g/cm<sup>3</sup> **MP** 98-100 °C **SOL** M,A,CN

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



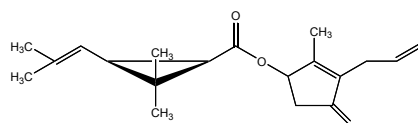
*Octalene*

**CAS** 309-00-2 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub> **MW** 364.9 **PS** S  
**SG** 1.6 g/cm<sup>3</sup> **MP** 104 °C **SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-002N	10 mg
100 µg/mL in MeOH	P-002S	1 mL
1000 µg/mL in MeOH	P-002S-10X	1 mL

## Allethrin

2-Methyl-4-oxo-3-(2-propenyl)-2-cyclopenten-1-yl-2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropane-carboxylate



*Esbiothrin*

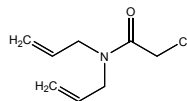
**CAS** 584-79-2 **MF** C<sub>19</sub>H<sub>26</sub>O<sub>3</sub> **MW** 302.45 **PS** L  
**SG** 1.00 g/cm<sup>3</sup> **BP** 140 °C (0.1mm Hg) **FP** 87 °C  
**SOL** M,A,D,H,CN,H,T,EA

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

N,N-Diallyl-2-chloroacetamide



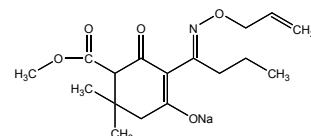
*Randox*

**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> **BP** 92°C (2mm Hg) **FP** 100 °C  
**SOL** M,CN

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

## 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 **FP** >100 °C **SOL** M,A,EA

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

*Alphamethrin, see a-Cypermethrin*

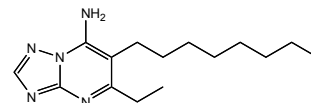
*Altacor, see Chlorantraniliprole*

*Amber, see Triasulfuron*

*Amdro, see Hydramethlnon*

## Ametoctradin

5-Ethyl-6-octyl[1,2,4]triazolo[1,5-a]pyrimidin-7-amine

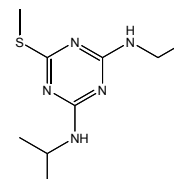


**CAS** 865318-97-4 **MF** C<sub>15</sub>H<sub>25</sub>N<sub>5</sub> **MW** 275.39  
**PS** S **SG** 1.12 g/cm<sup>3</sup> **MP** 198 °C  
**BP** Decomp. 234 °C **SOL** M,T,EA,A

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1039S	1 mL

## Ametryn

N-Ethyl-N'-isopropyl-6-(methylsulfonyl)-1,3,5-triazine-2,4-diamine



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

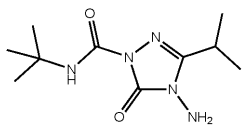
Matrix	Cat. No.	Unit
NEAT	P-003N	10 mg
100 µg/mL in MeOH	P-003S	1 mL
1000 µg/mL in MeOH	P-003S-10X	1 mL

*Amiben, see Chloramben*

# Pesticide Standards

## Amicarbazone

4-Amino-N-tert-butyl-4,5-dihydro-3-isopropyl-5-oxo-1H-1,2,4-triazole-1-carboxamide

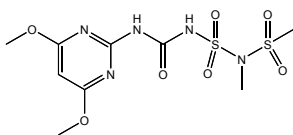


CAS 129909-90-6 MF C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>O<sub>2</sub> MW 241.29  
PS S SG 1.12 g/cm<sup>3</sup> MP 138 °C  
SOL W,IPA,EA,DMSO,A,CN,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1152S-CN	1 mL

## Amidosulfuron

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



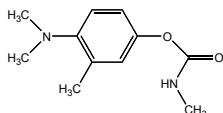
Gratil

CAS 120923-37-7 MF C<sub>9</sub>H<sub>15</sub>N<sub>5</sub>O<sub>7</sub>S<sub>2</sub> MW 369.38  
PS S SG 1.50 g/cm<sup>3</sup> MP 160-163 °C  
SOL A,EA,T,H,M,CN

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

## Aminocarb

4-Dimethylamino-m-tolyl methylcarbamate

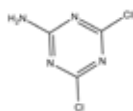


Metacil

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 SOL M,A,H,CN

Matrix	Cat. No.	Unit
NEAT	P-062N	10 mg
100 µg/mL in MeOH	P-062S	1 mL
1000 µg/mL in MeOH	P-062S-10X	1 mL

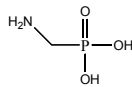
## 2-Amino-4,6-dichloro-1,3,5-triazine



CAS 933-20-0 MF C<sub>3</sub>H<sub>2</sub>Cl<sub>2</sub>N<sub>4</sub> MW 164.98 PS S  
SG N/A MP 239-241 °C SOL CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1444S-CN	1 mL

## Aminomethyl phosphonic acid

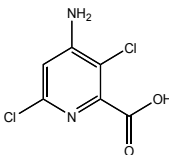


CAS 1066-51-9 MF CH<sub>6</sub>NO<sub>3</sub>P MW 111.04  
PS S SG 1.64 g/cm<sup>3</sup> MP 300 °C SOL W

Matrix	Cat. No.	Unit
NEAT	P-625N	10 mg
100 µg/mL in Water	P-625S-W	1 mL
1000 µg/mL in Water	P-625S-W-10X	1 mL

## Aminopyralid

4-Amino-3,6-dichloropyridine-2-carboxylic acid

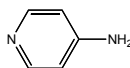


CAS 150114-71-9 MF C<sub>6</sub>H<sub>4</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub> MW 207.01  
PS S SG 1.76 g/cm<sup>3</sup> MP 163-164 °C  
BP Decomp. 334 °C SOL A,EA,M,CN

Matrix	Cat. No.	Unit
NEAT	P-1048N	10 mg
100 µg/mL in MeOH	P-1048S	1 mL

## 4-Aminopyridine

4-Pyridamine



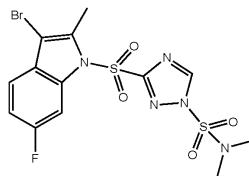
Amitrol

CAS 504-24-5 MF C<sub>5</sub>H<sub>6</sub>N<sub>2</sub> MW 94.12 PS S  
SG 1.15 g/cm<sup>3</sup> MP 160-162 °C BP 273 °C SOL M

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

## Amisulbrom

3-(3-Bromo-6-fluoro-2-methylindol-1-ylsulfonyl)-N,N-di-methyl-1,2,4-triazole-1-sulfonamide

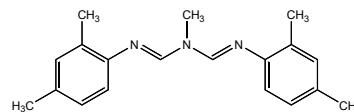


CAS 348635-87-0 MF C<sub>13</sub>H<sub>13</sub>BrFN<sub>5</sub>O<sub>4</sub>S<sub>2</sub> MW 466.31  
PS S SG 1.85 g/cm<sup>3</sup> MP 128-130 °C  
BP Decomp. 242 °C SOL H,T,M,TP

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-998S	1 mL

## Amitraz

N-Methylbis(2,4-xylyliminomethyl)amine



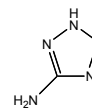
CAS 33089-61-1 MF C<sub>19</sub>H<sub>23</sub>N<sub>3</sub> MW 293.45 PS S  
SG 1.13 g/cm<sup>3</sup> MP 86-88 °C BP Decomp.  
SOL M,A,CN,EA,T

Matrix	Cat. No.	Unit
NEAT	P-409N	10 mg
100 µg/mL in AcCN	P-409S-CN	1 mL
1000 µg/mL in MeOH	P-409S-10X	1 mL

Amitrol, see 4-Aminopyridine

## Amitrole (ATA)

3-Aminotriazole

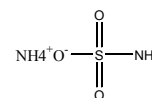


ATA, Diurol

CAS 61-82-5 MF C<sub>2</sub>H<sub>3</sub>N<sub>3</sub> MW 84.1 PS S  
SG 1.14 g/cm<sup>3</sup> MP 157-159 °C BP Decomp.  
SOL T,IPA,D,A,M,EA

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

## Ammonium sulfamate



AMS

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

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

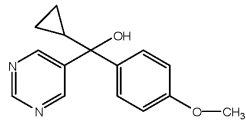
AMS, see Ammonium sulfamate



# Pesticide Standards

## Ancymidol

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

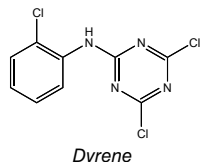


**CAS** 12771-68-5 **MF** C<sub>15</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub> **MW** 256.3 **PS** S  
**SG** 1.26 g/cm<sup>3</sup> **MP** 110-111 °C **BP** Decomp.  
**SOL** M,A,H

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



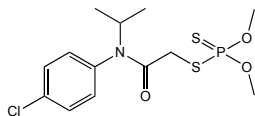
**CAS** 101-05-3 **MF** C<sub>9</sub>H<sub>5</sub>Cl<sub>3</sub>N<sub>4</sub> **MW** 275.52 **PS** S  
**SG** 1.61 g/cm<sup>3</sup> **MP** 159-160 °C **BP** Decomp. 460 °C  
**SOL** D,H,T,IPA,A

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

**2-Anilino-4,6-dimethylpyrimidine**, see *Pyrimethanil*

## Anilofos

S-(2-((4-Chlorophenyl)(1-methylethyl)amino)-2-oxoethyl) O,O-dimethyl phosphorodithioate



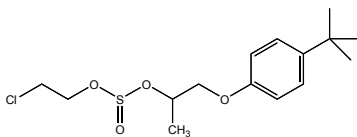
**CAS** 64249-01-0 **MF** C<sub>13</sub>H<sub>19</sub>ClNO<sub>3</sub>PS<sub>2</sub> **MW** 367.85  
**PS** S **SG** 1.27 g/cm<sup>3</sup> **MP** 51-53 °C  
**BP** Decomp. 150 °C **SOL** T,A,EA,H,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-973S-CN	1 mL

**Apache**, see *Cadusafos*

## Aramite

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



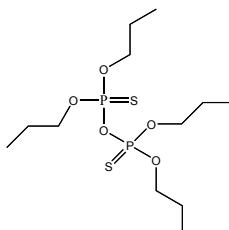
**CAS** 140-57-8 **MF** C<sub>15</sub>H<sub>23</sub>ClO<sub>4</sub>S **MW** 334.86 **PS** L  
**SG** 1.19 g/cm<sup>3</sup> **BP** 175 °C (0.1mm Hg) **FP** 212 °C  
**SOL** M,A,D,H,CN

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

**Asana**, see *Esfenvalerate*

## Aspon

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



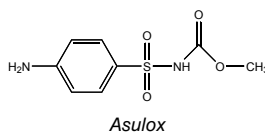
**CAS** 3244-90-4 **MF** C<sub>12</sub>H<sub>28</sub>O<sub>4</sub>P<sub>2</sub>S<sub>2</sub> **MW** 378.46  
**PS** L **SG** 1.12 g/cm<sup>3</sup> **BP** 375 °C **SOL** M,D,H,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-309S	1 mL

**Assure**, see *Quizalofop ethyl*

## Asulam

Methyl sulfanylcarbamate



**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  
**SG** 1.42 g/cm<sup>3</sup> **MP** 143-144 °C **SOL** M,A,CN,EA,W

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

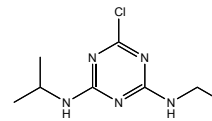
**Asulox**, see *Asulam*

**ATCP**, see *Picloram*

**Atraton**, see *Gesatamine*

## Atrazine

6-Chloro-N-ethyl-N'-isopropyl-1,3,5-triazine-2,4-diamine

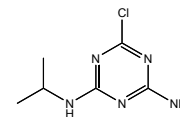


**CAS** 1912-24-9 **MF** C<sub>8</sub>H<sub>14</sub>ClN<sub>5</sub> **MW** 215.68 **PS** S  
**SG** 1.23 g/cm<sup>3</sup> **MP** 176 °C **BP** Decomp. **FP** 177 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-005N	10 mg
100 µg/mL in MeOH	P-005S	1 mL
1000 µg/mL in MeOH	P-005S-10X	1 mL
1000 µg/mL in Acetone	P-005S-A-10X	1 mL

## Atrazine desethyl

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

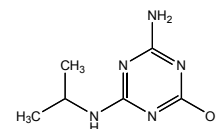


**CAS** 6190-65-4 **MF** C<sub>8</sub>H<sub>10</sub>ClN<sub>5</sub> **MW** 187.63 **PS** S  
**SG** 1.38 g/cm<sup>3</sup> **MP** 130-133 °C  
**SOL** M,A,D,H,T,CN,EA

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-1,3,5-triazine



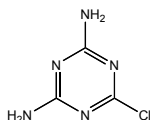
**CAS** 19988-24-0 **MF** C<sub>8</sub>H<sub>11</sub>N<sub>5</sub>O **MW** 169.18  
**PS** S **SG** 1.51 g/cm<sup>3</sup> **MP** >310 °C **FP** >100 °C  
**SOL** M

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

# Pesticide Standards

## Atrazine-desethyl-desisopropyl

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



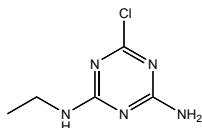
*Desisopropyl desethyl atrazine*

**CAS** 3397-62-4 **MF** C<sub>3</sub>H<sub>4</sub>ClN<sub>3</sub> **MW** 145.55 **PS** S  
**MP** 320 °C

Matrix	Cat. No.	Unit
NEAT	P-428N	10 mg
100 µg/mL in MeOH	P-428S	1 mL

## Atrazine-desisopropyl

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



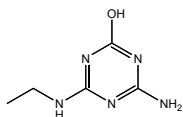
*Desethyl simazine, Desisopropylatrazine*

**CAS** 1007-28-9 **MF** C<sub>5</sub>H<sub>8</sub>N<sub>3</sub>Cl **MW** 173.6 **PS** S  
**MP** 177-179 °C **SOL** M,A,D,H,T,CN,EA

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>3</sub>O **MW** 155.16 **PS** L  
**MP** >310 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-344N	10 mg
100 µg/mL in MeOH	P-344S	1 mL

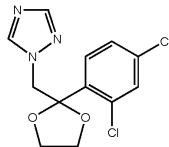
*Atrazine-methoxy, see Gesatamine*

*Avid, see Abamectin*

*Axial, see Pinoxaden*

## Azaconazole

1-[2-(2,4-Dichlorophenyl)-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole



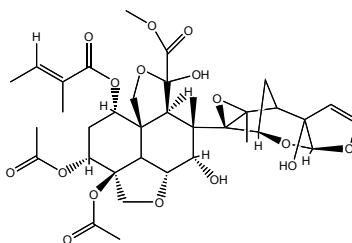
**CAS** 60207-31-0 **MF** C<sub>12</sub>H<sub>11</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>2</sub> **MW** 300.14  
**PS** S **SG** 1.55 g/cm<sup>3</sup> **MP** 112 °C  
**SOL** A,H,M,T,CN,W

Matrix	Cat. No.	Unit
NEAT	P-971N	10 mg
100 µg/mL in AcCN	P-971S-CN	1 mL

*Azad, see Azadirachtin*

## Azadirachtin

Dimethyl (2aR,3S,4S,4aR,5S,7aS,8S,10R,10aS,10bR)-10-(acetyloxy)-3,5-dihydroxy-4-[(1aR,2S,3aS,6aS,7S,7aS)-6a-hydroxy-7a-methyl-3a,6a,7,7a-tetrahydro-2,7-methanofuro[2,3-b]oxiren[e]oxepin-1a(2H)-yl]-4-methyl-8-[(2E)-2-methyl-but-2-enoyloxy]octahydro-1H-naphtho[1,8a-c:4,5-b'c']difuran-5,10a(8H)-dicarboxylate



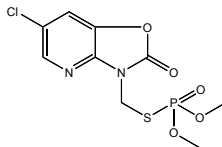
*Azad*

**CAS** 11141-17-6 **MF** C<sub>39</sub>H<sub>44</sub>O<sub>16</sub> **MW** 720.71 **PS** S  
**SG** 1.51 g/cm<sup>3</sup> **MP** 165 °C **SOL** T,M,A,EA,CN,W

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

## Azamethiphos

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

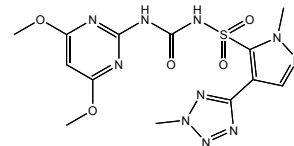


**CAS** 35575-96-3 **MF** C<sub>9</sub>H<sub>8</sub>ClN<sub>2</sub>O<sub>3</sub>PS **MW** 324.68  
**PS** S **SG** 1.60 g/cm<sup>3</sup> **MP** 89 °C **FP** >150 °C  
**SOL** M,CN,D

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

## Azimsulfuron

N-[[[(4,6-Dimethoxy-2-pyrimidinyl)amino]carbonyl]-1-methyl-4-(2-methyl-H-tetrazol-5-yl)-1H-pyrazole-5-sulfonamide

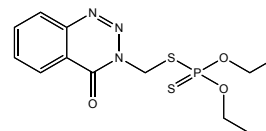


**CAS** 120162-55-2 **MF** C<sub>13</sub>H<sub>16</sub>N<sub>10</sub>O<sub>5</sub>S **MW** 424.40  
**PS** S **SG** 1.12 g/cm<sup>3</sup> **MP** 170 °C  
**BP** Decomp. 180 °C **SOL** A,EA,M,T,CN,D

Matrix	Cat. No.	Unit
50 µg/mL in AcCN	P-1036S-CN-0.5X	1 mL

## Azinphos-ethyl

O,O-Diethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] phosphorodithioate



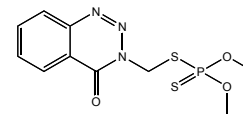
*Ethyl azinphos*

**CAS** 2642-71-9 **MF** C<sub>7</sub>H<sub>12</sub>N<sub>4</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 345.38  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 50 °C **BP** 147 °C (1.3 Pa)  
**SOL** M,A,D,H,T,CN,TP,EA,IPA

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-benzotriazine-3-methyl)phosphorodithioate

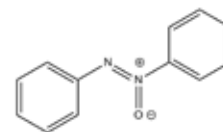


*Guthion*

**CAS** 86-50-0 **MF** C<sub>10</sub>H<sub>12</sub>N<sub>4</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 317.33  
**PS** S **SG** 1.52 g/cm<sup>3</sup> **MP** 73 °C **BP** 200 °C  
**SOL** M,A,D,H,T,CN,TP,EA,DMSO

Matrix	Cat. No.	Unit
NEAT	P-007N	10 mg
100 µg/mL in MeOH	P-007S	1 mL
1000 µg/mL in MeOH	P-007S-10X	1 mL
1000 µg/mL in Hexane	P-007S-H-10X	1 mL

## Azoxybenzene



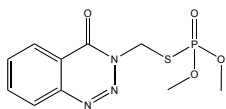
**CAS** 495-48-7 **MF** C<sub>12</sub>H<sub>10</sub>N<sub>2</sub>O **MW** 198.22 **PS** S  
**SG** 1.16 g/cm<sup>3</sup> **MP** 36 °C **BP** Decomp. before boiling  
**SOL** CN,M

Matrix	Cat. No.	Unit
NEAT	P-1458N	10 mg

# Pesticide Standards

## Azinphos-methyl oxon

O,O-Dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] phosphorothioate

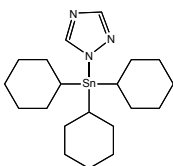


CAS 961-22-8 MF C<sub>10</sub>H<sub>12</sub>N<sub>3</sub>O<sub>4</sub>PS MW 301.26  
SOL T,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in Toluene	P-1327S-T	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  
SG 1.34 g/cm<sup>3</sup> MP 210 °C (decomp.) FP 249 °C  
SOL D,IPA,H,T,M,CN

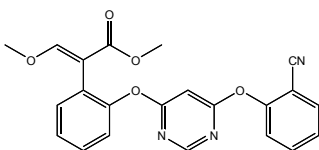
Matrix	Cat. No.	Unit
NEAT	P-353N	10 mg
100 µg/mL in MeOH	P-353S	1 mL

*Azodrin*, see *Monocrotophos*

*Azophos*, see *Methyl parathion*

## Azoxystrobin

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



Pyroxystrobin

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 SG 1.33 g/cm<sup>3</sup> MP 116 °C BP 360 °C  
SOL M,A,D,T,CN,EA,H

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

*Balan*, see *Benfluralin*

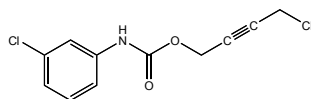
*BAM*, see *2,6-Dichlorobenzamide*

*Bancol*, see *Bensultap*

*Banvel-D*, see *Dicamba*

## Barbamate

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



Barban

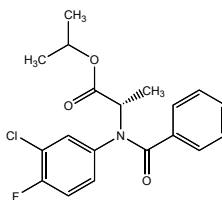
CAS 101-27-9 MF C<sub>11</sub>H<sub>9</sub>Cl<sub>2</sub>NO<sub>2</sub> MW 258.11 PS S  
SG 1.39 g/cm<sup>3</sup> MP 75 - 76 °C SOL M,A,D,CN,EA

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



Flamprop-isopropyl

CAS 52756-22-6 MF C<sub>9</sub>H<sub>9</sub>ClFNO<sub>2</sub> MW 363.84  
PS S SG 1.31 g/cm<sup>3</sup> FP >100 °C SOL M,CN

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

*BAS 490 F*, see *Kresoxim-methyl*

*Basagran*, see *Bentazon*

*Basic cupric chloride*, see *Copper oxychloride*

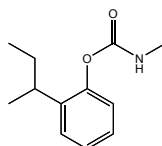
*Basitac*, see *Mepronil*

*Basudin*, see *Diazinon*

*Basatan*, see *Fentin acetate*

## Baycarb

2-sec-Butylphenyl methylcarbamate



BPMC, Fenobucarb

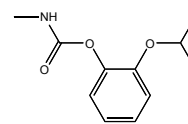
CAS 3766-81-2 MF C<sub>12</sub>H<sub>17</sub>NO<sub>2</sub> MW 207.3 PS L,S  
SG 1.02 g/cm<sup>3</sup> MP 32 °C BP Decomp. FP 142 °C  
SOL A,T,D,EA,CN,W

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



Propoxur

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 87 °C BP Decomp.  
SOL M,A,D,H,T,CN,IPA,W

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

*Bayleton*, see *Triadimefon*

*Baytex*, see *Fenthion*

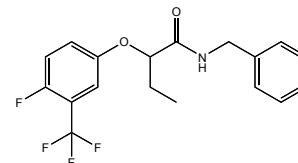
*Baythroid I*, see *Cyfluthrin*

*Beacon*, see *Primisulfuron-methyl*

*Beam*, see *Tricyclazole*

## Beflubutamid

2-[4-Fluoro-3-(trifluoromethyl)phenoxy]-N-(phenylmethyl)butanamide



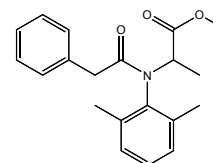
CAS 113614-08-7 MF C<sub>18</sub>H<sub>17</sub>F<sub>4</sub>NO<sub>2</sub> MW 355.33  
PS S SG 1.33 g/cm<sup>3</sup> MP 75 °C  
BP Decomp. 128 °C FP >128 °C SOL A,EA,M

Matrix	Cat. No.	Unit
NEAT	P-1041N	10 mg
100 µg/mL in MeOH	P-1041S	1 mL

*Belmark*, see *Fenvalerate*

## Benalaxyl

Methyl N-phenylacetyl-N-2,6-xylil-DL-alanine



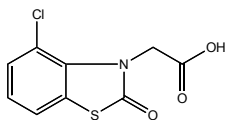
CAS 71626-11-4 MF C<sub>20</sub>H<sub>23</sub>NO<sub>3</sub> MW 325.4 PS S  
SG 1.27 g/cm<sup>3</sup> MP 79 °C SOL M,A,T,CN,EA

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

# Pesticide Standards

## Benazolin

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



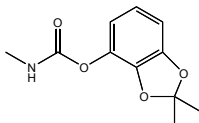
*Bensecal, Metizolin, Tillox*

**CAS** 3813-05-6 **MF** C<sub>8</sub>H<sub>6</sub>ClNO<sub>3</sub>S **MW** 243.67  
**PS S** **SG** 1.63 g/cm<sup>3</sup> **MP** 193 °C **FP** >100 °C  
**SOL** M,A,CN,EA,IPA,D,T,W

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

## Bendiocarb

2,3-Isopropylidenedioxyphenyl methyl carbamate



*Ficam*

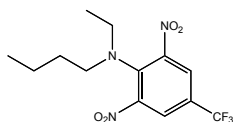
**CAS** 22781-23-3 **MF** C<sub>11</sub>H<sub>13</sub>NO<sub>4</sub> **MW** 223.23  
**PS S** **SG** 1.25 g/cm<sup>3</sup> **MP** 130 °C **BP** >100 °C  
**SOL** M,A,D,H,T,CN,EA,W

Matrix	Cat. No.	Unit
NEAT	P-203N	10 mg
100 µg/mL in MeOH	P-203S	1 mL
1000 µg/mL in MeOH	P-203S-10X	1 mL

*Benefin, see Benfluralin*

## Benfluralin

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



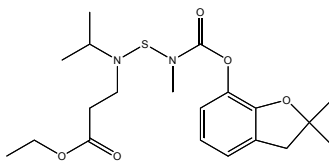
*Balan, Benefin*

**CAS** 1861-40-1 **MF** C<sub>13</sub>H<sub>18</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** 148-149 °C  
(7mm Hg) **SOL** M,A,D,T,CN,TP,EA,H

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

## Benfuracarb

Ethyl N-[2,3-dihydro-2,2-dimethylbenzofuran-7-yl]oxycarbonyl(methyl)aminothio]-N-isopropyl-b-alaninate

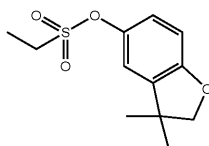


**CAS** 82560-54-1 **MF** C<sub>20</sub>H<sub>30</sub>N<sub>2</sub>O<sub>5</sub>S **MW** 410.5 **PS L**  
**SG** 1.15 g/cm<sup>3</sup> **BP** 110 °C (0.023mm Hg)  
**FP** 114 °C **SOL** A,M,H,CN,EA,D

Matrix	Cat. No.	Unit
NEAT	P-454N	10 mg
100 µg/mL in MeOH	P-454S	1 mL
1000 µg/mL in MeOH	P-454S-10X	1 mL

## Benfuresate

2,3-Dihydro-3,3-dimethyl-5-benzofuranyl ethanesulfonate

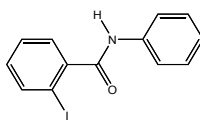


**CAS** 68505-69-1 **MF** C<sub>12</sub>H<sub>16</sub>O<sub>2</sub>S **MW** 256.32 **PS S**  
**SG** 0.96 g/cm<sup>3</sup> **MP** 30-31 °C **BP** 241 °C **FP** 38 °C  
**SOL** D,A,T,M,EA,H,W

Matrix	Cat. No.	Unit
NEAT	P-1080N	10 mg
100 µg/mL in MeOH	P-1080S	1 mL

## Benodanil

2-Iodobenzanilide



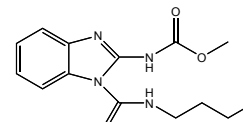
*Calirus*

**CAS** 15310-01-7 **MF** C<sub>13</sub>H<sub>10</sub>INO **MW** 323.13 **PS S**  
**MP** 147-148 °C **SOL** M,CN,A,EA

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

## Benomyl

Methyl 1-(butylcarbamoyl)benzimidazol-2-ylcarbamate



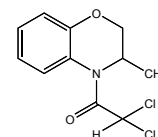
*Fundazol*

**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**  
**SG** 1.28 g/cm<sup>3</sup> **MP** 140 °C **SOL** M,A,CN

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



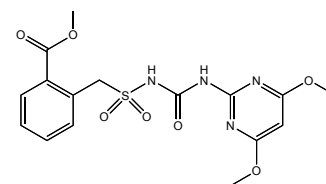
**CAS** 98730-04-2 **MF** C<sub>11</sub>H<sub>11</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 260.12  
**PS S** **SG** 1.52 g/cm<sup>3</sup> **MP** 107 °C **FP** 185 °C  
**SOL** A,D,I,M,H,EA,CN,T

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

*Bensecal, see Benazolin*

## Bensulfuron-methyl

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



*Lonfax*

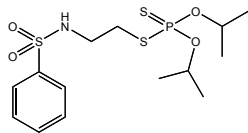
**CAS** 83055-99-6 **MF** C<sub>16</sub>H<sub>18</sub>N<sub>4</sub>O<sub>7</sub>S **MW** 410.4 **PS S**  
**SG** 1.44 g/cm<sup>3</sup> **MP** 185-188 °C **BP** Decomp. 245 °C  
**SOL** A,D,EA,M,CN

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

# Pesticide Standards

## Bensulide

O,O-Diisopropyl S-[2-[(phenylsulfonyl)amino]ethyl] phosphorodithioate

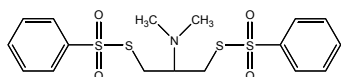


**CAS** 741-58-2 **MF** C<sub>14</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub>PS<sub>3</sub> **MW** 397.54  
**PS S** **SG** 1.23 g/cm<sup>3</sup> **MP** 34 °C **FP** >104 °C  
**SOL** M,A,H,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-204N	10 mg
100 µg/mL in MeOH	P-204S	1 mL
1000 µg/mL in MeOH	P-204S-10X	1 mL

## Bensultap

S,S'-2-Dimethylaminotrimethylene di(benzenethio-sulfonate)



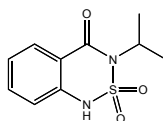
Bancol

**CAS** 17606-31-4 **MF** C<sub>17</sub>H<sub>21</sub>N<sub>2</sub>O<sub>4</sub>S<sub>4</sub> **MW** 431.63  
**PS S** **SG** 1.35 g/cm<sup>3</sup> **MP** 83-84 °C **BP** Decomp.  
**SOL** H,T,M,EA,D

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

## Bentazon

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



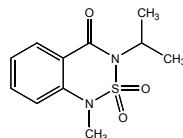
Basagran

**CAS** 25057-89-0 **MF** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub>S<sub>2</sub> **MW** 240.28  
**PS S** **SG** 1.41 g/cm<sup>3</sup> **MP** 138 °C  
**BP** Decomp. 210 °C **SOL** M,A,D,H,T,CN,EA,W

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
1000 µg/mL in Acetone	P-177S-A-10X	1 mL

## Bentazon methyl

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

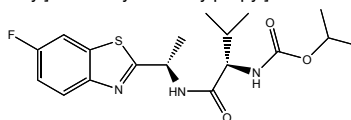


**CAS** 61592-45-8 **MF** C<sub>11</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>S<sub>2</sub> **MW** 254.31  
**PS S** **MP** 45 °C **SOL** M

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

## Benthiavalcarb-isopropyl

[[Isopropyl[(S)-1-[(R)-1-(6-fluoro-1,3-benzothiazol-2-yl) ethyl]carbamoyl-2-methylpropyl]carbamate]

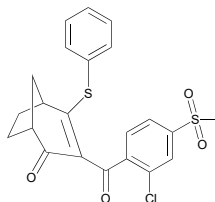


**CAS** 177406-68-7 **MF** C<sub>18</sub>H<sub>24</sub>FN<sub>3</sub>O<sub>3</sub>S<sub>2</sub> **MW** 381.47  
**PS S** **SOL** A, EA **SG** 1.25 g/cm<sup>3</sup> **MP** 153-154 °C  
**BP** Decomp. 240 °C

Matrix	Cat. No.	Unit
10 µg/mL in Acetone	P-1049S-A-0.1X	1 mL

## Benzobicyclon

3-(2-Chloro-4-mesybenzoyl)-2-phenylthiobicyclo[3.2.1] oct-2-en-4-one

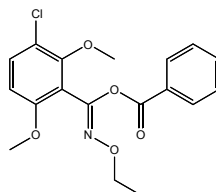


**CAS** 156963-66-5 **MF** C<sub>22</sub>H<sub>19</sub>ClO<sub>2</sub>S<sub>2</sub> **MW** 446.96  
**PS S** **SG** 1.45 g/cm<sup>3</sup> **MP** 187 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1099S-CN	1 mL
1000 µg/mL in AcCN	P-1099S-CN-10X	1 mL

## Benzoximate

3-Chloro-a-(EZ)-ethoxyimino-2,6-dimethoxybenzyl benzoate



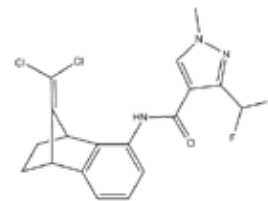
**CAS** 29104-30-1 **MF** C<sub>16</sub>H<sub>18</sub>ClNO<sub>3</sub> **MW** 363.79  
**PS S** **SG** 1.30 g/cm<sup>3</sup> **MP** 73 °C **BP** Decomp.  
**SOL** H,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-801S-CN	1 mL

**Benthiocarb**, see **Thiobencarb**

## Benzovindiflupyr

N-[9-(Dichloromethylene)-1,2,3,4-tetrahydro-1,4-methanonaphthalen-5-yl]-3-(difluoromethyl)-1-methyl-1Hpyrazole-4-carboxamide



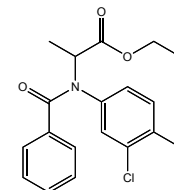
Solatenol

**CAS** 1072957-71-1 **MF** C<sub>18</sub>H<sub>15</sub>Cl<sub>2</sub>F<sub>2</sub>N<sub>3</sub>O  
**MW** 398.23 **PS S** **MP** 145-148 °C **SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-773S	1 mL
100 µg/mL in AcCN	P-773S-CN	1 mL

## Benzoylprop-ethyl

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



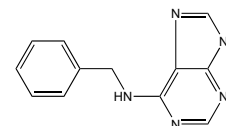
Suffix

**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** 70-71 °C **BP** 493 °C  
**FP** 252 °C **SOL** M,A,T,CN,TP

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

## Benzyladenine

6-Benzylaminopurine



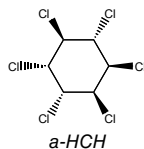
**CAS** 1214-39-7 **MF** C<sub>12</sub>H<sub>11</sub>N<sub>5</sub> **MW** 225.25 **PS S**  
**MP** 230-233 °C **SOL** CN,M

Matrix	Cat. No.	Unit
NEAT	P-901N	10 mg

# Pesticide Standards

## a-BHC

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

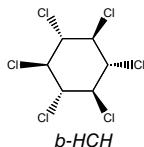


CAS 319-84-6 MF C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> MW 290.83 PS S  
SG 1.88 g/cm<sup>3</sup> MP 159 °C  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-010N	10 mg
100 µg/mL in MeOH	P-010S	1 mL
1000 µg/mL in MeOH	P-010S-10X	1 mL

## b-BHC

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

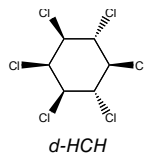


CAS 319-85-7 MF C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> MW 290.83 PS S  
SG 1.88 g/cm<sup>3</sup> MP 309 °C FP >120 °C  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-011N	10 mg
100 µg/mL in MeOH	P-011S	1 mL
1000 µg/mL in MeOH	P-011S-10X	1 mL

## d-BHC

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



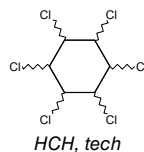
CAS 319-86-8 MF C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> MW 290.83 PS S  
SG 1.88 g/cm<sup>3</sup> MP 141-142 °C  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-012N	10 mg
100 µg/mL in MeOH	P-012S	1 mL
1000 µg/mL in MeOH	P-012S-10X	1 mL

g-BHC, see Lindane

## BHC Tech

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



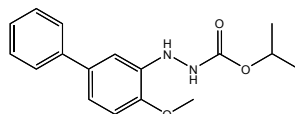
CAS 608-73-1 MF C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub> MW 290.83 PS S  
SG 1.87 g/cm<sup>3</sup> MP 150-160 °C SOL M,A,CN

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

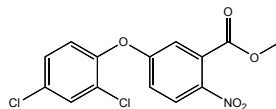


CAS 149877-41-8 MF C<sub>17</sub>H<sub>19</sub>N<sub>2</sub>O<sub>3</sub> MW 300.35  
PS S SG 1.31 g/cm<sup>3</sup> MP 123-125 °C  
BP Decomp. 240 °C

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

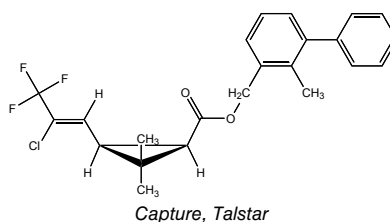


CAS 42576-02-3 MF C<sub>11</sub>H<sub>6</sub>Cl<sub>2</sub>NO<sub>3</sub> MW 342.13  
PS S SG 1.46 g/cm<sup>3</sup> MP 86 °C  
BP Decomp. 399 °C SOL M,D,T,A,CN

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

## Bifenthrin

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

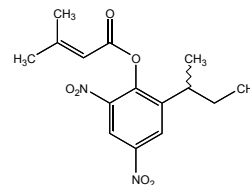


CAS 82657-04-3 MF C<sub>23</sub>H<sub>22</sub>ClF<sub>3</sub>O<sub>2</sub> MW 422.9  
PS S SG 1.21 g/cm<sup>3</sup> MP 58-60 °C FP 165 °C  
BP Decomp. 280 °C SOL M,A,T,CN,TP,EA,D

Matrix	Cat. No.	Unit
NEAT	P-445N	10 mg
100 µg/mL in MeOH	P-445S	1 mL
1000 µg/mL in MeOH	P-445S-10X	1 mL

## Binapacryl

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



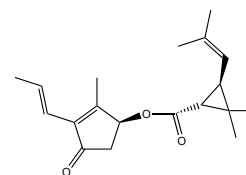
Dinoseb methacrylate

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  
SG 1.24 g/cm<sup>3</sup> MP 70 °C BP Decomp. FP >100 °C  
SOL M,CN,A,H

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

## S-Bioallethrin

(S)-3-Allyl-2-methyl-4-oxocyclopent-2-enyl (1R,3R)-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate



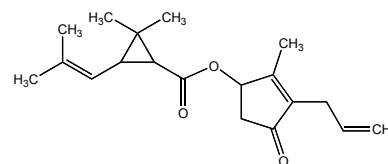
Esbial

CAS 28434-00-6 MF C<sub>19</sub>H<sub>26</sub>O<sub>3</sub> MW 302.41 PS L  
SG 1.01 g/cm<sup>3</sup> BP 165-170 °C (0.15mm Hg)  
FP 113 °C SOL M,T,A,D,H,EA,M

Matrix	Cat. No.	Unit
NEAT	P-664N	10 mg
100 µg/mL in MeOH	P-664S	1 mL

## Bioallethrin d-trans-allethrin

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



d-trans-Allethrin

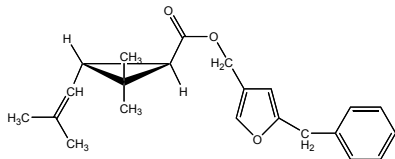
CAS 28057-48-9 MF C<sub>19</sub>H<sub>26</sub>O<sub>3</sub> MW 302.41 PS L  
SG 1.12 g/cm<sup>3</sup> BP 329-338 °C (0.15mm Hg)  
FP 87 °C SOL A,EA,H,T,D,CN

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

# Pesticide Standards

## Bioresmethrin

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



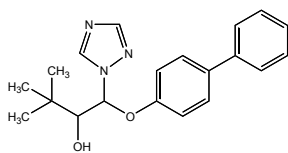
CAS 28434-01-7 MF C<sub>22</sub>H<sub>26</sub>O<sub>3</sub> MW 338.44 PS L  
SG 1.05 g/cm<sup>3</sup> MP 32 °C BP Decomp. 180 °C  
FP 92 °C SOL A,D,EA,T,H,M,CN

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

*Bis(2,3,3,3-tetrachloropropyl) ether, see S421*

## Bitertanol

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



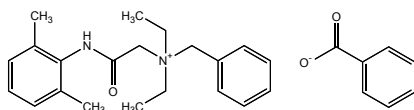
*Baycor, Sibutol*

CAS 55179-31-2 MF C<sub>25</sub>H<sub>29</sub>N<sub>3</sub>O<sub>2</sub> MW 337.42 PS S  
SG 1.14 g/cm<sup>3</sup> MP 136-137 °C BP Decomp. 300 °C  
FP 100 °C SOL M,A,T,CN,D,IPA

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



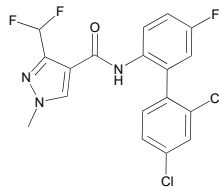
*Denatonium benzoate*

CAS 3734-33-6 MF C<sub>21</sub>H<sub>29</sub>N<sub>2</sub>O<sup>+</sup>•C<sub>7</sub>H<sub>5</sub>O<sub>2</sub><sup>-</sup> MW 446.64  
PS S SG 0.79 g/cm<sup>3</sup> MP 165 °C SOL A,EA,M

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

## Bixafen

N-(3',4'-Dichloro-5-fluorobiphenyl-2-yl)-3-(difluoromethyl)-1-methylpyrazole-4-carboxamide



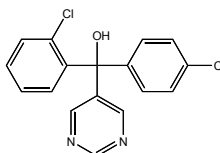
CAS 581809-46-3 MF C<sub>18</sub>H<sub>12</sub>Cl<sub>2</sub>F<sub>3</sub>N<sub>3</sub>O MW 414.21  
PS S MP 147 °C BP decomp. 250 °C  
SOL A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1186S-CN	1 mL
1000 µg/mL in AcCN	P-1186S-CN-10X	1 mL

*Bladex, see Cyanazine*

## Bloc

2,4'-Dichloro-alpha-(pyrimidine-5-yl) benzhydrylalcohol



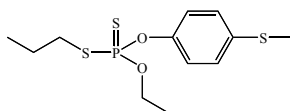
*Fenarimol*

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 FP 100 °C  
SOL M,A,D,H,T,CN,TP,EA

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



*Sulprofos*

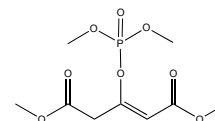
CAS 35400-43-2 MF C<sub>12</sub>H<sub>19</sub>O<sub>2</sub>PS<sub>2</sub> MW 322.46  
PS L SG 1.20 g/cm<sup>3</sup> BP 155-158 °C (0.01mm Hg)  
FP 64 °C SOL M,A,D,H,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-108N	10 mg
100 µg/mL in MeOH	P-108S	1 mL
1000 µg/mL in Hexane	P-108S-H-10X	1 mL

*Boltage, see Pyraclofos*

## Bomyl

Dimethyl 3-((dimethoxyphosphinyl)oxy)-2-pentene-dioate



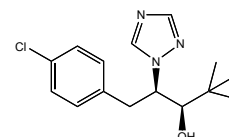
*Swat*

CAS 122-10-1 MF C<sub>9</sub>H<sub>15</sub>O<sub>8</sub>P MW 282.19 PS L  
SG 1.2 g/cm<sup>3</sup> BP 155-164 °C (17mm Hg) SOL M,A

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1377S	1 mL

## Bonzi

(2RS,3RS)-1-(4-Chlorophenyl)-4,4-dimethyl-2-(1H-1,2,4-triazol-1-yl)pentan-3-ol



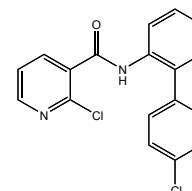
*Clipper, Paclobutrazol*

CAS 76738-62-0 MF C<sub>16</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 385 °C  
SOL M,A,CN,EA

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



*Nicobifen*

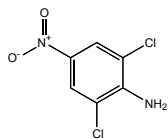
CAS 188425-85-6 MF C<sub>18</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>2</sub>O MW 343.21  
PS S SG 1.37 g/cm<sup>3</sup> MP 143-144 °C  
BP Decomp. 300 °C SOL M,A,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-811N	10 mg
100 µg/mL in MeOH	P-811S	1 mL

# Pesticide Standards

## Botran

2,6-Dichloro-4-nitroaniline



Dichloran

**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** 130 °C (2mm Hg)  
**SOL** M,A,D,H,T,CN,TP,EA

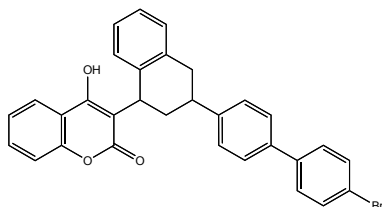
Matrix	Cat. No.	Unit
NEAT	P-013N	10 mg
100 µg/mL in MeOH	P-013S	1 mL

**BPMC**, see Baycarb

**Brodan**, see Dursban

## Brodifacoum

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



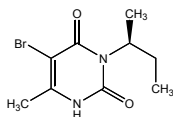
Bromfenacoum

**CAS** 56073-10-0 **MF** C<sub>31</sub>H<sub>23</sub>BrO<sub>3</sub> **MW** 523.45  
**PS** S **SG** 1.43 g/cm<sup>3</sup> **MP** 228-230 °C  
**SOL** EA,A,M,D,T

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

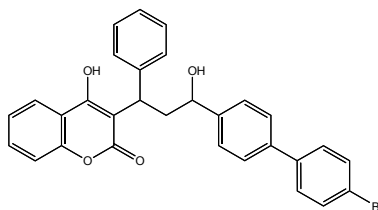


**CAS** 314-40-9 **MF** C<sub>9</sub>H<sub>13</sub>BrN<sub>2</sub>O<sub>2</sub> **MW** 261.12 **PS** S  
**SG** 1.55 g/cm<sup>3</sup> **MP** 158 °C **BP** Decomp.  
**SOL** M,A,D,H,T,CN,EA,W

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



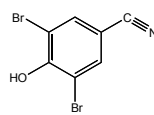
**CAS** 28772-56-7 **MF** C<sub>30</sub>H<sub>23</sub>BrO<sub>4</sub> **MW** 527.44 **PS** S  
**SG** 1.45 g/cm<sup>3</sup> **MP** 200 °C (decomp.)  
**SOL** EA,A,M,CN,W

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



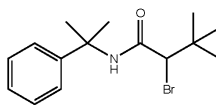
Bromoxynil

**CAS** 1689-84-5 **MF** C<sub>7</sub>H<sub>3</sub>Br<sub>2</sub>NO **MW** 276.91 **PS** S  
**SG** 1.63 g/cm<sup>3</sup> **MP** 194-195 °C **BP** Decomp. 270 °C  
**SOL** M,A,D,CN,EA

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

## Bromobutide

(RS)-2-Bromo-3,3-dimethyl-N-(1-methyl-1-phenylethyl)butyramide

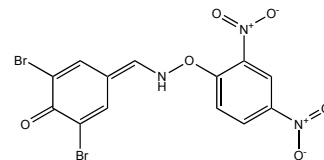


**CAS** 74712-19-9 **MF** C<sub>16</sub>H<sub>22</sub>BrNO **MW** 312.25  
**PS** S **SG** 1.21 g/cm<sup>3</sup> **MP** 180-182 °C **SOL** M,A,H

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1059S	1 mL

## Bromofenoxim

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



Faneron

**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** 461.0  
**PS** S **SG** 2.15 g/cm<sup>3</sup> **MP** 196-197 °C **SOL** H,IPA,A

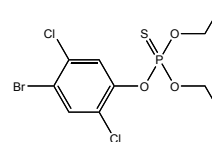
Matrix	Cat. No.	Unit
NEAT	P-511N	10 mg
100 µg/mL in MeOH	P-511S	1 mL

**Bromofos-ethyl**, see Bromophos-ethyl

**Bromophos**, see Bromophos-methyl

## Bromophos-ethyl

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



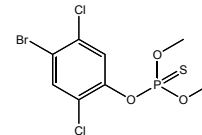
Bromophos-ethyl

**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> **BP** 122-123 °C (0.001mm Hg)  
**FP** >100 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-372N	10 mg
100 µg/mL in MeOH	P-372S	1 mL
1000 µg/mL in MeOH	P-372S-10X	1 mL

## Bromophos-methyl

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



Bromophos

**CAS** 2104-96-3 **MF** C<sub>9</sub>H<sub>9</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 **FP** >100 °C  
**BP** 140-142 °C (0.01mm Hg) **SOL** M,A,D,H,T,CN,TP

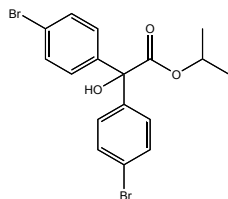
Matrix	Cat. No.	Unit
NEAT	P-484N	10 mg
100 µg/mL in MeOH	P-484S	1 mL



# Pesticide Standards

## Bromopropylate

Isopropyl 4,4'-dibromobenzilate



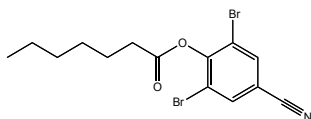
Acarol

CAS 18181-80-1 MF  $C_{17}H_{16}Br_2O_3$  MW 428.1 PS S  
SG 1.59 g/cm<sup>3</sup> MP 77 °C FP > 100 °C  
SOL M,A,D,H,T,CN,TP,IPA

Matrix	Cat. No.	Unit
NEAT	P-457N	10 mg
100 µg/mL in MeOH	P-457S	1 mL
1000 µg/mL in MeOH	P-457S-10X	1 mL

## Bromoxynil-heptanoate

2,6-Dibromo-4-cyanophenylheptanoate



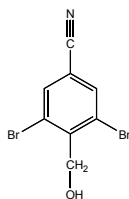
CAS 56634-95-8 MF  $C_{14}H_{15}Br_2NO_2$  MW 389.08  
PS S SG 1.63 g/cm<sup>3</sup> MP 44-45 °C  
BP Decomp. 180 °C SOL EA,M,T,D,A

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1012S	1 mL

*Bromoxynil, see Brominal*

## Bromoxynil methyl ether

3,5-Dibromo-4-methoxybenzonitrile

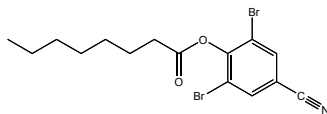


CAS 3336-39-8 MF  $C_8H_6Br_2NO$  MW 290.94  
PS S SG 1.95 g/cm<sup>3</sup> MP 189-191 °C  
SOL M,A,D,T,TP

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

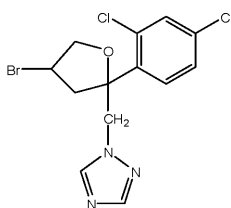


CAS 1689-99-2 MF  $C_{15}H_{17}Br_2NO_2$  MW 403.11 PS S  
SG 1.64 g/cm<sup>3</sup> MP 45-46 °C SOL A,EA,M,T, CN

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

## Bromuconazol

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

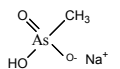


CAS 116255-48-2 MF  $C_{13}H_{12}BrCl_2N_3O$  MW 377.06  
PS S SG 1.71 g/cm<sup>3</sup> MP 84 °C BP Decomp.194°C  
SOL H,T,A,CN

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

## Bueno

Monosodium acid methane arsonate



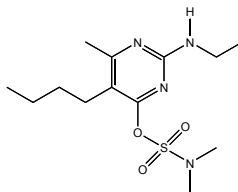
MSMA

CAS 2163-80-6 MF  $CH_3AsNaO_3$  MW 161.95  
PS S SG 1.54 g/cm<sup>3</sup> MP 113-116 °C SOL M

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

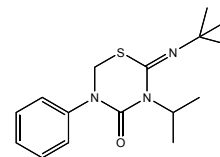


CAS 41483-43-6 MF  $C_{13}H_{24}N_4O_3S$  MW 316.47 S L  
SG 1.20 g/cm<sup>3</sup> MP 50-51 °C BP 232 °C  
FP >100 °C SOL M,A,CN

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

## Buprofezin

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

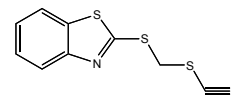


CAS 69327-76-0 MF  $C_{16}H_{23}N_3OS$  MW 305.44  
PS S SG 1.18 g/cm<sup>3</sup> MP 104.5-105.5 °C BP 252°C  
SOL M,A,H,T,CN,EA,D

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

## Busan

2-(Thiocyanomethylthio)benzothiazole



TCMTB

CAS 21564-17-0 MF  $C_9H_8N_2S_3$  MW 238.35 PS L  
SG 1.47 g/cm<sup>3</sup> SOL M,CN,EA

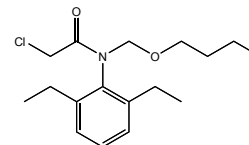
Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-072S-CN	1 mL

*Busan 40, see Potassium n-hydroxymethyl-n-methyl dithiocarbamate*

*Busan 85, see Potassium dimethyl dithiocarbamate*

## Butachlor

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



Machette

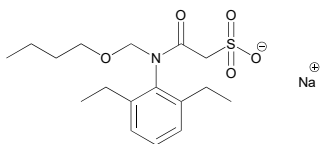
CAS 23184-66-9 MF  $C_{17}H_{26}ClNO_2$  MW 311.89  
PS L SG 1.07 g/cm<sup>3</sup> BP 156 °C (0.5mm Hg)  
SOL M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-191N	10 mg
100 µg/mL in MeOH	P-191S	1 mL
1000 µg/mL in MeOH	P-191S-10X	1 mL

# Pesticide Standards

## Butachlor ESA sodium salt

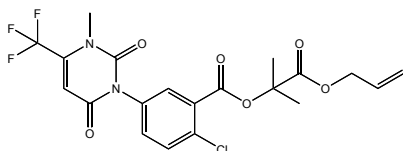
Sodium 2-[(2,6-diethylphenyl)(butoxymethyl)amino]-2-oxo-ethanesulfonate



CAS N/A MF C<sub>17</sub>H<sub>26</sub>NNaO<sub>5</sub>S MW 379 PS S  
SOL CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-913S	1 mL

## Butafenacil



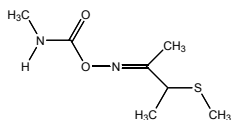
CAS 134605-64-4 MF C<sub>20</sub>H<sub>18</sub>ClF<sub>2</sub>N<sub>2</sub>O<sub>6</sub> MW 474.81  
PS S SG 1.41 g/cm<sup>3</sup> MP 113 °C BP 270 °C  
SOL M,CN

Matrix	Cat. No.	Unit
NEAT	P-940N	10 mg
100 µg/mL in MeOH	P-940S	1 mL

Butam, see Tebutam

## Butocarboxim

3-(Methylthio)butanone O-methylcarbamoyloxime



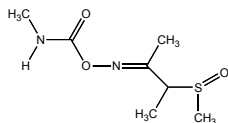
CAS 34681-10-2 MF C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S MW 190.29  
PS S SG 1.12 g/cm<sup>3</sup> MP 37 °C SOL M,CN,A,W

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

Butocarboxim sulfone, see Butoxycarboxim

## Butocarboxim sulfoxide

(5E)-6,7-Dimethyl-4-oxa-8-thia-2,5-diazanon-5-en-3-one 8-oxide



CAS 34681-24-8 MF C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S MW 206.26  
PS S SG 1.25 g/cm<sup>3</sup> MP 62-63 °C SOL M,CN

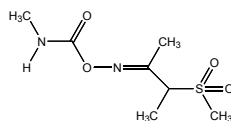
Matrix	Cat. No.	Unit
NEAT	P-701N	10 mg
100 µg/mL in MeOH	P-701S	1 mL

Butoffin, see Deltamethrin

Butopyronoxyl, see Indalone

## Butoxycarboxim

3-Mesybutanone O-methylcarbamoyloxime



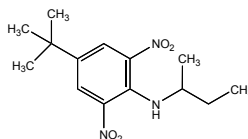
Butocarboxim sulfone

CAS 34681-23-7 MF C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S MW 222.26 PS S  
SG 1.21 g/cm<sup>3</sup> MP 85-89 °C SOL A,T,IPA,CN,W

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

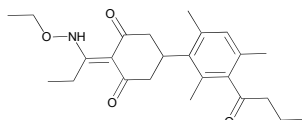


CAS 33629-47-9 MF C<sub>14</sub>H<sub>21</sub>N<sub>3</sub>O<sub>4</sub> MW 295.33 PS S  
SG 1.06 g/cm<sup>3</sup> MP 61 °C BP 134-136 °C (0.5mm Hg) FP 36 °C SOL M,A,CN,TP,EA,D

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

## Butroxydim

2-[1-(Etoxyimino)propyl]-3-hydroxy-5-[2,4,6-trimethyl-3-(1-oxobutyl)phenyl]-2-cyclohexen-1-one

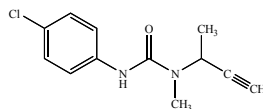


CAS 138164-12-2 MF C<sub>24</sub>H<sub>33</sub>NO<sub>4</sub> MW 399.53  
PS S SG 1.2 g/cm<sup>3</sup> MP 81 °C SOL M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1394S	1 mL

## Buturon

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

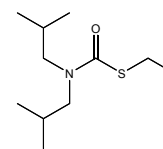


CAS 3766-60-7 MF C<sub>12</sub>H<sub>13</sub>ClN<sub>2</sub>O MW 236.72  
PS S SG 1.23 g/cm<sup>3</sup> MP 130-132 °C FP 193 °C  
SOL M,A,CN

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

## Butylate

S-Ethyl diisobutylcarbamothioate



Sutan

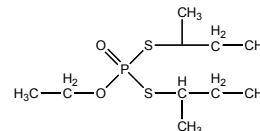
CAS 2008-41-5 MF C<sub>11</sub>H<sub>23</sub>NOS MW 217.37  
PS L SG 0.94 g/cm<sup>3</sup> BP 138 °C (21mm Hg)  
FP 115 °C SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-088N	10 mg
100 µg/mL in MeOH	P-088S	1 mL
1000 µg/mL in MeOH	P-088S-10X	1 mL

Cacodylic acid, see Dimethylarsinic acid

## Cadusafos

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



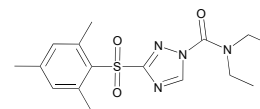
Apache, Ebufos

CAS 95465-99-9 MF C<sub>10</sub>H<sub>20</sub>O<sub>2</sub>PS<sub>2</sub> MW 270.39  
P L SG 1.05 g/cm<sup>3</sup> BP 112-114 °C (0.8mm Hg)  
FP 129 °C SOL A,CN,D,EA,T,M,IPA,W

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

## Cafenstrole

N,N-Diethyl-3-mesitylsulfonyl-1H-1,2,4-triazole-1-carboxamide

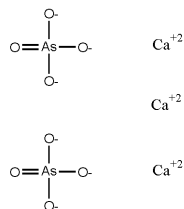


CAS 125306-83-4 MF C<sub>16</sub>H<sub>22</sub>N<sub>4</sub>O<sub>3</sub>S MW 350.44  
PS S SG 1.30 g/cm<sup>3</sup> MP 115 °C SOL A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1214S-CN	1 mL
1000 µg/mL in AcCN	P-1214S-CN-10X	1 mL

# Pesticide Standards

## Calcium arsenate



**CAS** 7778-44-1 **MF** As<sub>2</sub>Ca<sub>3</sub>O<sub>8</sub> **MW** 398.07 **PS** S  
**SG** 3.62 g/cm<sup>3</sup> **MP** Decomp. **SOL** M,EA,A,H

Matrix	Cat. No.	Unit
NEAT	P-1076N	10 mg

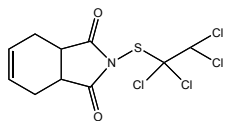
*Calirus*, see *Benodanil*

*Calypso*, see *Thiacloprid*

*Camphechlor*, see *Toxaphene*

## Captafol

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

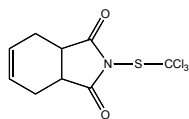


**CAS** 2425-06-1 **MF** C<sub>10</sub>H<sub>8</sub>Cl<sub>4</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 349.06  
**PS** S **SG** 1.75 g/cm<sup>3</sup> **MP** 160-161 °C **FP** >100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,IPA,DMSO

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



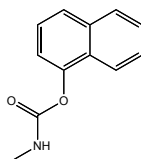
**CAS** 133-06-2 **MF** C<sub>9</sub>H<sub>8</sub>Cl<sub>3</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 300.59  
**PS** S **SG** 1.74 g/cm<sup>3</sup> **MP** 178 °C  
**SOL** M,A,D,H,T,CN,TP,EA, IPA

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

*Capture*, see *Bifenthrin*

## Carbaryl

1-Naphthyl methylcarbamate



*Sevin*

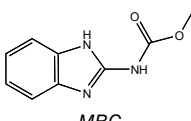
**CAS** 63-25-2 **MF** C<sub>17</sub>H<sub>11</sub>NO<sub>2</sub> **MW** 201.22 **PS** S  
**SG** 1.23 g/cm<sup>3</sup> **MP** 142 °C  
**SOL** M,A,D,H,T,CN,EA,DMSO,IPA

Matrix	Cat. No.	Unit
NEAT	P-083N	10 mg
100 µg/mL in MeOH	P-083S	1 mL
1000 µg/mL in MeOH	P-083S-10X	1 mL

*Carbathiin*, see *Carboxin*

## Carbendazim

Methyl benzimidazole-2-ylcarbamate



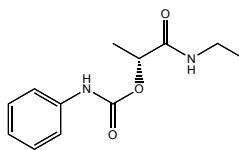
*MBC*

**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  
**SG** 1.45 g/cm<sup>3</sup> **MP** 302-307 °C **SOL** M,A,D,CN,EA

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

## Carbetamide

(R)-1-(Ethylcarbamoyl)ethyl carbanilate

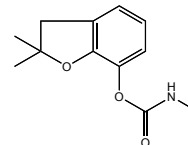


**CAS** 16118-49-3 **MF** C<sub>12</sub>H<sub>16</sub>N<sub>2</sub>O<sub>3</sub> **MW** 236.27 **PS** S  
**SG** 1.17 g/cm<sup>3</sup> **MP** 119 °C **BP** 235 °C  
**SOL** M,A,CN,EA,D

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

## Carbofuran

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



*Furadan*

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

Matrix	Cat. No.	Unit
NEAT	P-106N	10 mg
100 µg/mL in MeOH	P-106S	1 mL
1000 µg/mL in MeOH	P-106S-10X	1 mL

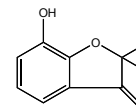
*Carbofuran 3-hydroxy*, see *3-Hydroxycarbofuran*

*Carbofuran-3-keto*, see *3-Ketocarbofuran*

*Carbofuran phenol*, see *2,3-Dihydro-2,2-dimethyl-benzofuran-7-ol*

## Carbofuran phenol-3-ketone

7-Hydroxy-2,2-dimethyl-benzofuran-3-one

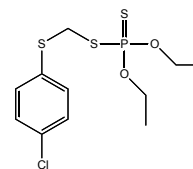


**CAS** 17781-16-7 **MF** C<sub>10</sub>H<sub>10</sub>O<sub>3</sub> **MW** 178.18 **SOL** M

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

## Carbophenothion

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



*Garrathion*, *Phencapton*, *Trithion*

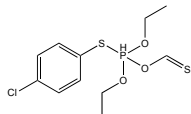
**CAS** 786-19-6 **MF** C<sub>11</sub>H<sub>16</sub>ClO<sub>2</sub>PS<sub>2</sub> **MW** 342.87  
**PS** L **SG** 1.28 g/cm<sup>3</sup> **BP** 82 °C (0.01mm Hg)  
**SOL** M,A,D,H,T,CN,TP,EA

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

*Carbophenothion methyl*, see *Methyl trithion*

# Pesticide Standards

## Carbophenothion methyl-o-analog

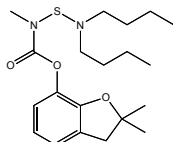


CAS 7332-32-3 MF C<sub>9</sub>H<sub>12</sub>ClO<sub>3</sub>PS<sub>2</sub> MW 298.9  
SG 1.30 g/cm<sup>3</sup> BP 330 °C SOL EA

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

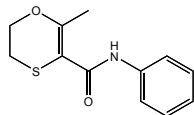


CAS 55285-14-8 MF C<sub>20</sub>H<sub>32</sub>N<sub>2</sub>O<sub>3</sub>S MW 380.55  
PS L SG 1.05 g/cm<sup>3</sup> BP 124-128 °C FP 95 °C  
SOL M,A,T,CN,EA,D,H

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



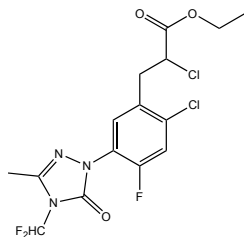
Carbathiin

CAS 5234-68-4 MF C<sub>12</sub>H<sub>13</sub>NO<sub>2</sub>S MW 235.32  
PS S SG 1.36 g/cm<sup>3</sup> MP 91-92 °C  
SOL M,A,D,H,CN,EA,T,W

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

## Carfentrazone-ethyl

Ethyl-α,2-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]-4-fluorobenzene propanoate

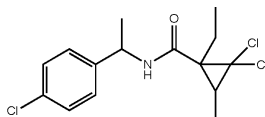


CAS 128639-02-1 MF C<sub>15</sub>H<sub>14</sub>Cl<sub>2</sub>F<sub>3</sub>N<sub>3</sub>O<sub>3</sub> MW 412.19  
PS L SG 1.46 g/cm<sup>3</sup> BP 353 °C  
SOL M,A,CN,EA,T,H,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-957S-CN	1 mL

## Carpropamid

2,2-Dichloro-N-(1-(4-chlorophenyl)ethyl)-1-ethyl-3-methyl cyclopropanecarboxamide

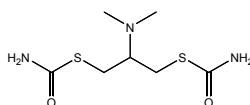


CAS 104030-54-8 MF C<sub>15</sub>H<sub>18</sub>Cl<sub>3</sub>NO MW 334.67  
PS S SG 1.17 g/cm<sup>3</sup> MP 160 °C

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1162S-CN	1 mL

## Cartap

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

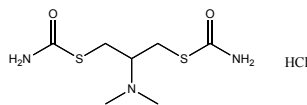


CAS 15263-53-3 MF C<sub>7</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub>S<sub>2</sub> MW 273.35  
PS S SG 1.31 g/cm<sup>3</sup> MP 131 °C SOL H,T,A,M

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 179-181 °C SOL CN,W

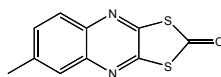
Matrix	Cat. No.	Unit
NEAT	P-949N	10 mg

Casoron, see Dichlobenil

CGA 219417, see Cyprodinil

## Chinomethionate

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



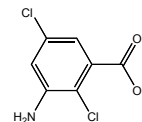
Morestan, Oxythioquinox

CAS 2439-01-2 MF C<sub>10</sub>H<sub>8</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 SOL T,D,H,M,A,CN,IPA

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



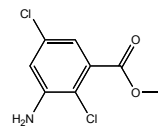
Amiben

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 SG 1.61 g/cm<sup>3</sup> MP 200-201 °C SOL M,A,CN

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

## Chloramben methyl ester

Methyl 3-amino-2,5-dichlorobenzoate



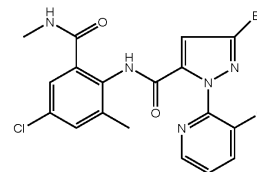
CAS 7286-84-2 MF C<sub>8</sub>H<sub>7</sub>Cl<sub>2</sub>NO<sub>2</sub> MW 220.06 PS L  
SG 1.43 g/cm<sup>3</sup> MP 49-50 °C SOL M,CN

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

Chloramizol, see Imazalil

## Chlorantraniliprole

3-Bromo-4'-chloro-1-(3-chloro-2-pyridyl)-2'-methyl-6'-(methylcarbamoyl)pyrazole-5-carboxanilide



Altacor

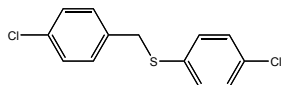
CAS 500008-45-7 MF C<sub>18</sub>H<sub>14</sub>BrCl<sub>2</sub>N<sub>5</sub>O<sub>2</sub> MW 483.15  
PS S SG 1.51 g/cm<sup>3</sup> MP 250-252 °C  
SOL A,CN,D,EA,M

Matrix	Cat. No.	Unit
NEAT	P-952N	10 mg
100 µg/mL in MeOH	P-952S	1 mL

# Pesticide Standards

## Chlorbenside

4-Chlorobenzyl 4-chlorophenyl sulfide

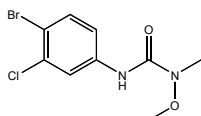


**CAS** 103-17-3 **MF** C<sub>13</sub>H<sub>10</sub>Cl<sub>2</sub>S **MW** 269.19 **PS** S  
**SG** 1.42 g/cm<sup>3</sup> **MP** 75 °C **BP** 83-84 °C (0.0024 mm Hg) **SOL** M,D,H,CN

Matrix	Cat. No.	Unit
NEAT	P-107N	10 mg
100 µg/mL in MeOH	P-107S	1 mL
1000 µg/mL in MeOH	P-107S-10X	1 mL

## Chlorbromuron

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



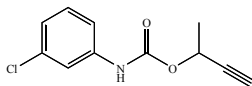
Maloran

**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 **SG** 1.69 g/cm<sup>3</sup> **MP** 95-97 °C  
**SOL** A,D,H,M, CN

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

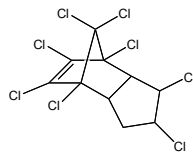


**CAS** 1967-16-4 **MF** C<sub>11</sub>H<sub>10</sub>ClNO<sub>2</sub> **MW** 223.66  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 45 °C **BP** 270 °C  
**FP** 117 °C **SOL** M,A,T,CN

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

## Chlordane (tech)

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



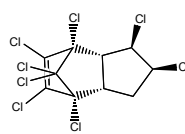
Octachlor

**CAS** 12789-03-6 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>8</sub> **MW** 409.78 **PS** L  
**SG** 1.59-1.63 g/cm<sup>3</sup> **BP** 381 °C **SOL** M,A,H,T,TP,IPA

Matrix	Cat. No.	Unit
NEAT	P-017N	10 mg
100 µg/mL in MeOH	P-017S	1 mL
1000 µg/mL in MeOH	P-017S-10X	1 mL
1000 µg/mL in Hexane	P-017S-H-10X	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



cis-Chlordane

**CAS** 5103-71-9 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>8</sub> **MW** 409.76 **PS** S  
**SG** 1.59-1.63 g/cm<sup>3</sup> **MP** 106-107 °C **BP** 381 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-134N	10 mg
100 µg/mL in MeOH	P-134S	1 mL
100 µg/mL in Hexane	P-134S-H	1 mL

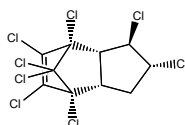
*cis-Chlordane*, see *a-Chlordane*

*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-methanoindene



trans-Chlordane

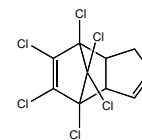
**CAS** 5103-74-2 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>8</sub> **MW** 409.76 **PS** S  
**SG** 1.59-1.63 g/cm<sup>3</sup> **MP** 104-105 °C **BP** 381 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-135N	10 mg
100 µg/mL in MeOH	P-135S	1 mL
1000 µg/mL in MeOH	P-135S-10X	1 mL

*Chlordecone*, see *Kepone*

## Chlordene

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

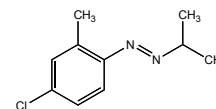


**CAS** 3734-48-3 **MF** C<sub>10</sub>H<sub>6</sub>Cl<sub>6</sub> **MW** 338.86 **PS** S  
**MP** 159 °C **SOL** M,A,H,T,TP

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

## Chlordimeform

N,N-Dimethyl-N'-[2-methyl-4-chlorophenyl]formamide

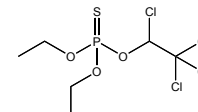


**CAS** 6164-98-3 **MF** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub> **MW** 196.7 **PS** S  
**SG** 1.10 g/cm<sup>3</sup> **MP** 32-35 °C **BP** 300 °C  
**SOL** M,A,D,CN,EA

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

## Chlorethoxyfos

O,O-Diethyl O-(1,2,2,2-tetrachloroethyl) phosphorothioate



**CAS** 54593-83-8 **MF** C<sub>6</sub>H<sub>11</sub>Cl<sub>4</sub>O<sub>3</sub>PS **MW** 336.00  
**PS** L **SG** 1.41 g/cm<sup>3</sup> **BP** 105-115 °C (0.8mm Hg)  
**FP** 230 °C **SOL** A,CN,H

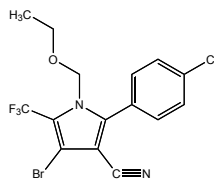
Matrix	Cat. No.	Unit
NEAT	P-1017N	10 mg
100 µg/mL in AcCN	P-1017S-CN	1 mL

*Chlorfenac*, see *Fenatrol*

# Pesticide Standards

## Chlorfenapyr

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



Pirate

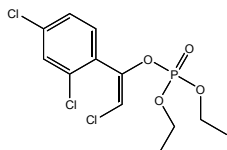
CAS 122453-73-0 MF C<sub>15</sub>H<sub>11</sub>BrClF<sub>3</sub>N<sub>2</sub>O MW 407.61  
PS S SG 1.53 g/cm<sup>3</sup> MP 100-101 °C BP 444 °C  
FP 222 °C SOL M,A,D,H,T,CN,EA

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

Chlorfenson, see Ovxex

## Chlorfenvinphos

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



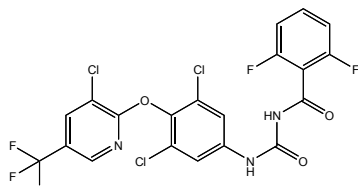
Supona

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 SG 1.36 g/cm<sup>3</sup> BP 390 °C  
SOL M,A,D,H,T,CN,TP,EA

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

## Chlorfluazuron

N-(((3,5-Dichloro-4-((3-chloro-5-(trifluoromethyl)-2-pyridinyl)oxy)phenyl)amino)carbonyl)-2,6-difluorobenzamide



Aim

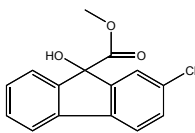
CAS 71422-67-8 MF C<sub>20</sub>H<sub>9</sub>Cl<sub>3</sub>F<sub>5</sub>N<sub>3</sub>O<sub>3</sub> MW 540.65  
PS S SG 1.66 g/cm<sup>3</sup> MP 227 °C  
SOL M,T,IPA,D,A,H,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-771S-CN	1 mL

Chlorflurenol-methyl, see Chlorfurecol-methyl ester

## Chlorfurecol-methyl ester

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



Chlorflurenol-methyl

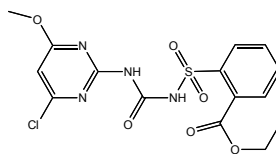
CAS 2536-31-4 MF C<sub>14</sub>H<sub>9</sub>ClO<sub>3</sub> MW 260.68 PS S  
SG 1.42 g/cm<sup>3</sup> MP 152 °C SOL A,M,IPA,CN

Matrix	Cat. No.	Unit
NEAT	P-401N	10 mg
100 µg/mL in MeOH	P-401S	1 mL
1000 µg/mL in MeOH	P-401S-10X	1 mL

Chloridazon, see Pyrazon

## Chlorimuron-ethyl

Ethyl 2-(((4-chloro-6-methoxypyrimidine-2-yl)amino)carbonyl)aminosulfonylbenzoate



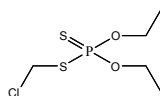
Classic

CAS 90982-32-4 MF C<sub>15</sub>H<sub>15</sub>ClN<sub>2</sub>O<sub>5</sub>S MW 414.82  
PS S SG 1.49 g/cm<sup>3</sup> MP 180-182 °C SOL A,H,CN

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

## Chlormephos

S-Chloromethyl O,O-diethyl phosphorothioate

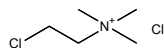


CAS 24934-91-6 MF C<sub>5</sub>H<sub>12</sub>ClO<sub>2</sub>PS<sub>2</sub> MW 234.71  
PS L SG 1.26 g/cm<sup>3</sup> BP 81-85 °C (0.1mm Hg)  
SOL M,A,D,CN

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

## Chlormequat chloride

(2-Chloroethyl)trimethylammonium chloride



Chlorocholine chloride

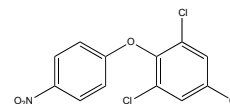
CAS 999-81-5 MF C<sub>5</sub>H<sub>13</sub>ClN•Cl MW 158.09 PS S  
SG 1.14 g/cm<sup>3</sup> MP 235 °C SOL M,A,EA

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

Chlormesulon, see Sulcotrione

## Chlornitrofen

4-Nitrophenyl 2,4,6-trichlorophenyl ether

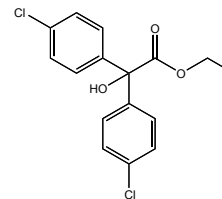


CAS 1836-77-7 MF C<sub>12</sub>H<sub>6</sub>Cl<sub>3</sub>NO<sub>3</sub> MW 318.54  
PS S SG 1.53 g/cm<sup>3</sup> MP 107 °C BP 210 °C  
SOL TP,CN,A

Matrix	Cat. No.	Unit
NEAT	P-816N-5MG	5 mg
100 µg/mL in AcCN	P-816S-CN	1 mL

## Chlorobenzilate

Ethyl-4,4'-Dichlorobenzilate



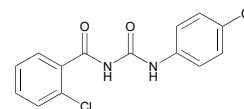
Folbex

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  
SG 1.28 g/cm<sup>3</sup> MP 37 °C BP 415 °C  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-133N	10 mg
100 µg/mL in AcCN	P-133S-CN	1 mL
1000 µg/mL in AcCN	P-133S-CN-10X	1 mL

## Chlorobenzuron

2-Chloro-N-[(4-chlorophenyl)carbamoyl]benzamide

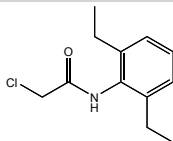


CAS 57160-47-1 MF C<sub>14</sub>H<sub>10</sub>N<sub>2</sub>Cl<sub>2</sub>O<sub>2</sub> MW 309.15  
PS S SOL A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1163S-CN	1 mL
1000 µg/mL in AcCN	P-1163S-CN-10X	1 mL

Chlorocholine chloride, see Chlormequat chloride

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

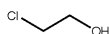


CAS 6967-29-9 MF C<sub>12</sub>H<sub>16</sub>ClNO MW 225.72  
PS S SG 1.13 g/cm<sup>3</sup> MP 128-132 °C SOL M

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

## 2-Chloroethanol

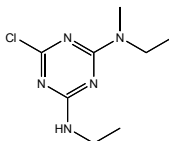
Ethylene chlorohydrin



CAS 107-07-3 MF C<sub>2</sub>H<sub>5</sub>ClO MW 80.51 PS L  
SG 1.20 g/cm<sup>3</sup> BP 128-129 °C FP 55 °C  
SOL M,D,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-1079N	10 mg
100 µg/mL in MeOH	P-1079S	1 mL

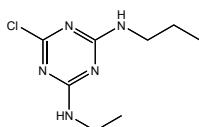
## 2-Chloro-4-ethylamino-6-methylethylamino-s-triazine



CAS 3084-92-2 MF C<sub>8</sub>H<sub>14</sub>ClN<sub>5</sub> MW 215.68 SOL MC

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

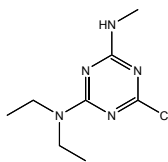
## 2-Chloro-4-ethylamino-6-propylamino-s-triazine



CAS 90952-64-0 MF C<sub>9</sub>H<sub>14</sub>ClN<sub>5</sub> MW 215.68 PS S  
MP 203-206 °C SOL MC

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

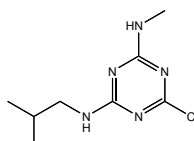
## 2-Chloro-4-methylamino-6-diethylamino-s-triazine



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

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

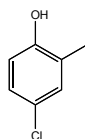
## 2-Chloro-4-methylamino-6-sec-butylamino-s-triazine



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

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

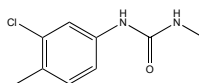
## 4-Chloro-2-methylphenol



CAS 1570-64-5 MF C<sub>7</sub>H<sub>7</sub>ClO MW 142.58 PS S  
SG 1.23 g/cm<sup>3</sup> MP 51 °C BP 223 °C FP 78 °C  
SOL M,A,D,H,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-1026N	10 mg
100 µg/mL in MeOH	P-1026S	1 mL

## 1-(3-Chloro-4-methylphenyl)-3-methylurea



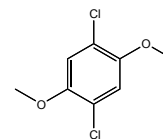
CAS 22175-22-0 MF C<sub>9</sub>H<sub>11</sub>ClN<sub>2</sub>O MW 198.65  
PS S SOL A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1368S-CN	1 mL

4-Chloro-*o*-tolylxyacetic acid, methyl ester, see MCPA methyl ester

## Chloroneb

1,4-Dichloro-2,5-dimethoxybenzene



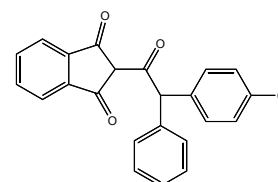
Demosan, Terraneb

CAS 2675-77-6 MF C<sub>8</sub>H<sub>8</sub>Cl<sub>2</sub>O<sub>2</sub> MW 207.06 PS S  
SG 1.28 g/cm<sup>3</sup> MP 133-135 °C BP 268 °C  
FP 161 °C SOL M,A,D,H,T,CN,TP,EA

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

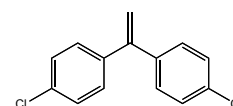


Rozol

CAS 3691-35-8 MF C<sub>23</sub>H<sub>15</sub>ClO<sub>3</sub> MW 374.83 PS S  
SG 1.43 g/cm<sup>3</sup> MP 140 °C SOL M,A,CN,H,EA,W

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

## 1,1-bis(4-Chlorophenyl)ethylene



CAS 2642-81-1 MF C<sub>14</sub>H<sub>10</sub>Cl<sub>2</sub> MW 249.13 PS S  
SG 1.21 g/cm<sup>3</sup> MP 86-88 °C BP 349-350 °C  
FP 159 °C SOL M,D,H

Matrix	Cat. No.	Unit
NEAT	P-1054N	10 mg
100 µg/mL in MeOH	P-1054S	1 mL

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

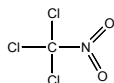
Chlorophos, see Trichlorfon

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## Chloropicrin

Trichloronitromethane

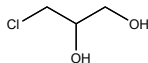


*Nitrochloroform*

**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> **BP** 112 °C **SOL** M,A,TP,H,W

Matrix	Cat. No.	Unit
NEAT	P-398N	10 mg
100 µg/mL in MeOH	P-398S	1 mL
1000 µg/mL in MeOH	P-398S-10X	1 mL

## 3-Chloro-1,2-propanediol

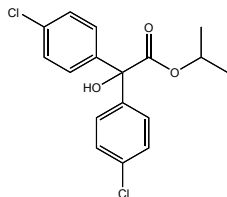


**CAS** 96-24-2 **MF** C<sub>3</sub>H<sub>7</sub>ClO<sub>2</sub> **MW** 110.55 **PS** L  
**SG** 1.32 g/cm<sup>3</sup> **BP** 213 °C **FP** 113 °C  
**SOL** M,D,H,EA

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

## Chloropropylate

Isopropyl 4,4'-dichlorobenzilate

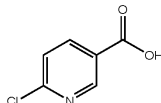


**CAS** 5836-10-2 **MF** C<sub>17</sub>H<sub>16</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 339.23 **PS** S  
**SG** 1.30 g/cm<sup>3</sup> **MP** 73 °C **BP** 148-150 °C (0.5mm Hg) **SOL** A,D,H,T,M,CN,TP

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

## 6-Chloropyridine-3-carboxylic acid

6-Chloronicotinic acid

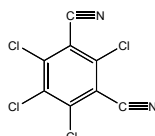


**CAS** 5326-23-8 **MF** C<sub>6</sub>H<sub>4</sub>ClNO<sub>2</sub> **MW** 157.55 **PS** S  
**SG** 1.50 g/cm<sup>3</sup> **MP** 190-192 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1267N	10 mg
100 µg/mL in MeOH	P-1267S	1 mL

## Chlorothalonil

Tetrachloroisophthalonitrile



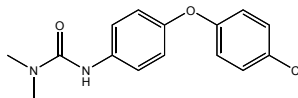
*Daconil*

**CAS** 1897-45-6 **MF** C<sub>6</sub>Cl<sub>4</sub>N<sub>2</sub> **MW** 265.91 **PS** S  
**SG** 1.80 g/cm<sup>3</sup> **MP** 250-251 °C **BP** 350 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-222N	10 mg
100 µg/mL in MeOH	P-222S	1 mL
1000 µg/mL in MeOH	P-222S-10X	1 mL

## Chloroxuron

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

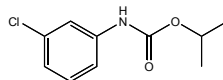


**CAS** 1982-47-4 **MF** C<sub>15</sub>H<sub>15</sub>ClN<sub>2</sub>O<sub>2</sub> **MW** 290.77  
**PS** S **SG** 1.27 g/cm<sup>3</sup> **MP** 151 °C **FP** >100 °C  
**SOL** M,A,D,CN,EA,T

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

## Chlorpropham

Isopropyl 3-chlorophenylcarbamate



*Isopropyl 3-chlorocarbamate, CIPC*

**CAS** 101-21-3 **MF** C<sub>10</sub>H<sub>12</sub>ClNO<sub>2</sub> **MW** 213.66 **PS** S  
**SG** 1.18 g/cm<sup>3</sup> **MP** 41 °C **BP** Decomp. 150 °C  
**SOL** M,A,D,H,T,CN,TP,EA

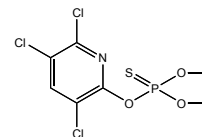
Matrix	Cat. No.	Unit
NEAT	P-221N	10 mg
100 µg/mL in MeOH	P-221S	1 mL

*Chlorpyrifos, see Dursban*

*Chlorpyrifos-0-analog, see Chlorpyrifos oxon*

## Chlorpyrifos-methyl

O,O-Dimethyl O-3,5,6-trichloro-2-pyridylphosphorothioate



*Reldan*

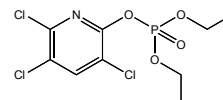
**CAS** 5598-13-0 **MF** C<sub>8</sub>H<sub>8</sub>Cl<sub>3</sub>NO<sub>3</sub>PS **MW** 322.53  
**PS** S **SG** 1.64 g/cm<sup>3</sup> **MP** 46 °C **FP** 182 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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

*Chlorthal acid, see DCPA diacid*

## Chlorpyrifos-oxon

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



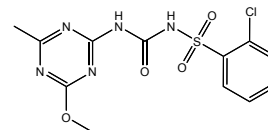
*Chlorpyrifos-0-analog*

**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 **SG** 1.46 g/cm<sup>3</sup> **MP** 41 °C **SOL** M,A,D,CN,TP

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 **SG** 1.48 g/cm<sup>3</sup> **MP** 174-175 °C **BP** Decomp. 150 °C  
**SOL** A,D,M,T,CN,EA,H,W

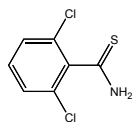
Matrix	Cat. No.	Unit
NEAT	P-262N	10 mg
100 µg/mL in AcCN	P-262S-CN	1 mL



# Pesticide Standards

## Chlorthiamid

2,6-Dichlorothiobenzamide

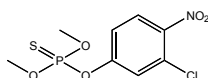


**CAS** 1918-13-4 **MF** C<sub>7</sub>H<sub>5</sub>Cl<sub>2</sub>NS **MW** 206.09 **PS** S **SG** 1.47 g/cm<sup>3</sup> **MP** 151-152 °C **SOL** M,CN,W

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

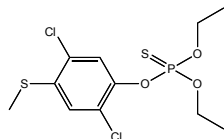


**CAS** 500-28-7 **MF** C<sub>8</sub>H<sub>9</sub>ClNO<sub>3</sub>PS **MW** 297.65 **PS** S or L **SG** 1.44 g/cm<sup>3</sup> **MP** 21 °C **BP** 125 °C **FP** 176 °C **SOL** M,CN

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

## Chlorthiophos

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

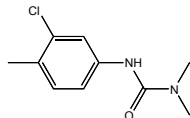


**CAS** 60238-56-4 **MF** C<sub>11</sub>H<sub>15</sub>Cl<sub>2</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 361.25 **PS** L **SG** 1.46 g/cm<sup>3</sup> **BP** >200 °C **SOL** M,A,D,CN

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

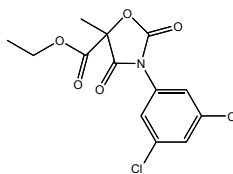


**CAS** 15545-48-9 **MF** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O **MW** 212.68 **PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 148 °C **SOL** M,A,D,CN,EA,T

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



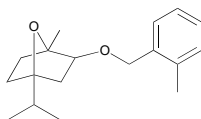
**CAS** 84332-86-5 **MF** C<sub>13</sub>H<sub>11</sub>Cl<sub>2</sub>NO<sub>5</sub> **MW** 332.15 **PS** S **SG** 1.42 g/cm<sup>3</sup> **MP** 113 - 114 °C **FP** >200 °C **SOL** M,CN,EA

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

**Ciafos**, see *Cyanophos*

## Cinmethylin

exo-1-Methyl-4-(1-methylethyl)-2-[(2-methylphenyl)methoxy]-7-oxabicyclo[2.2.1]heptane

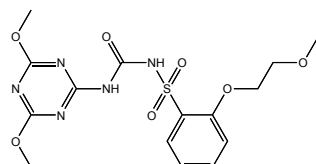


**CAS** 87818-31-3 **MF** C<sub>18</sub>H<sub>26</sub>O<sub>2</sub> **MW** 274.4 **PS** L **SG** 1.01 g/cm<sup>3</sup> **BP** decomp. 145 °C **FP** 147 °C **SOL** A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1157S-CN	1 mL
1000 µg/mL in AcCN	P-1157S-CN-10X	1 mL

## 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>3</sub>O<sub>5</sub>S **MW** 413.41 **PS** S **SG** 1.47 g/cm<sup>3</sup> **MP** 144.6 °C **FP** >144 °C **SOL** A,T,M,CN,W

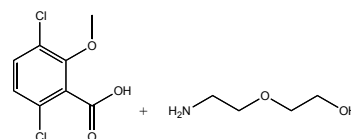
Matrix	Cat. No.	Unit
NEAT	P-823N	10 mg
100 µg/mL in AcCN	P-823S-CN	1 mL

**Ciodrin**, see *Crotoxyphos*

**CIPC**, see *Chlorpropham*

## Clarity

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



*Dicamba*, diglycoamine salt, tech

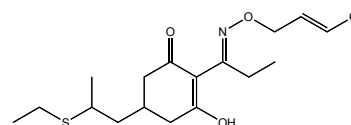
**CAS** 104040-79-1 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub>•C<sub>4</sub>H<sub>11</sub>NO<sub>2</sub> **MW** 326.18 **PS** L **SOL** W

Matrix	Cat. No.	Unit
100 µg/mL in Water	P-495S-W	1 mL
1000 µg/mL in Water	P-495S-W-10X	1 mL

**Classic**, see *Chlorimuron-ethyl*

## Clethodim

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



*Select*

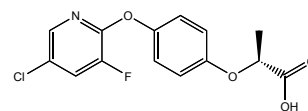
**CAS** 99129-21-2 **MF** C<sub>17</sub>H<sub>26</sub>ClNO<sub>3</sub>S **MW** 359.91 **PS** L **SG** 1.14 g/cm<sup>3</sup> **BP** Decomp. 100 °C **SOL** M,A,EA,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-602S-CN	1 mL
1000 µg/mL in AcCN	P-602S-CN-10X	1 mL

**Clipper**, see *Bonzi*

## Clodinafop

(R)-2-[4-(5-Chloro-3-fluoro-2-pyridyloxy)phenoxy] propionic acid

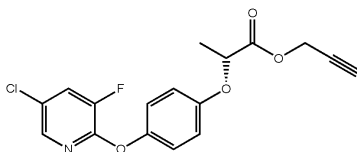


**CAS** 114420-56-3 **MF** C<sub>14</sub>H<sub>11</sub>ClFNO<sub>4</sub> **MW** 311.69 **PS** S **SG** 1.41 g/cm<sup>3</sup> **MP** 172-173 °C **BP** Decomp. 410 °C **FP** 202 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1009N	10 mg
100 µg/mL in MeOH	P-1009S	1 mL

## Clodinafop-propargyl

2-Propyn-1-yl (2R)-2-(4-[(5-chloro-3-fluoro-2-pyridinyl)oxy]phenoxy)propanoate

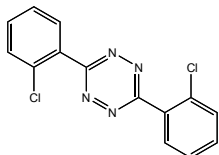


**CAS** 105512-06-9 **MF** C<sub>17</sub>H<sub>13</sub>ClFNO<sub>4</sub> **MW** 349.74  
**PS S SG** 1.35 g/cm<sup>3</sup> **MP** 59 °C **BP** 100-101 °C  
**SOL** A,EA,H,D,CN,M,T

Matrix	Cat. No.	Unit
NEAT	P-755N	10 mg
100 µg/mL in AcCN	P-755S-CN	1 mL

## Clofentezine

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

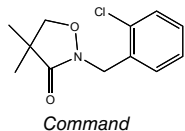


**CAS** 74115-24-5 **MF** C<sub>14</sub>H<sub>8</sub>Cl<sub>2</sub>N<sub>4</sub> **MW** 303.15 **PS S**  
**SG** 1.52 g/cm<sup>3</sup> **MP** 182 °C **BP** Decomp. 190 °C  
**SOL** M,A,T,CN,EA,D

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



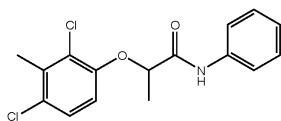
*Command*

**CAS** 81777-89-1 **MF** C<sub>11</sub>H<sub>13</sub>ClNO<sub>2</sub> **MW** 239.7  
**PS L SG** 1.19 g/cm<sup>3</sup> **BP** 275 °C **FP** 75 °C  
**SOL** A,CN,T,M,D,EA,H,W

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

## Clomeprop

2-(2,4-Dichloro-3-methylphenoxy)-N-phenylpropanamide



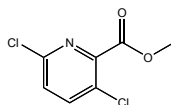
**CAS** 84496-56-0 **MF** C<sub>16</sub>H<sub>15</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 324.20  
**PS S SG** 1.31 g/cm<sup>3</sup> **MP** 146-147 °C  
**SOL** A,DMSO,M,T

Matrix	Cat. No.	Unit
NEAT	P-1065N-5MG	5 mg
100 µg/mL in Acetone	P-1065S-A	1 mL

*Clopyralid, see Lontrel*

## Clopyralid methyl ester

Methyl 3,6-dichloropicolinate

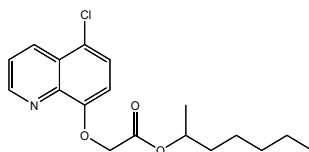


**CAS** 1532-24-7 **MF** C<sub>8</sub>H<sub>5</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 206.03  
**PS S SG** 1.43 g/cm<sup>3</sup> **MP** 49-50 °C **BP** 296 °C  
**FP** 133 °C **SOL** M,A,D,H

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

## Cloquintocet-mexyl

1-Methylhexyl [(5-chloro-8-quinolinyloxy)acetate

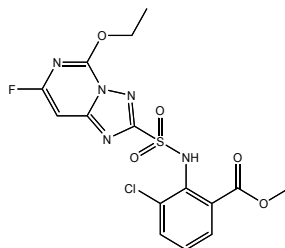


**CAS** 99607-70-2 **MF** C<sub>16</sub>H<sub>22</sub>ClNO<sub>2</sub> **MW** 335.82  
**PS S SG** 1.05 g/cm<sup>3</sup> **MP** 69-70 °C **SOL** A,H,M,T,CN

Matrix	Cat. No.	Unit
NEAT	P-929N	10 mg
100 µg/mL in MeOH	P-929S	1 mL

## Cloransulam methyl

Methyl 3-chloro-2-[(5-ethoxy-7-fluoro-[1,2,4]triazolo[5,1-c]pyrimidin-2-yl)sulfonylamino]benzoate

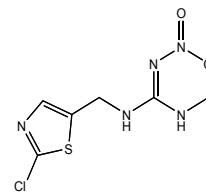


**CAS** 147150-35-4 **MF** C<sub>15</sub>H<sub>13</sub>ClFNO<sub>5</sub>S **MW** 429.81  
**PS S SG** 1.54 g/cm<sup>3</sup> **MP** 217 °C  
**SOL** A,D,EA,M,CN,H

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-981S-CN	1 mL

## Clothianidin

(E)-1-(2-Chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine



*Clutch*

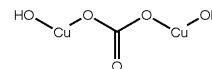
**CAS** 210880-92-5 **MF** C<sub>6</sub>H<sub>8</sub>ClN<sub>3</sub>O<sub>2</sub>S **MW** 249.68  
**PS S SG** 1.61 g/cm<sup>3</sup> **MP** 177 °C  
**SOL** A,EA,D,M,CN,W

Matrix	Cat. No.	Unit
NEAT	P-947N	10 mg
100 µg/mL in MeOH	P-947S	1 mL

*Clutch, see Clothianidin*

*Command, see Clomazon*

## Copper (II) carbonate

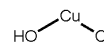


**CAS** 12069-69-1 **MF** CH<sub>2</sub>Cu<sub>2</sub>O<sub>5</sub> **MW** 221.12 **PS S**  
**SG** 4.0 g/cm<sup>3</sup> **MP** Decomp. 200 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1074N	10 mg
100 µg/mL in MeOH	P-1074S	1 mL

## Copper oxychloride

Dicopper chloride trihydroxide



No specified formula or molecular weight. Contains 57% Cu<sup>++</sup>.

*Basic cupric chloride*

**CAS** 1332-40-7 **PS S SG** 0.80 g/cm<sup>3</sup>

Matrix	Cat. No.	Unit
NEAT	P-458N	10 mg

*Co-Ral, see Coumaphos*

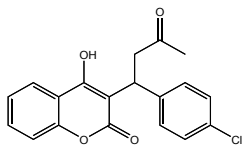
*Cotoran, see Fluometuron*

*Cottonex, see Fluometuron*

# Pesticide Standards

## Coumachlor

3-[1-(4-Chlorophenyl)-3-oxobutyl]-4-hydroxy-2H-1-benzopyran-2-one

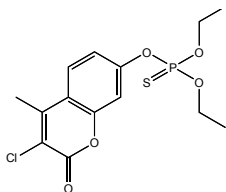


CAS 81-82-3 MF C<sub>19</sub>H<sub>15</sub>ClO<sub>4</sub> MW 342.77 PS S  
SG 1.38 g/cm<sup>3</sup> MP 168-170 °C BP 543 °C  
FP 282 °C SOL M,A

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



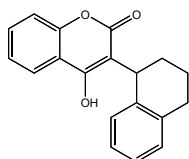
Co-Ral

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 >200 °C FP 100 °C  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-019N	10 mg
100 µg/mL in MeOH	P-019S	1 mL
1000 µg/mL in Hexane	P-019S-H-10X	1 mL

## Coumatetralyl

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



Racumin

CAS 5836-29-3 MF C<sub>19</sub>H<sub>16</sub>O<sub>3</sub> MW 292.33 PS S  
SG 1.33 g/cm<sup>3</sup> MP 172-176 °C FP >100 °C  
SOL M,CN,D,IPA,W

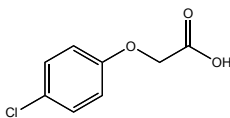
Matrix	Cat. No.	Unit
NEAT	P-313N	10 mg
100 µg/mL in MeOH	P-313S	1 mL

Counter, see Terbufos

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## 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 1.52 g/cm<sup>3</sup> MP 157-159 °C BP Decomp.  
SOL M,A,D,CN

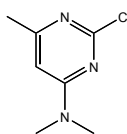
Matrix	Cat. No.	Unit
NEAT	P-373N	10 mg
100 µg/mL in MeOH	P-373S ▲	1 mL

Crag Herbicide, see Disul, sodium salt

Crimidin, see Crimidine

## Crimidine

2-Chloro-4-dimethylamino-6-methylpyrimidine



Crimidin

CAS 535-89-7 MF C<sub>7</sub>H<sub>10</sub>ClN<sub>2</sub> MW 171.63 PS S  
SG 1.21 g/cm<sup>3</sup> MP 87 °C BP 140-147 °C (4mm Hg)  
FP 130 °C SOL M,EA,D,IPA

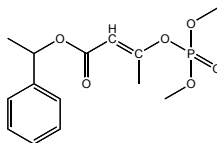
Matrix	Cat. No.	Unit
NEAT	P-561N	10 mg
100 µg/mL in MeOH	P-561S	1 mL

Croneton, see Ethiofencarb

Croneton sulfone, see Ethiofencarb sulfone

## Crotoxyphos

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



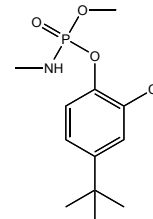
Ciodrin

CAS 7700-17-6 MF C<sub>14</sub>H<sub>16</sub>O<sub>6</sub>P MW 314.27 PS L  
SG 1.20 g/cm<sup>3</sup> BP 135 °C (0.03mm Hg)  
SOL M,A,D,H,CN,TP

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

## Crufomate

4-tert-Butyl-2-chlorophenyl methyl methylphosphoramidate

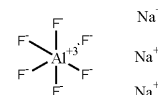


CAS 299-86-5 MF C<sub>12</sub>H<sub>19</sub>ClNO<sub>3</sub>P MW 291.74  
PS L SG 1.18 g/cm<sup>3</sup> MP 60-61 °C SOL M,T,CN

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

## Cryolite

Sodium fluoroaluminate

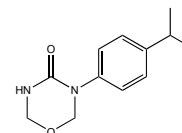


CAS 15096-52-3 MF AlF<sub>6</sub>Na<sub>3</sub> MW 209.94 PS S  
SG 2.9 g/cm<sup>3</sup> MP 1012 °C SOL W

Matrix	Cat. No.	Unit
NEAT	P-1071N	10 mg

## Cumyluron

1-(2-Chlorobenzyl)-3-(1-methyl-1-phenylethyl)urea

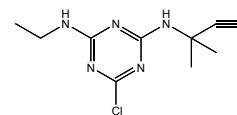


CAS 99485-76-4 MF C<sub>17</sub>H<sub>19</sub>ClN<sub>2</sub>O MW 302.8  
PS S SG 1.16 g/cm<sup>3</sup> MP 166 °C FP 258 °C  
SOL A,H,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1135S-CN	1 mL

## Cyanazine

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



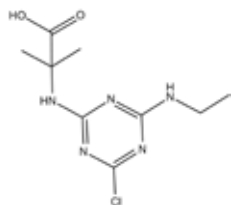
Bladex

CAS 21725-46-2 MF C<sub>9</sub>H<sub>13</sub>ClN<sub>6</sub> MW 240.69 PS S  
SG 1.29 g/cm<sup>3</sup> MP 168 °C FP 100 °C  
SOL M,A,D,H,T,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-175N	10 mg
100 µg/mL in MeOH	P-175S	1 mL
1000 µg/mL in MeOH	P-175S-10X	1 mL

# Pesticide Standards

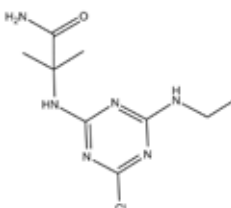
## Cyanazine acid



**CAS** 36576-43-9 **MF** C<sub>9</sub>H<sub>14</sub>ClN<sub>5</sub>O<sub>2</sub> **MW** 259.69  
**PS** S **SG** N/A **SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1440S-CN	1 mL

## Cyanazine amide

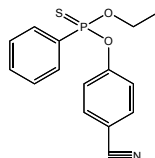


**CAS** 36576-42-8 **MF** C<sub>9</sub>H<sub>15</sub>ClN<sub>5</sub>O **MW** 258.71  
**PS** S **SG** N/A **SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1441S-CN	1 mL

## Cyanofenphos

4-Cyanophenylethylphenyl phosphonothionate

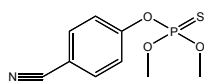


**CAS** 13067-93-1 **MF** C<sub>15</sub>H<sub>14</sub>NO<sub>3</sub>PS **MW** 303.33  
**PS** S **SG** 1.26 g/cm<sup>3</sup> **MP** 83 °C **BP** 424 °C  
**FP** 210 °C **SOL** M,A,CN

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



Ciafos, Cyanox

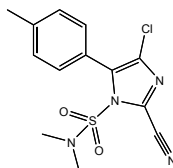
**CAS** 2636-26-2 **MF** C<sub>7</sub>H<sub>10</sub>NO<sub>3</sub>PS **MW** 243.22  
**PS** L **SG** 1.25 g/cm<sup>3</sup> **BP** Decomp. 119 °C  
**FP** >104 °C **SOL** M,A,D

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

Cyanox, see Cyanophos

## Cyazofamid

4-Chloro-2-cyano-N,N-dimethyl-5-(4-methylphenyl)-1H-imidazol-1-sulfonamide



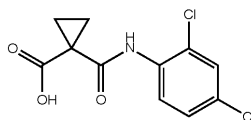
**CAS** 120116-88-3 **MF** C<sub>13</sub>H<sub>13</sub>ClN<sub>3</sub>O<sub>2</sub>S **MW** 324.79  
**PS** S **SG** 1.45 g/cm<sup>3</sup> **MP** 152-153 °C  
**SOL** A,T,D,H,EA,CN,IPA,M

Matrix	Cat. No.	Unit
NEAT	P-969N	10 mg
100 µg/mL in MeOH	P-969S	1 mL

Cybutryne, see Irgarol

## Cyclanilide

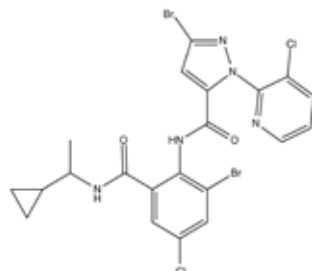
1-(2,4-Dichloroanilino)carbonylcyclopropanecarboxylic acid



**CAS** 113136-77-9 **MF** C<sub>11</sub>H<sub>9</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 274.10  
**PS** S **SG** 1.47 g/cm<sup>3</sup> **MP** 195 °C **SOL** H,T,M,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-982S-CN	1 mL

## Cyclaniliprole

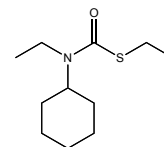


**CAS** 1031756-98-5 **MF** C<sub>21</sub>H<sub>17</sub>Br<sub>2</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>2</sub>  
**MW** 602.11 **PS** S **SG** N/A **MP** 185-187 °C  
**SOL** M,A

Matrix	Cat. No.	Unit
NEAT	P-1445N	10 mg
100 µg/mL in MeOH	P-1445S	1 mL

## Cycloate

S-Ethyl cyclohexyl(ethyl)thiocarbamate

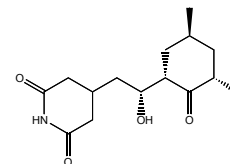


**CAS** 1134-23-2 **MF** C<sub>11</sub>H<sub>21</sub>NOS **MW** 215.36 **PS** L  
**SG** 1.02 g/cm<sup>3</sup> **BP** 145-146 °C (10mm Hg)  
**FP** >100 °C **SOL** M,A,H

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

## Cycloheximide

4-[2-(3,5-Dimethyl-2-oxocyclohexyl)-2-hydroxyethyl]-2,6-piperidinedione



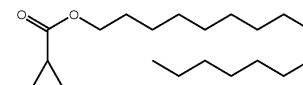
**CAS** 66-81-9 **MF** C<sub>15</sub>H<sub>23</sub>NO<sub>4</sub> **MW** 281.35 **PS** S  
**SG** 1.14 g/cm<sup>3</sup> **MP** 120 °C **BP** 492 °C **FP** 252 °C  
**SOL** M,A

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

3-Cyclohexyl-5,6-trimethylenauracil, see Lenacil

## Cycloprate

Hexadecyl cyclopropane carboxylate



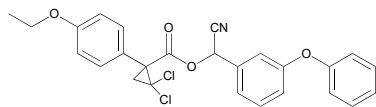
**CAS** 54460-46-7 **MF** C<sub>20</sub>H<sub>38</sub>O<sub>2</sub> **MW** 310.51 **PS** S  
**SG** 0.92 g/cm<sup>3</sup> **MP** 100-102 °C **BP** 366 °C  
**FP** 189 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1069N	10 mg
100 µg/mL in MeOH	P-1069S	1 mL

# Pesticide Standards

## Cyprothrin

(RS)- $\alpha$ -Cyano-3-phenoxybenzyl (RS)-2,2-dichloro-1-(4-ethoxyphenyl)cyclopropanecarboxylate

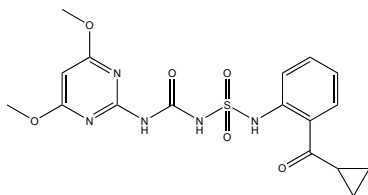


**CAS** 63935-38-6 **MF** C<sub>26</sub>H<sub>21</sub>Cl<sub>2</sub>NO<sub>4</sub> **MW** 482.36  
**PS** L or S **SG** 1.26 g/cm<sup>3</sup> **MP** 25 °C  
**BP** 140-145 °C/0.001mm Hg **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1205S-CN	1 mL
1000 µg/mL in AcCN	P-1205S-CN-10X	1 mL

## Cyclosulfamuron

1-[2-(Cyclopropylcarbonyl)anilinosulfonyl]-3-(4,6-dimethoxy-pyrimidin-2-yl)urea



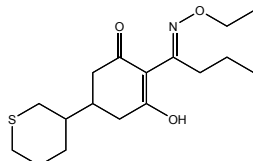
**CAS** 136849-15-5 **MF** C<sub>17</sub>H<sub>19</sub>N<sub>5</sub>O<sub>6</sub>S **MW** 421.43  
**PS** S **SG** 0.62 g/cm<sup>3</sup> **MP** 150-153 °C **SOL** CN

Matrix	Cat. No.	Unit
NEAT	P-1086N	10 mg
100 µg/mL in MeOH	P-1086S	1 mL
100 µg/mL in AcCN	P-1086S-CN	1 mL

*Cycloxydim, see Cycloxydime*

## Cycloxydime

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



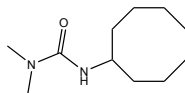
*Cycloxydim, Focus*

**CAS** 101205-02-1 **MF** C<sub>17</sub>H<sub>27</sub>NO<sub>3</sub>S **MW** 325.51  
**PS** S **SG** 1.14 g/cm<sup>3</sup> **MP** 41 °C **FP** 119 °C  
**BP** Decomp. 200 °C **SOL** A,M,D,T,EA,H,CN

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

## Cycluron

3-Cyclo-octyl-1,1-dimethylurea



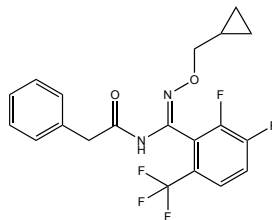
**CAS** 2163-69-1 **MF** C<sub>11</sub>H<sub>22</sub>N<sub>2</sub>O **MW** 198.31 **PS** S  
**SG** 0.97 g/cm<sup>3</sup> **MP** 138 °C **FP** >100 °C  
**SOL** A,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-791S-CN	1 mL

*Cyfoxylate, see Cyfluthrin*

## Cyflufenamide

(Z)-N-[ $\alpha$ -(Cyclopropylmethoxyimino)-2,3-difluoro-6-(trifluoromethyl)benzyl]-2-phenylacetamide

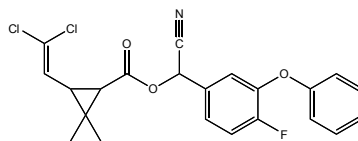


**CAS** 180409-60-3 **MF** C<sub>20</sub>H<sub>17</sub>F<sub>5</sub>N<sub>2</sub>O<sub>2</sub> **MW** 412.35  
**PS** S **SG** 1.35 g/cm<sup>3</sup> **MP** 62 °C **BP** Decomp. 140 °C  
**SOL** D,A,CN,M,EA,H

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-975S-CN	1 mL

## Cyfluthrin - Mix of Isomers

3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, cyano(4-fluoro-3-phenoxyphenyl)-2,2-dimethylcyclopropanecarboxylate methyl ester



*Baythroid I, Cyfoxylate*

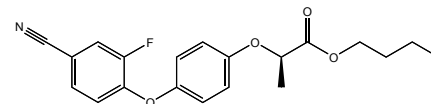
**CAS** 68359-37-5 **MF** C<sub>22</sub>H<sub>18</sub>Cl<sub>2</sub>FNO<sub>3</sub> **MW** 434.31  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 60 °C **FP** 107 °C  
**SOL** M,A,D,H,T,CN,TP,EA,IPA

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

*Cygon, see Dimethoate*

## Cyhalofop-butyl

(R)-Butyl 2-(4-(4-cyano-2-fluorophenoxy)phenoxy)propanoate

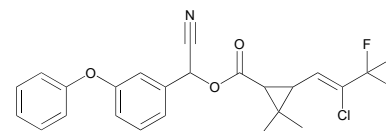


**CAS** 122008-85-9 **MF** C<sub>20</sub>H<sub>20</sub>FNO<sub>4</sub> **MW** 357.38  
**PS** S **SG** 1.17 g/cm<sup>3</sup> **MP** 48-49 °C **BP** Decomp. 270 °C  
**FP** 122 °C **SOL** M,CN,A

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

## Cyhalothrin

Cyano(3-phenoxyphenyl)methyl 3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propen-1-yl]-2,2-dimethylcyclopropanecarboxylate

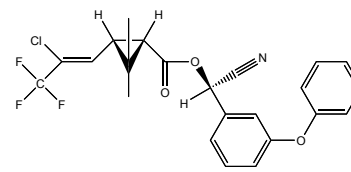


**CAS** 68085-85-8 **MF** C<sub>23</sub>H<sub>19</sub>ClF<sub>3</sub>NO<sub>3</sub> **MW** 449.85  
**PS** L **SG** 1.25 g/cm<sup>3</sup> **BP** 187-190 °C/0.2mm Hg  
**FP** >100 °C **SOL** A,CN,D,EA,H,M,T

Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-1118S-A	1 mL
1000 µg/mL in Acetone	P-1118S-A-10X	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



*Icon, Karate*

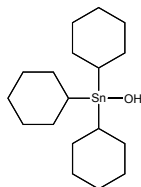
**CAS** 91465-08-6 **MF** C<sub>23</sub>H<sub>19</sub>ClF<sub>3</sub>NO<sub>3</sub> **MW** 449.85  
**PS** S **SG** 1.34 g/cm<sup>3</sup> **MP** 49 °C **FP** 225 °C  
**BP** Decomp. 275 °C **SOL** M,A,D,H,T,CN,EA

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

# Pesticide Standards

## Cyhexatin

Tricyclohexylhydroxystannane



Tricyclohexyltin hydroxide

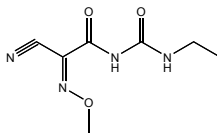
**CAS** 13121-70-5 **MF** C<sub>18</sub>H<sub>34</sub>OSn **MW** 385.21 **PS** S  
**MP** 195-198 °C **BP** 426 °C **FP** >100 °C  
**SOL** M,D,T,A,CN

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

*Cyemtrín, see Simetryn*

## Cymoxanil

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



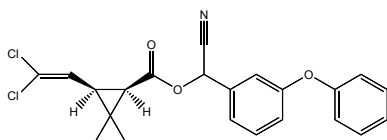
Zymoxanil

**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  
**SG** 1.32 g/cm<sup>3</sup> **MP** 160 °C **FP** >100 °C  
**SOL** EA,A,T,H,W,M,CN,D

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

## Cypermethrin

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



Polytrin, Siperin

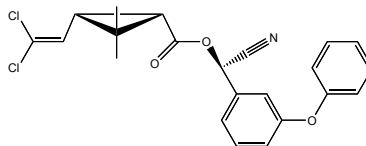
**CAS** 52315-07-8 **MF** C<sub>22</sub>H<sub>19</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 416.3  
**PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** 81 °C **BP** Decomp. 220 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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



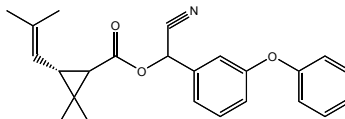
Alphamethrin, cis-Cypermethrin

**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  
**SG** 1.12 g/cm<sup>3</sup> **MP** 78-81 °C **BP** Decomp. 248 °C  
**SOL** T,M,EA,A,H,CN

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



d-trans-Cyphenothrin, Gokilaht

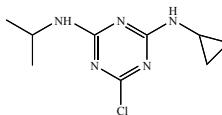
**CAS** 39515-40-7 **MF** C<sub>24</sub>H<sub>25</sub>NO<sub>3</sub> **MW** 375.46 **PS** L  
**SG** 1.08 g/cm<sup>3</sup> **BP** 154 °C (0.1mm Hg) **FP** 130 °C  
**SOL** M,A,H

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

*d-trans-Cyphenothrin, see Cyphenothrin*

## Cyprazine

6-Chloro-N-cyclopropyl-N'-isopropyl-1,3,5-triazine-2,4-diamine



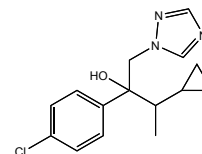
**CAS** 22936-86-3 **MF** C<sub>9</sub>H<sub>14</sub>ClN<sub>5</sub> **MW** 227.69  
**PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 165-167 °C **FP** 163 °C  
**SOL** M,H,CN,T

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



Cyproconazole, unstated stereochemistry

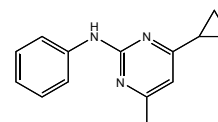
**CAS** 94361-06-5 **MF** C<sub>15</sub>H<sub>18</sub>ClN<sub>3</sub>O **MW** 291.78  
**PS** S **SG** 1.26 g/cm<sup>3</sup> **MP** 107-108 °C  
**BP** Decomp. 299 °C **SOL** A,M,DMSO,T,D,EA,H,CN

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

*Cyproconazole, unstated stereochemistry, see Cyproconazole*

## Cyprodinil

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



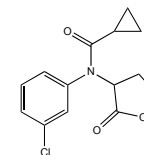
CGA 219417

**CAS** 121552-61-2 **MF** C<sub>14</sub>H<sub>14</sub>N<sub>3</sub> **MW** 225.29 **PS** S  
**SG** 1.21 g/cm<sup>3</sup> **MP** 76 °C **FP** >150 °C  
**SOL** M,A,H,T,CN,D,EA

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

## Cyprofuram

N-(3-Chlorophenyl)-N-(2-oxotetrahydro-3-furanyl)cyclopropanecarboxamide



**CAS** 69581-33-5 **MF** C<sub>14</sub>H<sub>14</sub>ClNO<sub>3</sub> **MW** 279.72  
**PS** S **MP** 95-96 °C **SOL** M

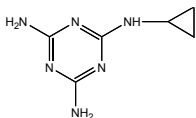
Matrix	Cat. No.	Unit
NEAT	P-1272N	10 mg
100 µg/mL in MeOH	P-1272S	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## Cyromazine

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



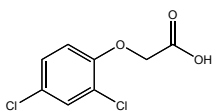
**CAS** 66215-27-8 **MF** C<sub>6</sub>H<sub>10</sub>N<sub>6</sub> **MW** 166.19 **PS** S  
**SG** 1.35 g/cm<sup>3</sup> **MP** 223 °C (decomp.)  
**SOL** M,A,CN,D,H,IPA,W

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

2,4-Dichlorophenoxyacetic acid



2,4-D Acid

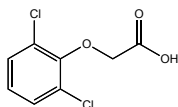
**CAS** 94-75-7 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 221.04 **SOL** T  
**SG** 1.57 g/cm<sup>3</sup> **MP** 140 °C **BP** Decomp. 200 °C  
**SOL** M,A,D,H,T,CN,EA,W

Matrix	Cat. No.	Unit
NEAT	P-020N	10 mg
100 µg/mL in MeOH	P-020S ▲	1 mL
1000 µg/mL in MeOH	P-020S-10X ▲	1 mL
100 µg/mL in AcCN	P-020S-CN	1 mL

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

## 2,6-D acid

2,6-Dichlorophenoxyacetic acid

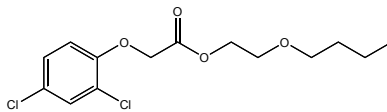


**CAS** 575-90-6 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 221.04 **PS** S  
**MP** 125-126 °C **SOL** M,A,CN

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-Butoxyethyl 2,4-dichlorophenoxyacetate



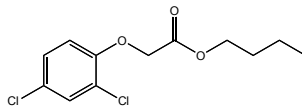
2,4-D butylglycol ester

**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** 185-190 °C **SOL** D,H,CN

Matrix	Cat. No.	Unit
NEAT	P-438N	10 mg

## 2,4-D butyl ester

Butyl 2,4-dichlorophenoxyacetate



Lirinox

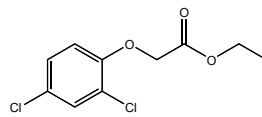
**CAS** 94-80-4 **MF** C<sub>12</sub>H<sub>14</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 277.14 **PS** L  
**SG** 1.24 g/cm<sup>3</sup> **BP** 342 °C **FP** 132 °C **SOL** M

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

**2,4-D butylglycol ester**, see *2,4-D butoxyethyl ester*

## 2,4-D ethyl ester

Ethyl 2,4-dichlorophenoxyacetate



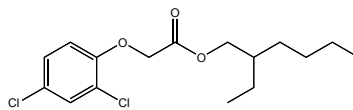
Ethyl 2,4-Dichlorophenoxyacetate

**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** M,D,H,T

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



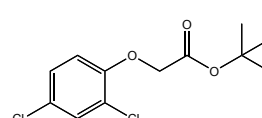
2,4-Dichlorophenoxy acid 2-ethylhexyl ester

**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> **BP** Decomp. 300 °C **FP** 171 °C  
**SOL** A,H,CN

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

## 2,4-D isobutyl ester

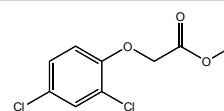
Isobutyl 2,4-dichlorophenoxyacetate



**CAS** 1713-15-1 **MF** C<sub>12</sub>H<sub>14</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 277.14 **PS** L  
**SG** 1.24 g/cm<sup>3</sup> **SOL** CN

Matrix	Cat. No.	Unit
NEAT	P-1027N	10 mg
100 µg/mL in AcCN	P-1027S-CN	1 mL

## 2,4-D methyl ester

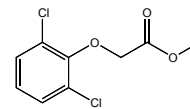


Methyl 2,4-Dichlorophenoxyacetate

**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** 1.35 g/cm<sup>3</sup> **MP** 119 °C **FP** 124 °C  
**SOL** M,A,D,H,T,CN,TP

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

## 2,6-D methyl ester



Methyl 2,6-dichlorophenoxyacetate

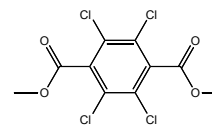
**CAS** N/A **MF** C<sub>9</sub>H<sub>8</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 235.06 **PS** S

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



DCPA

**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** 345 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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

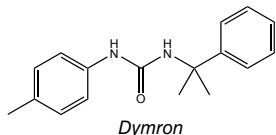
# Pesticide Standards

**Dacthal diacid**, see *DCPA diacid*

**Dacthal monoacid**, see *Monomethyltetrachloroterephthalate*

## Daimuron

N-(4-Methylphenyl)-N'-(1-methyl-1-phenylethyl)urea



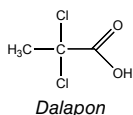
**CAS** 42609-52-9 **MF** C<sub>17</sub>H<sub>20</sub>N<sub>2</sub>O **MW** 268.35 **PS** L  
**SG** 1.11 g/cm<sup>3</sup> **MP** 203 °C **BP** 394 °C

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1087S-CN	1 mL

**Dalapon**, see *Dalapon acid*

## Dalapon acid

2,2-Dichloropropionic acid

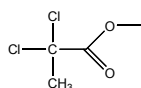


**CAS** 75-99-0 **MF** C<sub>3</sub>H<sub>2</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 142.97 **PS** L  
**SG** 1.40 g/cm<sup>3</sup> **BP** 185-190 °C **FP** >110 °C  
**SOL** M,A,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-140N	10 mg
100 µg/mL in MeOH	P-140S ▲	1 mL
1000 µg/mL in MeOH	P-140S-10X ▲	1 mL
100 µg/mL in AcCN	P-140S-CN	1 mL

## Dalapon methyl ester

Methyl 2,2-dichloropropionate



**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> **BP** 144 °C **FP** 50 °C  
**SOL** M,A,H,T,TP

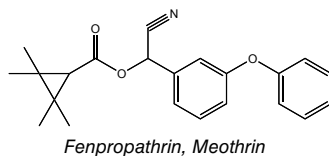
Matrix	Cat. No.	Unit
NEAT	P-226N	10 mg
100 µg/mL in MeOH	P-226S	1 mL

**Dalapon-sodium**, see *DPA Sodium*

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

## Danitol

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

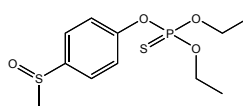


**CAS** 39515-41-8 **MF** C<sub>22</sub>H<sub>23</sub>NO<sub>3</sub> **MW** 349.42 **PS** S  
**SG** 1.15 g/cm<sup>3</sup> **MP** 45-50 °C **FP** 204 °C  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-263N	10 mg
100 µg/mL in MeOH	P-263S	1 mL
1000 µg/mL in MeOH	P-263S-10X	1 mL

## Dasanit

O,O-Diethyl O-(4-(methylsulfinyl)phenyl) phospho-  
rothioate

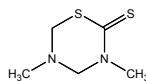


**CAS** 115-90-2 **MF** C<sub>11</sub>H<sub>17</sub>O<sub>4</sub>PS<sub>2</sub> **MW** 308.36 **PS** L  
**SG** 1.20 g/cm<sup>3</sup> **BP** 140 °C **SOL** M,A,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-235N	10 mg
100 µg/mL in MeOH	P-235S	1 mL
1000 µg/mL in Hexane	P-235S-H-10X	1 mL

## Dazomet

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



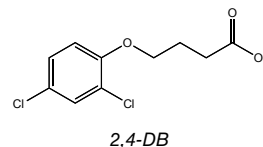
**CAS** 533-74-4 **MF** C<sub>5</sub>H<sub>10</sub>N<sub>2</sub>S<sub>2</sub> **MW** 162.28 **PS** S  
**SG** 1.36 g/cm<sup>3</sup> **MP** 103-105 °C **FP** 156 °C  
**SOL** A,EA,M,T,D,W

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

**2,4-DB**, see *2,4-DB acid*

## 2,4-DB acid

4-(2,4-Dichlorophenoxy)butyric acid

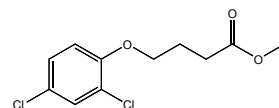


**CAS** 94-82-6 **MF** C<sub>10</sub>H<sub>10</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 249.1 **PS** S  
**SG** 1.51 g/cm<sup>3</sup> **MP** 118-120 °C **SOL** M,A,H,T,CN,EA,W

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> **BP** 153 °C (0.1mm Hg)  
**SOL** M,H,T

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*

**DCAA methyl ester**, see *Methyl-2,4-dichlorophenylacetate*

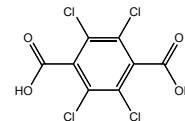
**DCMU**, see *Karmex*

**3,4-DCPA**, see *Propanil*

**DCPA**, see *Dacthal*

## DCPA diacid

Tetrachloroterephthalic acid



*Chlorthal acid, Dacthal diacid*

**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  
**SG** 1.87 g/cm<sup>3</sup> **MP** 343-345 °C **BP** 425 °C  
**FP** 211 °C **SOL** M,A,D,CN

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*

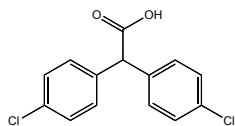
▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.



# Pesticide Standards

## p,p'-DDA

bis(4-Chlorophenyl)acetic acid



p,p'-Dichlorodiphenylacetic 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** 1.4 g/cm<sup>3</sup> **MP** 167-169 °C **SOL** M

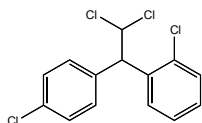
Matrix	Cat. No.	Unit
NEAT	P-444N	10 mg
100 µg/mL in MeOH	P-444S ▲	1 mL
1000 µg/mL in MeOH	P-444S-10X ▲	1 mL

2,4'-DDD, see o,p'-DDD

4,4'-DDD, see p,p'-DDD

## o,p'-DDD

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



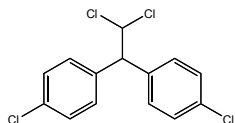
2,4'-DDD, Mitotane

**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  
**SOL** M,A,D,H,T,CN,TP,EA

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



4,4'-DDD, TDE

**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** 109-111 °C **BP** 350 °C  
**SOL** M,A,D,H,T,CN,TP,EA

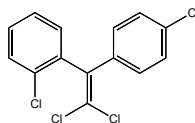
Matrix	Cat. No.	Unit
NEAT	P-025N	10 mg
100 µg/mL in MeOH	P-025S	1 mL
1000 µg/mL in MeOH	P-025S-10X	1 mL

2,4'-DDE, see o,p'-DDE

4,4'-DDE, see o,p'-DDE

## o,p'-DDE

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



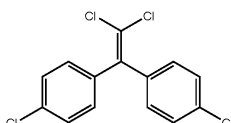
2,4'-DDE

**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 **FP** 182 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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

## p,p'-DDE

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



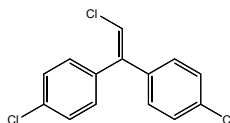
4,4'-DDE

**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** 336 °C **FP** 184 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-027N	10 mg
100 µg/mL in MeOH	P-027S	1 mL
1000 µg/mL in MeOH	P-027S-10X	1 mL

## 4,4'-DDMU

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



p,p'-DDMU

**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** >100 °C **SOL** M,D,H,TP

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

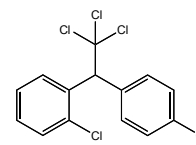
p,p'-DDMU, see 4,4'-DDMU

2,4'-DDT, see o,p'-DDT

4,4'-DDT, see p,p'-DDT

## o,p'-DDT

2,2-bis(o,p-Chlorophenyl)-1,1,1-trichloroethane



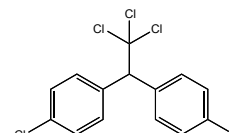
2,4'-DDT

**CAS** 789-02-6 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub> **MW** 354.49 **PS** S  
**SG** 0.99 g/cm<sup>3</sup> **MP** 71-72 °C **BP** 260 °C (decomp.)  
**SOL** M,A,D,H,T,CN,TP,EA

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



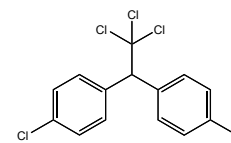
4,4'-DDT

**CAS** 50-29-3 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub> **MW** 354.49 **PS** S  
**SG** 0.99 g/cm<sup>3</sup> **MP** 107-109 °C **BP** 260 °C (decomp.)  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-029N	10 mg
100 µg/mL in MeOH	P-029S	1 mL
2000 µg/mL in MeOH	P-029S-20X	1 mL

## DDT, Tech

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



Dichlorodiphenyltrichloroethane

**CAS** 8017-34-3 **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> **BP** 260 °C (decomp.)  
**SOL** M,A,D,H,T,CN,TP,EA

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

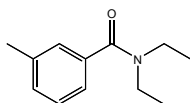
DDVP, see Dichlorvos

Dechlorane, see Mirex

# Pesticide Standards

## Deet (Off)

N,N-Diethyl-3-methylbenzamide

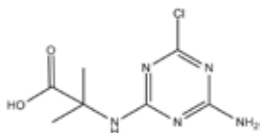


Diethyltoluamide, Off

**CAS** 134-62-3 **MF** C<sub>12</sub>H<sub>17</sub>NO **MW** 191.3 **PS** L  
**SG** 0.99 g/cm<sup>3</sup> **BP** 296 °C **FP** 155 °C  
**SOL** M,A,D,CN

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

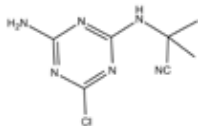
## Deethylcyanazine acid



**CAS** 36749-35-6 **MF** C<sub>17</sub>H<sub>10</sub>NO **MW** 231.64 **PS** S  
**SG** N/A **SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1439S-CN	1 mL

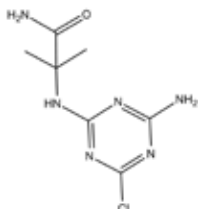
## N-Deethylcyanazine



**CAS** 21725-40-6 **MF** C<sub>11</sub>H<sub>10</sub>ClN<sub>5</sub>O<sub>2</sub> **MW** 212.64  
**PS** X **SG** N/A **SOL** XXXXXX

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1443-CN	1 mL

## N-Deethylcyanazine amide

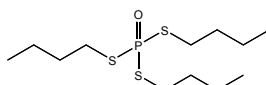


**CAS** 36556-77-1 **MF** C<sub>11</sub>H<sub>11</sub>ClN<sub>5</sub>O **MW** 230.65  
**PS** S **SG** N/A **SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1442S-CN	1 mL

## DEF 6

S,S,S-Tributylphosphorothioate



Tribufos

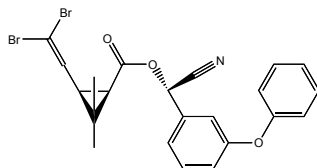
**CAS** 78-48-8 **MF** C<sub>12</sub>H<sub>27</sub>OPS<sub>3</sub> **MW** 314.54 **PS** L  
**SG** 1.06 g/cm<sup>3</sup> **BP** 210 °C **SOL** M,A,D,H,T,CN,EA

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



Butoflin

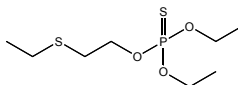
**CAS** 52918-63-5 **MF** C<sub>22</sub>H<sub>19</sub>Br<sub>2</sub>NO<sub>3</sub> **MW** 505.2  
**PS** S **SG** 0.55 g/cm<sup>3</sup> **MP** 100-102 °C  
**SOL** M,A,D,H,T,CN,TP,EA,IPA,DMSO

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



Systox

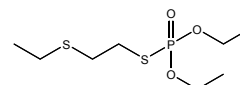
**CAS** 8065-48-3 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 258.36 **PS** L  
**SG** 1.13 g/cm<sup>3</sup> **BP** 310 °C **FP** 45 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-031N	10 mg
100 µg/mL in MeOH	P-031S	1 mL
1000 µg/mL in Hexane	P-031S-H-10X	1 mL

*Demeton I (thiono isomer)*, see *Demeton-S*

## Demeton-S

O,O-Diethyl S-2-ethylthioethyl phosphorothioate



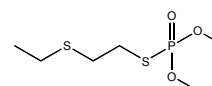
Demeton I (thiono isomer)

**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> **BP** 310 °C **FP** 45 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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

## Demeton-S-methyl

O,O-Dimethyl S-2-(ethylthio)ethyl phosphorothioate



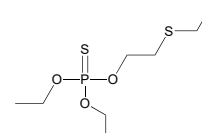
Metasystox I

**CAS** 919-86-8 **MF** C<sub>8</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> **BP** 305 °C  
**SOL** M,A,D,H,T,CN,TP,EA, IPA

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

## O-Demeton

O,O-Diethyl O-(2-(ethylthio)ethyl)phosphorothioate

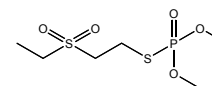


**CAS** 298-03-3 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>3</sub>S<sub>2</sub>P **MW** 258.34 **PS** L  
**SG** 1.12 g/cm<sup>3</sup> **BP** 134 °C/2mm Hg **FP** 45 cc  
**SOL** A,CN,D,H,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1033S-CN	1 mL
1000 µg/mL in AcCN	P-1033S-CN-10X	1 mL

## Demeton-S-methylsulfone

S-2-Ethylsulfonylethyl-  
O,O-dimethyl phosphorothioate



Dioxydemeton-S-methyl

**CAS** 17040-19-6 **MF** C<sub>8</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** 49-50 °C **BP** 336 °C  
**SOL** M,A,T,CN

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

# Pesticide Standards

**Denatonium benzoate**, see *Bitrex*

**Desethyl atrazine**, see *Atrazine desethyl*

**Desethyl simazine**, see *Atrazine-desisopropyl*

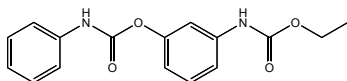
**Desethylterbutylazine**, see *Terbutylazine desethyl*

**Desisopropylatrazine**, see *Atrazine-desisopropyl*

**Desisopropyl desethyl atrazine**, see *Atrazine-desethyl-desisopropyl*

## Desmedipham

Ethyl 3-phenylcarbamoyloxyphenylcarbamate



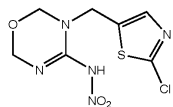
**CAS** 13684-56-5 **MF** C<sub>16</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub> **MW** 300.31  
**PS S SG** 1.30 g/cm<sup>3</sup> **MP** 118-120 °C  
**BP** Decomp. 234 °C **SOL** A,M,EA,D,T,H,CN

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

**Desmethyl isotroturon**, see *1-(4-isopropylphenyl)-3-methylurea*

## N-Desmethylthiamethoxam

3-[(2-Chloro-1,3-thiazol-5-yl)methyl]-N-nitro-1,3,5-oxadiazinan-4-imine

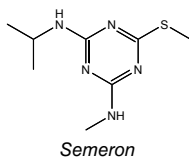


**CAS** 171103-04-1 **MF** C<sub>7</sub>H<sub>8</sub>ClN<sub>3</sub>O<sub>3</sub>S **MW** 277.69  
**PS S SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1266S	1 mL

## Desmetryn

N-Isopropyl-N'-methyl-6-(methylsulfanyl)-1,3,5-triazine-2,4-diamine



*Semeron*

**CAS** 1014-69-3 **MF** C<sub>8</sub>H<sub>15</sub>N<sub>3</sub>S **MW** 213.3 **PS S**  
**SG** 1.18 g/cm<sup>3</sup> **MP** 84-86 °C **BP** 340 °C  
**FP** >100 °C **SOL** M,A,D,H,T,CN,EA, T

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

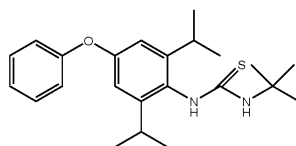
**Desulfanyl fipronil**, see *Fipronil desulfanyl*

**Devrinol™**, see *Napropamide*

**Dexon**, see *Fenaminosulf*

## Diafenthiuron

1-tert-Butyl-3-(2,6-diisopropyl-4-phenoxyphenyl)thiourea



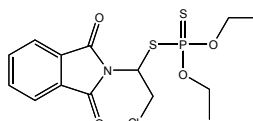
**CAS** 80060-09-9 **MF** C<sub>23</sub>H<sub>32</sub>N<sub>2</sub>OS **MW** 384.58  
**PS S SG** 1.09 g/cm<sup>3</sup> **MP** 146 °C **BP** 448-450 °C  
**FP** >149 °C **SOL** M,A,CN,T,H

Matrix	Cat. No.	Unit
NEAT	P-1064N	10 mg
100 µg/mL in Acetone	P-1064S-A	1 mL

**Dialifor**, see *Dialifos*

## Dialifos

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



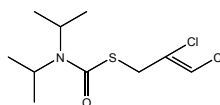
*Dialifor, Torak*

**CAS** 10311-84-9 **MF** C<sub>14</sub>H<sub>17</sub>ClNO<sub>2</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** >100 °C **SOL** M,CN,A

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)



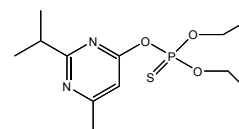
**CAS** 2303-16-4 **MF** C<sub>10</sub>H<sub>17</sub>Cl<sub>2</sub>NOS **MW** 270.24  
**PS L SG** 1.19 g/cm<sup>3</sup> **BP** 290 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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



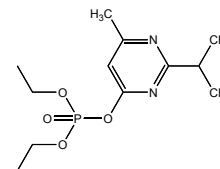
*Basudin, Diazide®, Spectracide®*

**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 SG** 1.12 g/cm<sup>3</sup> **BP** 83-84 °C (0.0002mm Hg)  
**FP** 104.4 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-033N	10 mg
100 µg/mL in MeOH	P-033S	1 mL
1000 µg/mL in MeOH	P-033S-10X	1 mL
1000 µg/mL in Hexane	P-033S-H-10X	1 mL

## Diazinon-O analog

Diethyl 2-isopropyl-6-methyl-4-pyrimidinyl phosphate



*Diazoxon*

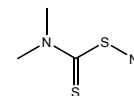
**CAS** 962-58-3 **MF** C<sub>12</sub>H<sub>21</sub>N<sub>2</sub>O<sub>4</sub>P **MW** 228.28  
**PS L SG** 1.14 g/cm<sup>3</sup> **BP** 336 °C **FP** 157 °C  
**SOL** M,A,CN,TP

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

Sodium dimethyldithiocarbamate dihydrate



**CAS** 128-04-1 **MF** C<sub>2</sub>H<sub>6</sub>NNa<sub>2</sub>S<sub>2</sub> **MW** 143.21 **PS S**  
**SG** 1.17 g/cm<sup>3</sup> **MP** 120-122 °C **SOL** M

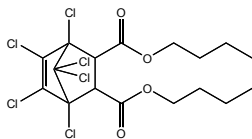
Matrix	Cat. No.	Unit
NEAT	P-487N	10 mg
100 µg/mL in MeOH	P-487S	1 mL

**Dibrom**, see *Naled*

# Pesticide Standards

## Dibutylchlorendate

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

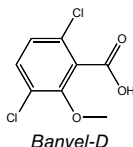


**CAS** 1770-80-5 **MF** C<sub>17</sub>H<sub>20</sub>Cl<sub>6</sub>O<sub>4</sub> **MW** 501.05 **PS** L  
**SG** 1.46 g/cm<sup>3</sup> **BP** 500 °C **FP** 164 °C  
**SOL** M,A,H,T,TP

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



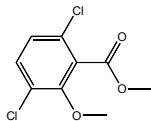
**CAS** 1918-00-9 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 221.04 **PS** S  
**SG** 1.57 g/cm<sup>3</sup> **MP** 115 °C **BP** Decomp. 230 °C  
**SOL** M,A,D,H,T,CN,EA,W

Matrix	Cat. No.	Unit
NEAT	P-008N	10 mg
100 µg/mL in MeOH	P-008S ▲	1 mL
1000 µg/mL in MeOH	P-008S-10X ▲	1 mL
100 µg/mL in AcCN	P-008S-CN	1 mL

*Dicamba, diglycoamine salt, tech, see Clarity*

## Dicamba methyl ester

Methyl 3,6-dichloro-2-methoxybenzoate



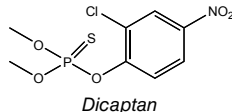
**CAS** 6597-78-0 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 235.07 **PS** L  
**SOL** M,A,D,H,T,TP

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

*Dicaptan, see Dicapthon*

## Dicapthon

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

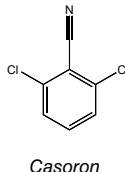


**CAS** 2463-84-5 **MF** C<sub>8</sub>H<sub>9</sub>ClNO<sub>5</sub>PS **MW** 297.66  
**PS** S **SG** 1.50 g/cm<sup>3</sup> **MP** 52 °C **SOL** M,T

Matrix	Cat. No.	Unit
NEAT	P-035N	10 mg
100 µg/mL in MeOH	P-035S	1 mL
1000 µg/mL in MeOH	P-035S-10X	1 mL

## Dichlobenil

2,6-Dichlorobenzonitrile

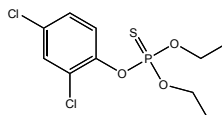


**CAS** 1194-65-6 **MF** C<sub>7</sub>H<sub>3</sub>Cl<sub>2</sub>N **MW** 172.01 **PS** S  
**SG** 1.55 g/cm<sup>3</sup> **MP** 145-146 °C **BP** 270 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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

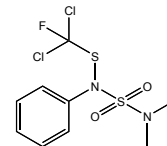


**CAS** 97-17-6 **MF** C<sub>10</sub>H<sub>13</sub>Cl<sub>2</sub>O<sub>3</sub>PS **MW** 315.15 **PS** L  
**SG** 1.32 g/cm<sup>3</sup> **BP** 120-123 °C (20mm Hg)  
**FP** >100 °C **SOL** M,A,D,H,T,CN,TP,EA

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

## Dichlofluanid

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



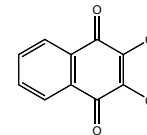
*Euparen*

**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 **SG** 1.55 g/cm<sup>3</sup> **MP** 106 °C **BP** 337 °C  
**FP** 158 °C **SOL** M,A,D,H,T,CN,TP,EA, IPA

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



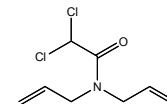
**CAS** 117-80-6 **MF** C<sub>10</sub>H<sub>4</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 227.04 **PS** S  
**SG** 1.54 g/cm<sup>3</sup> **MP** 192-193 °C  
**BP** 275 °C (2mm Hg) **SOL** M,D,TP

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

*Dichloran, see Botran*

## Dichlorimid

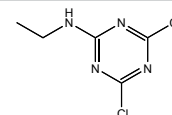
N,N-Diallyl-2,2-dichloroacetamide



**CAS** 37764-25-3 **MF** C<sub>8</sub>H<sub>11</sub>Cl<sub>2</sub>NO **MW** 208.08 **PS** L  
**SG** 1.2 g/cm<sup>3</sup> **BP** Decomp. 100 °C **SOL** M,A,CN,W

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

## 2,4-Dichloro-6-ethylamino-1,3,5-triazine

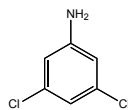


**CAS** 3440-19-5 **MF** C<sub>5</sub>H<sub>6</sub>Cl<sub>2</sub>N<sub>4</sub> **MW** 193.03 **PS** S  
**MP** 114-115 °C **SOL** MC

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

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## 3,5-Dichloroaniline

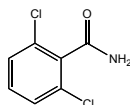


3,5-Dichlorobenzenamine

CAS 626-43-7 MF C<sub>6</sub>H<sub>5</sub>Cl<sub>2</sub>N MW 162.02 PS S  
SG 1.58 g/cm<sup>3</sup> MP 49-53 °C BP 260 °C FP 133 °C  
SOL M,D,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-1008N	10 mg
100 µg/mL in MeOH	P-1008S	1 mL

## 2,6-Dichlorobenzamide



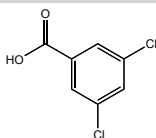
BAM

CAS 2008-58-4 MF C<sub>7</sub>H<sub>5</sub>Cl<sub>2</sub>NO MW 190.03 PS S  
SG 1.44 g/cm<sup>3</sup> MP 196-201 °C SOL M,A

Matrix	Cat. No.	Unit
NEAT	P-1035N	10 mg
100 µg/mL in MeOH	P-1035S	1 mL

3,5-Dichlorobenzenamine, see 3,5-Dichloroaniline

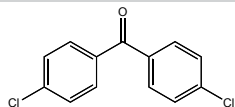
## 3,5-Dichlorobenzoic acid



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 309 °C  
FP 141 °C SOL M,A,H,T,CN

Matrix	Cat. No.	Unit
NEAT	P-242N	10 mg
100 µg/mL in MeOH	P-242S ▲	1 mL
1000 µg/mL in MeOH	P-242S-10X ▲	1 mL
100 µg/mL in AcCN	P-242S-CN	1 mL

## 4,4'-Dichlorobenzophenone



CAS 90-98-2 MF C<sub>14</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 SOL M,D,H

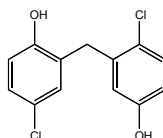
Matrix	Cat. No.	Unit
NEAT	P-295N	10 mg
100 µg/mL in MeOH	P-295S	1 mL
1000 µg/mL in MeOH	P-295S-10X	1 mL

*p,p'*-Dichlorodiphenylacetic acid, see *p,p'*-DDA

Dichlorodiphenyltrichloroethane, see DDT, Tech

## Dichlorophen

4,4'-Dichloro-2-2'-methylene-diphenol



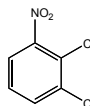
CAS 97-23-4 MF C<sub>13</sub>H<sub>10</sub>Cl<sub>2</sub>O<sub>2</sub> MW 269.13 PS S  
SG 1.42 g/cm<sup>3</sup> MP 177-178 °C SOL A,IPA,M,CN

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

2,4-Dichlorophenoxy acid 2-ethylhexyl ester, see 2,4-D Ethylhexyl ester

## 2,3-Dichloronitrobenzene

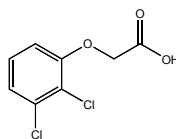
1,2-Dichloro-3-nitrobenzene



CAS 3209-22-1 MF C<sub>6</sub>H<sub>3</sub>Cl<sub>2</sub>NO<sub>2</sub> MW 192.00 PS S  
SG 1.72 g/cm<sup>3</sup> MP 62 °C BP 257-258 °C  
FP 124 °C SOL D,T,TP

Matrix	Cat. No.	Unit
NEAT	P-1005N	10 mg
100 µg/mL in Toluene	P-1005S-T	1 mL

## 2,3-Dichlorophenoxyacetic acid

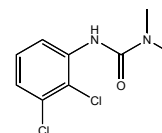


2,3-D

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 SOL M,CN

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

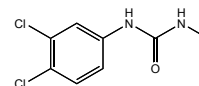


2,3-Diuron

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 80-81 °C SOL M

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

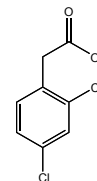
## 1-(3,4-Dichlorophenyl)-3-methylurea



CAS 3567-62-2 MF C<sub>9</sub>H<sub>8</sub>Cl<sub>2</sub>N<sub>2</sub>O MW 219.07 PS S  
SG 1.41 g/cm<sup>3</sup> MP 157-159 °C SOL M,CN

Matrix	Cat. No.	Unit
NEAT	P-1038N	10 mg
100 µg/mL in MeOH	P-1038S	1 mL

## 2,4-Dichlorophenylacetic acid



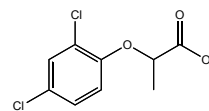
DCAA

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 SOL M,A,D,H,T,CN

Matrix	Cat. No.	Unit
NEAT	P-244N	10 mg
100 µg/mL in MeOH	P-244S ▲	1 mL
1000 µg/mL in MeOH	P-244S-10X ▲	1 mL
100 µg/mL in AcCN	P-244S-CN	1 mL

## Dichlorprop

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



2,4-DP

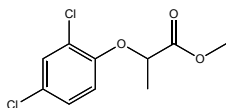
CAS 120-36-5 MF C<sub>9</sub>H<sub>8</sub>Cl<sub>2</sub>O<sub>3</sub> MW 235.07 PS S  
SG 1.42 g/cm<sup>3</sup> MP 110-112 °C FP 204 °C  
SOL M,A,D,H,T,CN,EA,IPA,W

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

# Pesticide Standards

## Dichlorprop methyl ester

Methyl 2-(2,4-dichlorophenoxy)propionate



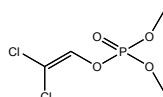
**CAS** 57153-17-0 **MF** C<sub>10</sub>H<sub>10</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 249.09 **PS** L  
**SG** 1.31 g/cm<sup>3</sup> **BP** 111 °C (0.8mm Hg) **SOL** M,H,T

Matrix	Cat. No.	Unit
NEAT	P-229N	10 mg
100 µg/mL in MeOH	P-229S	1 mL

*Dichlorprop, 2-ethylhexyl ester, see 2,4-DP ethyl hexyl*

## Dichlorvos

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



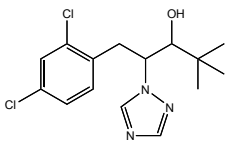
DDVP, Vapona

**CAS** 62-73-7 **MF** C<sub>4</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>2</sub>P **MW** 220.98 **PS** L  
**SG** 1.42 g/cm<sup>3</sup> **BP** 74 °C **FP** 100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-036N	10 mg
100 µg/mL in MeOH	P-036S	1 mL
1000 µg/mL in Hexane	P-036S-H-10X	1 mL

## Diclobutrazol

1-(2,4-Dichlorophenyl)-4,4-dimethyl-2-(1H-1,2,4-triazol-1-yl)-3-pentanol

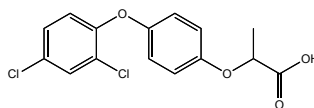


**CAS** 75736-33-3 **MF** C<sub>15</sub>H<sub>19</sub>Cl<sub>2</sub>N<sub>3</sub>O **MW** 328.24  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 147-149 °C **BP** 484 °C  
**FP** 247 °C **SOL** M,A,CN

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



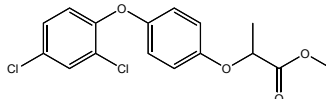
Hoe-grass

**CAS** 40843-25-2 **MF** C<sub>16</sub>H<sub>12</sub>Cl<sub>2</sub>O<sub>4</sub> **MW** 327.17 **PS** S  
**SG** 1.34 g/cm<sup>3</sup> **MP** 101-102 °C  
**SOL** M,A,D,H,CN,W

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** S  
**SG** 1.40 g/cm<sup>3</sup> **MP** 39-41 °C **BP** 370 °C  
**SOL** M,A,D,H,T,CN,TP,DMSO,EA,IPA

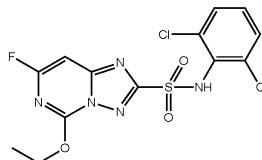
Matrix	Cat. No.	Unit
NEAT	P-303N	10 mg
100 µg/mL in MeOH	P-303S	1 mL

*Dicofol, see Kelthane*

*p,p'-Dicofol, see Kelthane*

## Diclosulam

N-(2,6-Dichlorophenyl)-5-ethoxy-7-fluoro[1,2,4]triazolo[1,5-c]pyrimidine-2-sulfonamide

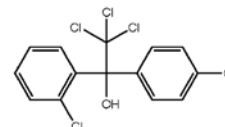


**CAS** 145701-21-9 **MF** C<sub>13</sub>H<sub>10</sub>Cl<sub>2</sub>FN<sub>5</sub>O<sub>3</sub>S **MW** 406.22  
**PS** L **SG** 1.60 g/cm<sup>3</sup> **MP** 218-221 °C  
**SOL** A,D,EA,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-904S	1 mL

## o,p'-Dicofol

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

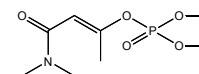


**CAS** 10606-46-9 **MF** C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub>O **MW** 370.49  
**PS** S **SG** 1.45 g/cm<sup>3</sup> **MP** 122 °C **SOL** M,A,H,T,TP

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



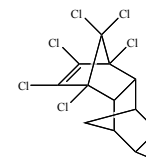
Bidrin

**CAS** 141-66-2 **MF** C<sub>8</sub>H<sub>16</sub>NO<sub>3</sub>P **MW** 237.19 **PS** L  
**SG** 1.22 g/cm<sup>3</sup> **BP** 400 °C **FP** >100 °C  
**SOL** M,A,D,H,T,CN,EA,W

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



HEOD

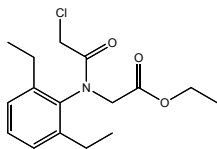
**CAS** 60-57-1 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O **MW** 380.92 **PS** S  
**SG** 1.75 g/cm<sup>3</sup> **MP** 176-177 °C **BP** 385 °C  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-037N	10 mg
100 µg/mL in MeOH	P-037S	1 mL
1000 µg/mL in MeOH	P-037S-10X	1 mL

# Pesticide Standards

## Diethyl 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** 1.38 g/cm<sup>3</sup> **MP** 50 °C **SOL** M,IPA

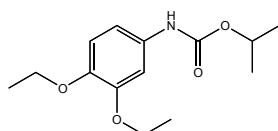
Matrix	Cat. No.	Unit
NEAT	P-599N	10 mg
100 µg/mL in MeOH	P-599S	1 mL

*Diethion*, see *Ethion*

*Diethquinalphione*, see *Quinalphos*

## Diethofencarb

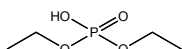
Isopropyl 3,4-diethoxybenzylcarbamate



**CAS** 87130-20-9 **MF** C<sub>14</sub>H<sub>21</sub>NO<sub>4</sub> **MW** 267.36 **PS** S  
**SG** 1.19 g/cm<sup>3</sup> **MP** 100 °C **BP** 272 °C **FP** 140 °C  
**SOL** M,A,H,CN,EA

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

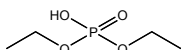
## Diethyl phosphate (mono- & di-)



**CAS** N/A **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> **BP** 203 °C **FP** 91 °C **SOL** M

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

## Diethylphosphate



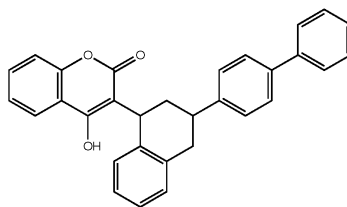
**CAS** 598-02-7 **MF** C<sub>4</sub>H<sub>11</sub>O<sub>4</sub>P **MW** 154.1 **PS** L  
**SG** 1.29 g/cm<sup>3</sup> **BP** 203 °C **FP** 91 °C **SOL** M

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

*Diethyltoluamide*, see *Deet*

## Difenacoum

3-[3-(4-Biphenyl)-1,2,3,4-tetrahydro-1-naphthalenyl]-4-hydroxy-2H-chromen-2-one

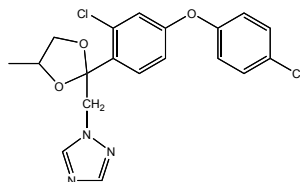


**CAS** 56073-07-5 **MF** C<sub>29</sub>H<sub>24</sub>O<sub>3</sub> **MW** 444.52 **PS** S  
**SG** 1.35 g/cm<sup>3</sup> **MP** 215-217 °C **SOL** M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1151S-CN	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

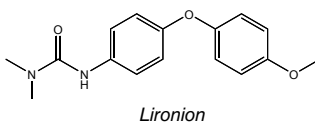


**CAS** 119446-68-3 **MF** C<sub>19</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>3</sub> **MW** 406.26  
**PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 79 °C **BP** 101 °C  
**FP** 285 °C **SOL** M,A,D,H,T,CN,TP,EA

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

## Difenoxuron

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



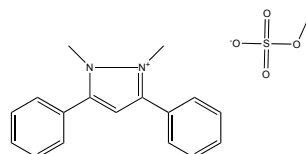
*Lironion*

**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  
**SG** 1.19 g/cm<sup>3</sup> **MP** 138-139 °C **SOL** M,CN,D,A,H

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

## Difenzoquat methyl sulfate

1,2-Dimethyl-3,5-diphenyl-1H-pyrazolium methyl sulfate

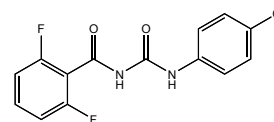


**CAS** 43222-48-6 **MF** C<sub>18</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 360.43 **PS** S  
**SG** 0.8 g/cm<sup>3</sup> **MP** 157-158 °C **SOL** W,D,M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-1330N	10 mg
100 µg/mL in MeOH	P-1330S	1 mL

## Diflubenzuron

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

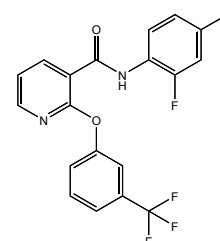


**CAS** 35367-38-5 **MF** C<sub>14</sub>H<sub>9</sub>ClF<sub>2</sub>N<sub>2</sub>O<sub>2</sub> **MW** 310.68  
**PS** S **SG** 1.56 g/cm<sup>3</sup> **MP** 230-232 °C **BP** 257 °C  
**SOL** M,A,D,CN,EA, H,T

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



*Diflufenicanil*

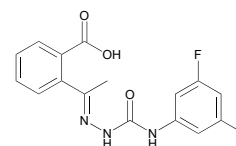
**CAS** 83164-33-4 **MF** C<sub>19</sub>H<sub>11</sub>F<sub>5</sub>N<sub>2</sub>O<sub>2</sub> **MW** 394.29 **PS** S  
**SG** 1.54 g/cm<sup>3</sup> **MP** 160 °C **SOL** M,EA,A,D,CN,T

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

*Diflufenicanil*, see *Diflufenican*

## Diflufenzopyr

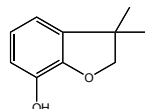
2-((E)-1-[4-(3,5-difluorophenyl)semicarbazono]ethyl)nicotinic acid



**CAS** 109293-97-2 **MF** C<sub>15</sub>H<sub>12</sub>F<sub>2</sub>N<sub>4</sub>O<sub>3</sub> **MW** 334.28  
**PS** S **SG** 0.24 g/cm<sup>3</sup> **MP** 136 °C  
**BP** decomp. 155 °C **SOL** CN,M

Matrix	Cat. No.	Unit
NEAT	P-1210N	10 mg

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



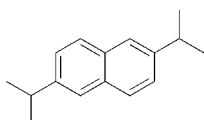
Carbofuran phenol

CAS 1563-38-8 MF C<sub>10</sub>H<sub>12</sub>O<sub>2</sub> MW 164.21 PS L  
SG 1.10 g/cm<sup>3</sup> FP 113 °C SOL M,W,D

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

1,2-Dihydro-3,6-pyridazinedione,  
see Maleic hydrazide

## 2,6-Diisopropynaphthalene

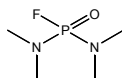


CAS 24157-81-1 MF C<sub>16</sub>H<sub>20</sub> MW 212.34 PS S  
SG 0.49 g/cm<sup>3</sup> MP 67-69 °C SOL A

Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-1291S-A	1 mL
1000 µg/mL in Acetone	P-1291S-A-10X	1 mL

## Dimefox

bis(Dimethylamino)fluorophosphine oxide



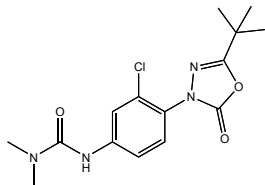
Tetramethylphosphorodiamidic fluoride (I)

CAS 115-26-4 MF C<sub>4</sub>H<sub>12</sub>FN<sub>2</sub>OP MW 154.12 PS L  
SG 1.11 g/cm<sup>3</sup> BP 85 °C (15mm Hg) FP >100 °C  
SOL M,CN,A

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

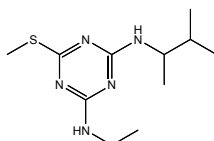


CAS 34205-21-5 MF C<sub>15</sub>H<sub>19</sub>ClN<sub>4</sub>O<sub>3</sub> MW 338.83  
PS S MP 193 °C SOL M,A,CN,EA

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



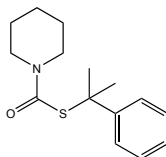
Dimepax

CAS 22936-75-0 MF C<sub>11</sub>H<sub>12</sub>N<sub>3</sub>S MW 255.43 PS S  
SG 1.11 g/cm<sup>3</sup> MP 65 °C BP 151-153 °C (0.04mm  
Hg) SOL A,D,H,M,CN,T

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

## Dimepiperate

S-(1-Methyl-1-phenylethyl) 1-piperidinecarbothioate

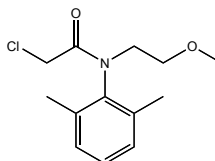


CAS 61432-55-1 MF C<sub>15</sub>H<sub>21</sub>NOS MW 263.40 PS S  
SG 1.08 g/cm<sup>3</sup> MP 39-40 °C BP 376 °C SOL A,H

Matrix	Cat. No.	Unit
50 µg/mL in Acetone	P-1020S-A-0.5X	1 mL

## Dimethachlor

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

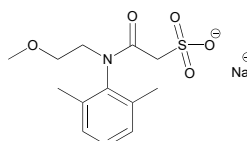


CAS 50563-36-5 MF C<sub>13</sub>H<sub>18</sub>ClNO<sub>2</sub> MW 255.77 S S  
SG 1.21 g/cm<sup>3</sup> MP 47 °C BP Decomp. 300 °C  
FP 180 °C SOL M,A,H,CN,D,W

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

## Dimethachlor ESA sodium salt

Sodium 2-[(2,6-dimethylphenyl)(2-methoxyethyl)  
amino]-2-oxo-ethanesulfonate



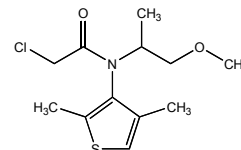
CAS N/A MF C<sub>13</sub>H<sub>18</sub>NNaO<sub>5</sub>S MW 323.34 SOL A,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-914S	1 mL

Dimethametryn, see Dimepax

## Dimethenamid

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

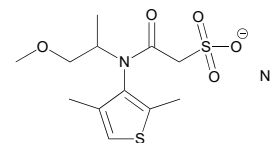


CAS 87674-68-8 MF C<sub>12</sub>H<sub>18</sub>ClNO<sub>2</sub>S MW 275.8  
PS L SG 1.20 g/cm<sup>3</sup> BP 354 °C FP 91 °C  
SOL A,EA,H,T,TP,M

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

## Dimethenamid ESA sodium salt

Sodium 2-[(2,4-dimethylthiophen-3-yl)(2-me-  
thoxy-1-methylethyl)amino]-2-oxo-ethanesulfonate

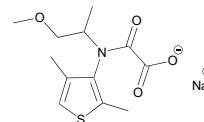


CAS 205939-58-8 MF C<sub>13</sub>H<sub>18</sub>NNaO<sub>5</sub>S<sub>2</sub> MW 366.5  
PS S MP 150-153 °C SOL CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-917S	1 mL

## Dimethenamid OA sodium salt

Sodium [(2,4-dimethylthiophen-3-yl)(2-me-  
thoxy-1-methylethyl)amino]-oxo-acetate



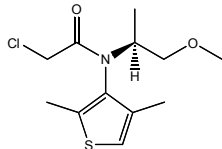
CAS N/A MF C<sub>12</sub>H<sub>16</sub>NO<sub>4</sub>Na MW 293 PS S  
MP 225 °C SOL CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-918S	1 mL



## Dimethenamide-P

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

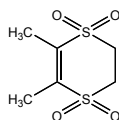


**CAS** 163515-14-8 **MF** C<sub>12</sub>H<sub>16</sub>ClNO<sub>2</sub>S **MW** 275.8  
**PS** L **SG** 1.20 g/cm<sup>3</sup> **BP** 280 °C **FP** >150 °C  
**SOL** H,M,W

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

## Dimethipin

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



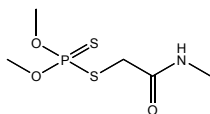
Harvade

**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  
**SG** 1.59 g/cm<sup>3</sup> **MP** 167-169 °C **SOL** M,A

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

## Dimethoate

2-Dimethoxyphosphinothioylthio-N-methylacetamide



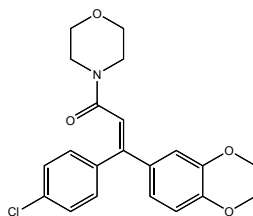
Cygon, Rogor

**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** 44-45 °C **BP** Decomp. 117 °C  
**FP** 107 °C **SOL** M,A,D,H,T,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-039N	10 mg
100 µg/mL in MeOH	P-039S	1 mL
1000 µg/mL in MeOH	P-039S-10X	1 mL

## Dimethomorph

(E,Z)-4-[3-(4-Chlorophenyl)-3-(3,4-dimethoxyphenyl)acryloyl]morpholine



Dimethomorph mixture of E + Z isomers

**CAS** 110488-70-5 **MF** C<sub>21</sub>H<sub>22</sub>ClNO<sub>4</sub> **MW** 387.86  
**PS** S **SG** 1.32 g/cm<sup>3</sup> **MP** 125-149 °C  
**SOL** A,H,M,T,CN,EA,D

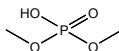
Matrix	Cat. No.	Unit
NEAT	P-713N	10 mg
100 µg/mL in MeOH	P-713S	1 mL

Dimethomorph mixture of E + Z isomers, see Dimethomorph

Dimethoxon, see Omethoate

## Dimethyl phosphate

O,O-Dimethyl hydrogen phosphate



**CAS** 813-78-5 **MF** C<sub>2</sub>H<sub>4</sub>O<sub>4</sub>P **MW** 126.04 **PS** L  
**SG** 1.32 g/cm<sup>3</sup> **BP** 172-176 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-442N	10 mg
100 µg/mL in MeOH	P-442S	1 mL

## Dimethylarsinic acid

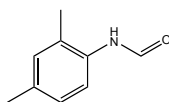


Cacodylic acid

**CAS** 75-60-5 **MF** C<sub>2</sub>H<sub>4</sub>AsO<sub>2</sub> **MW** 138.00 **PS** S  
**MP** 195 °C **BP** 253 °C **FP** 109 °C **SOL** M,W

Matrix	Cat. No.	Unit
NEAT	P-1075N	10 mg
100 µg/mL in MeOH	P-1075S	1 mL

## N-(2,4-Dimethylphenyl)formamide



2,4-DMPF

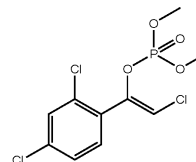
**CAS** 60397-77-5 **MF** C<sub>9</sub>H<sub>11</sub>NO **MW** 149.19 **PS** S  
**MP** 114-118 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1100S-CN	1 mL

*N,N*-Dimethyl-*N'*-(4-(1-methylethyl)phenyl)urea, see Isoproturon

## Dimethylvinphos (Z type)

(Z)-2-Chloro-1-(2,4-dichlorophenyl)vinyl dimethyl phosphate

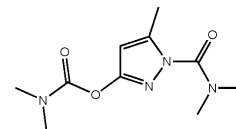


**CAS** 67628-93-7 **MF** C<sub>10</sub>H<sub>10</sub>Cl<sub>3</sub>O<sub>4</sub>P **MW** 331.52  
**PS** S **SG** 1.26 g/cm<sup>3</sup> **MP** 69-70 °C **SOL** A,CN

Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-1057S-A	1 mL

## Dimetilan

1-(Dimethylcarbamoyl)-5-methyl-1H-pyrazol-3-yl dimethylcarbamate

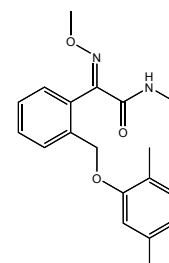


**CAS** 644-64-4 **MF** C<sub>10</sub>H<sub>16</sub>N<sub>4</sub>O<sub>3</sub> **MW** 240.26 **PS** S  
**SG** 1.25 g/cm<sup>3</sup> **MP** 69-70 °C **BP** 200-210 °C (10mm Hg) **SOL** A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-905S-CN	1 mL

## Dimoxystrobin

(E)-2-(Methoxyimino)-N-methyl-2-[a-(2,5-xylyloxy)-o-tolyl]acetamide



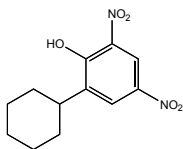
**CAS** 149961-52-4 **MF** C<sub>19</sub>H<sub>22</sub>N<sub>2</sub>O<sub>3</sub> **MW** 326.39  
**PS** S **SG** 1.24 g/cm<sup>3</sup> **MP** 138-140 °C  
**SOL** A,T,M,EA,CN,IPA,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-844S-CN	1 mL

# Pesticide Standards

## Dinex

2-Cyclohexyl-4,6-Dinitrophenol



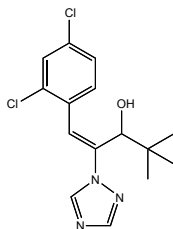
4,6-Dinitro-o-cyclohexylphenol

**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 **SOL** M,D,H

Matrix	Cat. No.	Unit
NEAT	P-427N	10 mg
100 µg/mL in MeOH	P-427S	1 mL
1000 µg/mL in MeOH	P-427S-10X	1 mL

## Diniconazol

(E)-(RS)-1-(2,4-Dichlorophenyl-4,4-dimethyl-2-(1H-1,2,4-triazol-1-yl)pent-1-en-3-ol



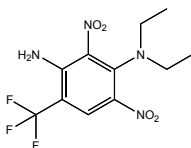
Embassador™, Spotless™

**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 **SG** 1.32 g/cm<sup>3</sup> **MP** 134-156 °C **FP** >150 °C  
**SOL** A,M,H,CN,T

Matrix	Cat. No.	Unit
NEAT	P-845N	10 mg
100 µg/mL in AcCN	P-845S-CN	1 mL

## Dinitramine

N,N-Diethyl-2,6-dinitro-4-(trifluoromethyl)-m-phenylenediamine

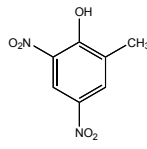


**CAS** 29091-05-2 **MF** C<sub>11</sub>H<sub>13</sub>F<sub>3</sub>N<sub>4</sub>O<sub>4</sub> **MW** 322.24  
**PS** S **SG** 1.46 g/cm<sup>3</sup> **MP** 98-99 °C **BP** Decomp.  
200 °C **SOL** M,A,CN,TP,H

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



DNOC

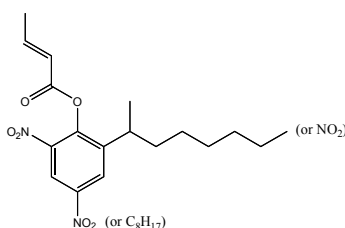
**CAS** 534-52-1 **MF** C<sub>7</sub>H<sub>6</sub>N<sub>2</sub>O<sub>5</sub> **MW** 198.13 **PS** S  
**SG** 1.56 g/cm<sup>3</sup> **MP** 88 °C **BP** 312 °C  
**SOL** M,A,D,H,T,CN,W,EA

Matrix	Cat. No.	Unit
NEAT	P-384N	10 mg
100 µg/mL in MeOH	P-384S	1 mL
1000 µg/mL in MeOH	P-384S-10X	1 mL

4,6-Dinitro-o-cyclohexylphenol, see Dinex

## Dinocap

2,6-Dinitro-4-octylphenyl crotonates

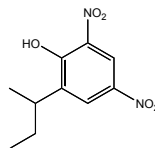


**CAS** 39300-45-3 **MF** C<sub>18</sub>H<sub>24</sub>N<sub>2</sub>O<sub>6</sub> **MW** 364.39 **PS** L  
**SG** 1.10 g/cm<sup>3</sup> **BP** 138-140 °C (0.05mm Hg)  
**SOL** M,A,D,CN,EA

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



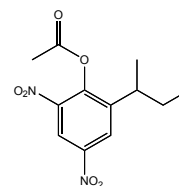
DNBP

**CAS** 88-85-7 **MF** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>O<sub>5</sub> **MW** 240.21 **PS** S  
**SG** 1.30 g/cm<sup>3</sup> **MP** 45-46 °C **BP** 332 °C  
**FP** >100 °C **SOL** M,A,D,H,CN

Matrix	Cat. No.	Unit
NEAT	P-144N	10 mg
100 µg/mL in MeOH	P-144S	1 mL
1000 µg/mL in MeOH	P-144S-10X	1 mL

## Dinoseb acetate

2-sec-Butyl-4,6-dinitrophenyl acetate



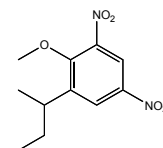
**CAS** 2813-95-8 **MF** C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O<sub>6</sub> **MW** 282.25 **PS** L  
**SG** 1.30 g/cm<sup>3</sup> **BP** 170 °C **FP** >100 °C **SOL** EA

Matrix	Cat. No.	Unit
NEAT	P-779N	10 mg
100 µg/mL in MeOH	P-779S	1 mL

Dinoseb methyl ester, see Dinoseb methyl ether

## Dinoseb methyl ether

2-sec-Butyl-4,6-dinitroanisole



Dinoseb methyl ester

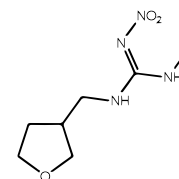
**CAS** 6099-79-2 **MF** C<sub>11</sub>H<sub>14</sub>N<sub>2</sub>O<sub>5</sub> **MW** 254.24 **PS** L  
**SOL** M,A,D,H,T

Matrix	Cat. No.	Unit
NEAT	P-230N	10 mg
100 µg/mL in MeOH	P-230S	1 mL

Dinoseb methacrylate, see Binapacryl

## Dinotefuran

(RS)-1-Methyl-2-nitro-3-(tetrahydro-3-furylmethyl)guanidine



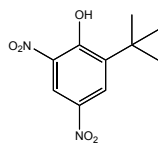
**CAS** 165252-70-0 **MF** C<sub>7</sub>H<sub>14</sub>N<sub>4</sub>O<sub>3</sub> **MW** 202.21  
**PS** S **SG** 1.42 g/cm<sup>3</sup> **MP** 107-108 °C  
**BP** Decomp. 208 °C **SOL** M,CN,H,T

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-986S-CN	1 mL

# Pesticide Standards

## Dinoterb

2-tert-Butyl-4,6-dinitrophenol



DNTBP

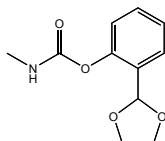
**CAS** 1420-07-1 **MF** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>O<sub>5</sub> **MW** 240.21 **PS** S  
**SG** 1.35 g/cm<sup>3</sup> **MP** 125.5-126.5 °C **BP** Decomp.  
220 °C **SOL** M,A,CN,EA

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-524S	1 mL

*Dioctyl adipate, see bis(2-Ethylhexyl)adipate*

## Dioxacarb

2-(1,3-Dioxolan-2-yl)phenyl methylcarbamate

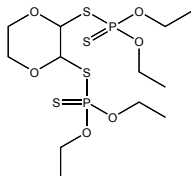


**CAS** 6988-21-2 **MF** C<sub>11</sub>H<sub>13</sub>NO<sub>4</sub> **MW** 223.25 **PS** S  
**SG** 1.46 g/cm<sup>3</sup> **MP** 114-115 °C **SOL** M,A,CN,H

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'-tetraethyl di(phosphorodithioate)



Delnav, Navadel

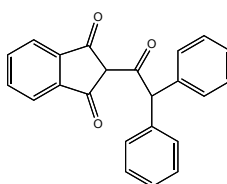
**CAS** 78-34-2 **MF** C<sub>12</sub>H<sub>26</sub>O<sub>5</sub>P<sub>2</sub>S<sub>4</sub> **MW** 456.56 **PS** L  
**SG** 1.26 g/cm<sup>3</sup> **BP** 60-68 °C **SOL** M,A,D,H,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-219N	10 mg
100 µg/mL in MeOH	P-219S	1 mL
1000 µg/mL in Hexane	P-219S-H-10X	1 mL

*Dioxydemeton-S-methyl, see Demeton-s-methyl-sulfone*

## Diphacinone

2-Diphenylacetyl-1,3-indandione



Diphacinone

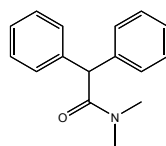
**CAS** 82-66-6 **MF** C<sub>23</sub>H<sub>16</sub>O<sub>3</sub> **MW** 340.37 **PS** S  
**SG** 1.28 g/cm<sup>3</sup> **MP** 146 °C **SOL** M,A,T

Matrix	Cat. No.	Unit
NEAT	P-315N	10 mg
100 µg/mL in MeOH	P-315S	1 mL

*Diphenadione, see Diphacinone*

## Diphenamid

N,N-Dimethyl-2,2-diphenylacetamide



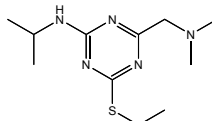
Dymid, Enide

**CAS** 957-51-7 **MF** C<sub>16</sub>H<sub>17</sub>NO **MW** 239.31 **PS** S  
**SG** 1.17 g/cm<sup>3</sup> **MP** 135 °C **SOL** M,A,D,H,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-173N	10 mg
100 µg/mL in MeOH	P-173S	1 mL

## Dipropetryn

6-(Ethylsulfanyl)-N,N'-diisopropyl-1,3,5-triazine-2,4-diamine



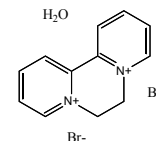
Sancap

**CAS** 4147-51-7 **MF** C<sub>11</sub>H<sub>21</sub>N<sub>3</sub>S **MW** 255.38 **PS** S  
**SG** 1.11 g/cm<sup>3</sup> **MP** 104-106 °C **SOL** A,D,T,H,M

Matrix	Cat. No.	Unit
NEAT	P-580N	10 mg
100 µg/mL in MeOH	P-580S	1 mL

*Dipropyl isocinchomeronate, see MGK-326*

## Diquat dibromide monohydrate

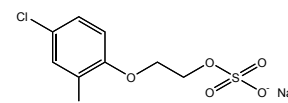


**CAS** 6385-62-2 **MF** C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>•2Br•H<sub>2</sub>O **MW** 362.06  
**PS** S **MP** 337 °C (decomp.) **SOL** M,W

Matrix	Cat. No.	Unit
NEAT	P-231N	10 mg
100 µg/mL in MeOH	P-231S	1 mL
1000 µg/mL in MeOH	P-231S-10X	1 mL

## Disul, sodium salt

Sodium 2,4-dichlorophenoxyethyl sulfate



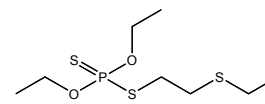
Crag Herbicide, Sesone

**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 **SOL** M

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



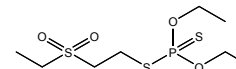
Disyston, Thiodemeton

**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  
**SG** 1.14 g/cm<sup>3</sup> **BP** 225 °C **FP** 133 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-042N	10 mg
100 µg/mL in MeOH	P-042S	1 mL
1000 µg/mL in MeOH	P-042S-10X	1 mL
1000 µg/mL in Hexane	P-042S-H-10X	1 mL

## Disulfoton sulfone

O,O-Diethyl S-2-ethylsulfonyl ethyl phosphorodithioate



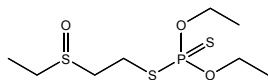
**CAS** 2497-06-5 **MF** C<sub>8</sub>H<sub>19</sub>O<sub>4</sub>PS<sub>3</sub> **MW** 306.41 **PS** L  
**SOL** M,A,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-582N	10 mg
100 µg/mL in MeOH	P-582S	1 mL

# Pesticide Standards

## Disulfoton sulfoxide

O,O-Diethyl S-2-ethylsulfinyethyl phosphorodithioate



Oxydisulfoton

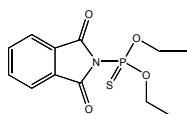
**CAS** 2497-07-6 **MF** C<sub>8</sub>H<sub>18</sub>O<sub>3</sub>PS<sub>3</sub> **MW** 290.41 **PS** L  
**SG** 1.27 g/cm<sup>3</sup> **BP** 409 °C **FP** 93 °C **SOL** M,D,T,CN

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

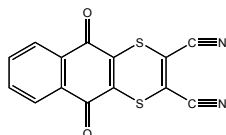


**CAS** 5131-24-8 **MF** C<sub>12</sub>H<sub>14</sub>NO<sub>2</sub>PS **MW** 299.28  
**PS** S **SG** 1.38 g/cm<sup>3</sup> **MP** 89-91 °C **BP** 400 °C  
**FP** >100 °C **SOL** M,CN

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

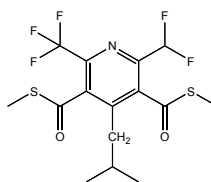


**CAS** 3347-22-6 **MF** C<sub>14</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>S<sub>2</sub> **MW** 296.33 **PS** S  
**SG** 1.58 g/cm<sup>3</sup> **MP** 225 °C **FP** >300 °C  
**SOL** T,A,EA,H,M,CN

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 **SG** 1.41 g/cm<sup>3</sup> **MP** 65 °C **BP** 460 °C  
**FP** 63 °C **SOL** M,A,CN,H,T

Matrix	Cat. No.	Unit
NEAT	P-741N	10 mg
100 µg/mL in MeOH	P-741S	1 mL

*Diuroil*, see *Amitrole (ATA)*

*Diuron*, see *Karmex*

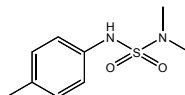
**2,3-Diuron**, see 3-(2,3-Dichlorophenyl)-1,1-dimethyl-urea

**DMDT**, see *Methoxychlor*

**2,4-DMPF**, see *N-(2,4-Dimethylphenyl)formamide*

## DMST

N,N-Dimethyl-N'-tolylsulfonyldiamide



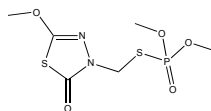
Tolylfluanid metabolite

**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** 88-91 °C **SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-572S	1 mL

## DMTP Oxon

S-[(5-Methoxy-2-oxo-1,3,4-thiadiazol-3(2H)-yl)methyl] O,O-dimethyl phosphorothioate



Methidathion Oxon

**CAS** 39856-16-1 **MF** C<sub>6</sub>H<sub>11</sub>N<sub>2</sub>O<sub>5</sub>PS<sub>2</sub> **MW** 286.26  
**PS** S **MP** 54 °C **SOL** W,A,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1352S	1 mL

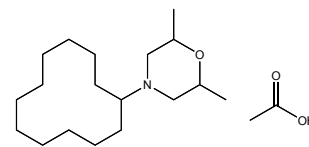
*DNBP*, see *Dinoseb*

*DNOC*, see 4,6-Dinitro-o-cresol

*DNTBP*, see *Dinoterb*

## Dodemorph acetate

N-Cyclododecyl-2,6-dimethylmorpholinium acetate



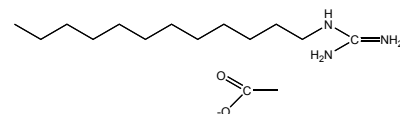
Meltaxo

**CAS** 31717-87-0 **MF** C<sub>18</sub>H<sub>35</sub>NO<sup>+</sup>•C<sub>2</sub>H<sub>4</sub>O<sub>2</sub><sup>-</sup> **MW** 341.53  
**PS** L **SG** 0.93 g/cm<sup>3</sup> **MP** 63-64 °C **BP** Decomp.  
158 °C **FP** 74 °C **SOL** EA,A,M

Matrix	Cat. No.	Unit
NEAT	P-385N	10 mg
100 µg/mL in MeOH	P-385S	1 mL

## Dodine

1-Dodecylguanidinium acetate

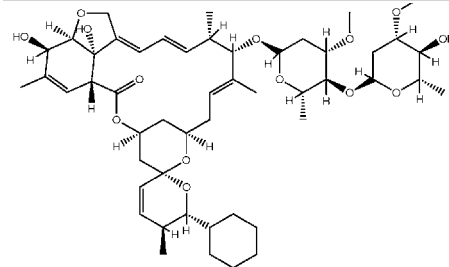


Cyprex

**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 **MP** 136 °C **BP** Decomp. 200 °C  
**SOL** M,CN,A,W

Matrix	Cat. No.	Unit
NEAT	P-386N	10 mg
100 µg/mL in MeOH	P-386S	1 mL

## Doramectin



**CAS** 117704-25-3 **MF** C<sub>50</sub>H<sub>74</sub>O<sub>14</sub> **MW** 899.11 **PS** S  
**SG** 1.35 g/cm<sup>3</sup> **MP** 116-119 °C **SOL** CN

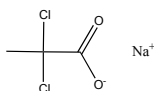
Matrix	Cat. No.	Unit
NEAT	P-935N	10 mg
100 µg/mL in AcCN	P-935S-CN	1 mL

**2,4-DP**, see *Dichlorprop*

# Pesticide Standards

## DPA Sodium

Sodium 2,2-dichloropropionate



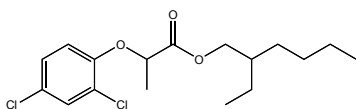
*Dalapon-sodium*

**CAS** 127-20-8 **MF** C<sub>3</sub>H<sub>3</sub>Cl<sub>2</sub>NaO<sub>2</sub> **MW** 164.95 **PS** S  
**SG** 1.74 g/cm<sup>3</sup> **MP** Decomp. 167 °C **SOL** M,A

Matrix	Cat. No.	Unit
NEAT	P-1348N	10 mg
100 µg/mL in MeOH	P-1348S	1 mL

## 2,4-DP ethyl hexyl

2-Ethylhexyl 2-(2,4-dichlorophenoxy)propionate



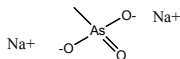
*Dichlorprop, 2-ethylhexyl ester*

**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  
**BP** >130 °C **FP** 100 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-429N	10 mg
100 µg/mL in MeOH	P-429S	1 mL

## DSMA

Disodium methane arsonate hexahydrate

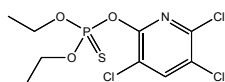


**CAS** 144-21-8 **MF** CH<sub>3</sub>AsNa<sub>2</sub>O<sub>3</sub> **MW** 183.94 **PS** S  
**SG** 1.15 g/cm<sup>3</sup> **MP** >300 °C **SOL** M

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



*Brodan, Chlorpyrifos, Eradex*

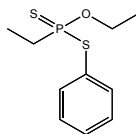
**CAS** 2921-88-2 **MF** C<sub>9</sub>H<sub>11</sub>Cl<sub>3</sub>NO<sub>3</sub>PS **MW** 350.59  
**PS** S **SG** 1.51 g/cm<sup>3</sup> **MP** 37-38 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-094N	10 mg
100 µg/mL in MeOH	P-094S	1 mL
1000 µg/mL in MeOH	P-094S-10X	1 mL

*Dybar, see Fenuron*

## Dyfonate

O-Ethyl S-phenyl (RS)-ethylphosphonodithioate



*Fonofos*

**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> **BP** 130 °C (0.1mm Hg) **FP** 179 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-087N	10 mg
100 µg/mL in MeOH	P-087S	1 mL
100 µg/mL in Hexane	P-087S-H	1 mL

*Dymid, see Diphenamid*

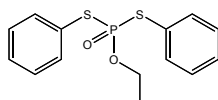
*Dymron, see Daimuron*

*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  
**SG** 1.27 g/cm<sup>3</sup> **BP** 449 °C **FP** 115 °C  
**SOL** H,D,IPA,T,CN,M

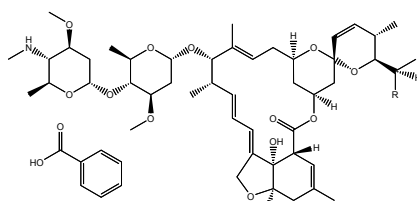
Matrix	Cat. No.	Unit
NEAT	P-368N	10 mg
100 µg/mL in MeOH	P-368S	1 mL

*Ebufos, see Cadusafos*

*Ekatin, see Thiometon*

## Emamectin-benzoate

(4'R)-4''-Deoxy-4''-(methylamino)avermectin B1 benzoate (1:1)



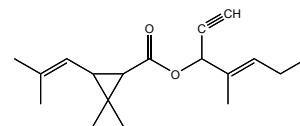
**CAS** 155569-91-8 **MF** C<sub>55</sub>H<sub>79</sub>NO<sub>15</sub> or C<sub>56</sub>H<sub>81</sub>NO<sub>15</sub>  
**MW** 994.21 or 1008.24 **MP** 146-150 °C **SOL** M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-996N-5MG	5 mg
100 µg/mL in MeOH	P-996S	1 mL

*Embassador™, see Diniconazol*

## 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> **BP** 296 °C **SOL** H,A,M

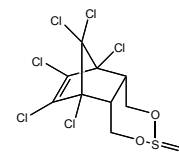
Matrix	Cat. No.	Unit
NEAT	P-708N	10 mg

*alpha-Endosulfan, see Endosulfan I*

*beta-Endosulfan, see Endosulfan II*

## Endosulfan I

endo-1,4,5,6,7,7-Hexachloro-5-norbomene-2,3-dimethanol, cyclic sulfite



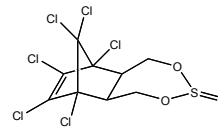
*alpha-Endosulfan, alpha-Thiodan*

**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  
**SG** 1.8 g/cm<sup>3</sup> **MP** 109.2 °C **BP** 401 °C **FP** 226 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-091N	10 mg
100 µg/mL in MeOH	P-091S	1 mL
1000 µg/mL in MeOH	P-091S-10X	1 mL

## Endosulfan II

3-alpha,5a-alpha,6-beta,9-beta,9a-alpha-(1,4,5,6,7,7-Hexachloro-8,9,10-trinorbom-5-ene-2,3-ylenebismethylene) sulfite



*beta-Endosulfan, Thiodan II*

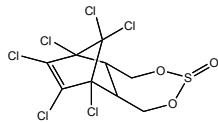
**CAS** 33213-65-9 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>6</sub>O<sub>3</sub>S **MW** 406.91 **PS** S  
**SG** 1.8 g/cm<sup>3</sup> **MP** 207-209 °C **BP** 401 °C  
**FP** 226 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-092N	10 mg
100 µg/mL in MeOH	P-092S	1 mL
1000 µg/mL in MeOH	P-092S-10X	1 mL

# Pesticide Standards

## Endosulfan, mixed isomers

(1,4,5,6,7,7-Hexachloro-8,9,10-trinorborn-5-en-2,3-ylenebismethylene)sulfite

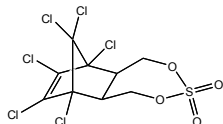


**CAS** 115-29-7 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>6</sub>O<sub>3</sub>S **MW** 406.92 **PS S**  
**SG** 1.80 g/cm<sup>3</sup> **MP** 106 °C **SOL** M,A,D,H,T,EA

Matrix	Cat. No.	Unit
NEAT	P-435N	10 mg
100 µg/mL in MeOH	P-435S	1 mL
1000 µg/mL in MeOH	P-435S-10X	1 mL

## Endosulfan sulfate

Hexachloro-hexahydro-methano-benzodioxathiepin-dioxide

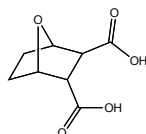


**CAS** 1031-07-8 **MF** C<sub>9</sub>H<sub>6</sub>Cl<sub>6</sub>O<sub>4</sub>S **MW** 422.92 **PS S**  
**SG** 1.94 g/cm<sup>3</sup> **MP** 180 °C **SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-145N	10 mg
100 µg/mL in MeOH	P-145S	1 mL
1000 µg/mL in MeOH	P-145S-10X	1 mL

## Endothall ▲

7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid



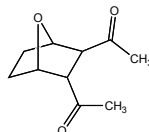
3,6-Endoxohexahydrophthalic acid

**CAS** 145-73-3 **MF** C<sub>8</sub>H<sub>10</sub>O<sub>5</sub> **MW** 186.16 **PS S**  
**SG** 1.43 g/cm<sup>3</sup> **MP** 144 °C **SOL** M,A,CN,IPA,W

Matrix	Cat. No.	Unit
NEAT	P-183N	10 mg
100 µg/mL in MeOH	P-183S ▲	1 mL
1000 µg/mL in MeOH	P-183S-10X▲	1 mL

## Endothall dimethyl ester

Dimethyl 7-oxabicyclo[2.2.1]heptane-2,3-dicarboxylate



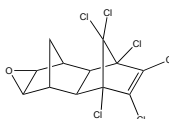
**CAS** N/A **MF** C<sub>10</sub>H<sub>14</sub>O<sub>3</sub> **MW** 182.22 **PS S**  
**MP** 69-70 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-603N	10 mg
100 µg/mL in MeOH	P-603S	1 mL

3,6-Endoxohexahydrophthalic acid, see Endothall

## Endrin

Hexachloroepoxyoctahydro-endo,endo-dimethanonaphthalene



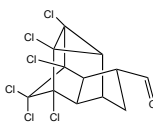
Hexadrin

**CAS** 72-20-8 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O **MW** 380.91 **PS S**  
**SG** 1.84 g/cm<sup>3</sup> **MP** 245 °C (decomp.)  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-045N	10 mg
100 µg/mL in MeOH	P-045S	1 mL
1000 µg/mL in MeOH	P-045S-10X	1 mL

## Endrin aldehyde

(1alpha,2beta,2abeta,4beta,4abeta,5beta,6beta,6bbeta,7R\*)-2,2a,3,3,4,7-Hexachlorodecahydro-1,2,4-methenocyclopenta(cd)pentallene-5-carboxaldehyde

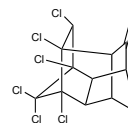


**CAS** 7421-93-4 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O **MW** 380.91 **PS S**  
**MP** 155 °C **SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-046S	1 mL
1000 µg/mL in MeOH	P-046S-10X	1 mL

## Endrin ketone

Hexachloro-decahydro-metheno-3H-cyclopenta(a)pentallene-3-one



delta-Ketoendrin

**CAS** 53494-70-5 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O **MW** 380.91 **PS S**  
**SG** 1.87 g/cm<sup>3</sup> **MP** 285 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-146N	10 mg
100 µg/mL in MeOH	P-146S	1 mL

Enide, see Diphenamid

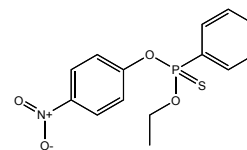
Enilconazole, see Imazalil

ENT 8184, see MGK-264

Entex, see Fenthion

## EPN

O-Ethyl O-4-nitrophenyl phenylphosphonothioate

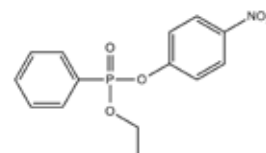


**CAS** 2104-64-5 **MF** C<sub>14</sub>H<sub>14</sub>NO<sub>4</sub>PS **MW** 323.32 **PS S**  
**SG** 1.27 g/cm<sup>3</sup> **MP** 35 °C **BP** 215 °C (5mm Hg)  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-220N	10 mg
100 µg/mL in Acetone	P-220S-A	1 mL
1000 µg/mL in Hexane	P-220S-H-10X	1 mL

## EPN Oxon

Ethyl 4-nitrophenyl phenylphosphonate



**CAS** 2012-00-2 **MF** C<sub>14</sub>H<sub>14</sub>NO<sub>3</sub>P **MW** 307.24 **PS S**  
**MP** 33 °C **SOL** A

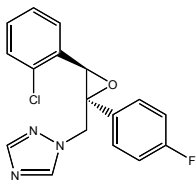
Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-1345S-A	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## Epoxiconazole

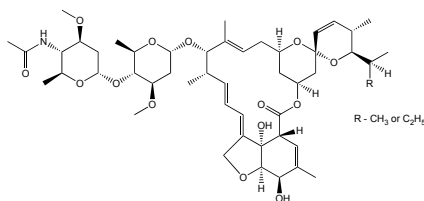
(2RS,3SR)-1-[3-(2-Chlorophenyl)-2,3-epoxy-2-(4-fluorophenyl)propyl]-1H-1,2,4-triazole



**CAS** 133855-98-8 **MF** C<sub>17</sub>H<sub>13</sub>ClFNO<sub>3</sub> **MW** 329.76  
**PS S** **SG** 1.38 g/cm<sup>3</sup> **MP** 136-137 °C  
**BP** Decomp. 310 °C **FP** >200 °C  
**SOL** EA,A,T,D,CN

Matrix	Cat. No.	Unit
NEAT	P-784N	10 mg
100 µg/mL in MeOH	P-784S	1 mL

## Eprinomectin



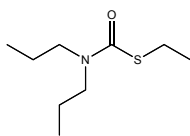
**CAS** 123997-26-2 **MF** C<sub>48</sub>H<sub>73</sub>NO<sub>14</sub> or C<sub>50</sub>H<sub>75</sub>NO<sub>14</sub>  
**MW** 900.10 or 914.13 **PS S** **MP** 180 °C  
**SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-959S-CN	1 mL

*Eptam*, see *EPTC*

## EPTC

S-Ethyl di-N,N-propylthiocarbamate



*Eptam*

**CAS** 759-94-4 **MF** C<sub>9</sub>H<sub>19</sub>NOS **MW** 189.32 **PS L**  
**SG** 0.95 g/cm<sup>3</sup> **FP** 110 °C  
**SOL** M,A,D,H,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-238N	10 mg
100 µg/mL in MeOH	P-238S	1 mL

*Eradex*, see *Dursban*

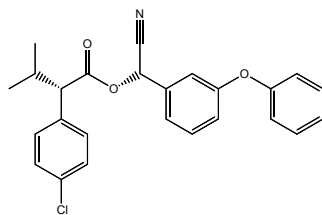
*Esbioi*, see *S-Bioallethrin*

*Esbiothrin*, see *Allethrin*

**1,2-Ethanediylbiscarbamodithioic acid, zinc complex**, see *Zineb*

## Esfenvalerate

4-Chloro-alpha-(1-methylethyl) benzeneacetic acid, (S-(R\*,R\*))cyano(3-phenoxyphenyl)methyl ester



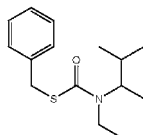
*Asana*

**CAS** 66230-04-4 **MF** C<sub>26</sub>H<sub>22</sub>ClNO<sub>3</sub> **MW** 419.9 **PS S**  
**SG** 1.26 g/cm<sup>3</sup> **MP** 59-60 °C  
**SOL** M,A,D,H,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-525N	10 mg
100 µg/mL in MeOH	P-525S	1 mL

## Esprocarb

S-Benzyl (RS)-1,2-dimethylpropyl(ethyl)thiocarbamate

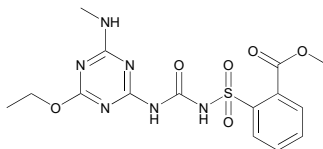


**CAS** 85785-20-2 **MF** C<sub>15</sub>H<sub>23</sub>NOS **MW** 265.42 **PS L**  
**SG** 1.03 g/cm<sup>3</sup> **BP** 135 °C (35mm Hg) **SOL** M,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-617S	1 mL

## Ethametsulfuron-methyl

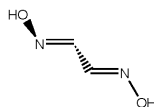
Methyl 2-[(4-ethoxy-6-methylamino-1,3,5-triazin-2-yl) carbamoylsulfamoyl]benzoate



**CAS** 97780-06-8 **MF** C<sub>15</sub>H<sub>18</sub>N<sub>6</sub>O<sub>6</sub>S **MW** 410.41  
**PS S** **SG** 1.60 g/cm<sup>3</sup> **MP** 197 °C **BP** 317 °C  
**SOL** A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1098S-CN	1 mL
1000 µg/mL in AcCN	P-1098S-CN-10X	1 mL

## Ethanedial dioxime

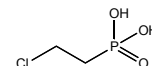


**CAS** 557-30-2 **MF** C<sub>2</sub>H<sub>4</sub>N<sub>2</sub>O<sub>2</sub> **MW** 88.07 **PS S**  
**SG** 1.14 g/cm<sup>3</sup> **MP** 168-171 °C **FP** 188 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1070N	10 mg
100 µg/mL in MeOH	P-1070S	1 mL

## Ethephon

(2-Chloroethyl)phosphonic acid

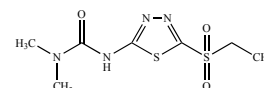


**CAS** 16672-87-0 **MF** C<sub>2</sub>H<sub>6</sub>ClO<sub>3</sub>P **MW** 144.49 **PS S**  
**SG** 1.41 g/cm<sup>3</sup> **MP** 75 °C **BP** Decomp. 250 °C  
**SOL** M,A,EA,CN,W

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

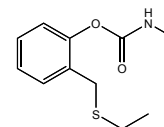


**CAS** 30043-49-3 **MF** C<sub>7</sub>H<sub>12</sub>N<sub>4</sub>O<sub>3</sub>S<sub>2</sub> **MW** 264.35  
**PS S** **SG** 1.44 g/cm<sup>3</sup> **MP** 156 °C **FP** >100 °C  
**SOL** M,A,CN,H,IPA

Matrix	Cat. No.	Unit
NEAT	P-364N	10 mg
100 µg/mL in MeOH	P-364S	1 mL

## Ethiofencarb

alpha-Ethylthio-o-tolyl methylcarbamate



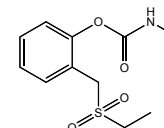
*Croneton*

**CAS** 29973-13-5 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub>S **MW** 225.31  
**PS S** **SG** 1.23 g/cm<sup>3</sup> **MP** 33-34 °C **FP** 123 °C  
**SOL** M,A,T,CN,D,IPA,W

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



*Croneton sulfone*

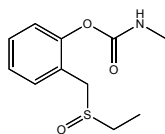
**CAS** 53380-23-7 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>4</sub>S **MW** 257.31  
**PS S** **SG** 1.25 g/cm<sup>3</sup> **MP** 134-135 °C **BP** 449 °C  
**FP** 226 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-824S-CN	1 mL

# Pesticide Standards

## Ethiofencarb sulfoxide

2-((Ethylsulfanyl)methyl)phenol methylcarbamate

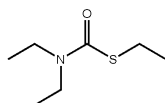


**CAS** 53380-22-6 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>3</sub>S **MW** 241.31  
**SG** 1.24 g/cm<sup>3</sup> **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-825S-CN	1 mL

## Ethiolat

S-Ethyl diethylcarbamothioate

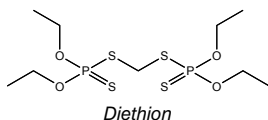


**CAS** 2941-55-1 **MF** C<sub>8</sub>H<sub>15</sub>NOS **MW** 161.27 **PS** L  
**SG** 0.97 g/cm<sup>3</sup> **BP** 142-145 °C (86mm Hg)  
**SOL** A,CN

Matrix	Cat. No.	Unit
NEAT	P-785N	10 mg
100 µg/mL in AcCN	P-785S-CN	1 mL

## Ethion

O,O,O',O'-Tetraethyl S,S'-methylene bis(phosphorodithioate)



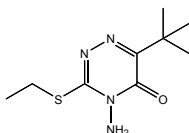
Diethion

**CAS** 563-12-2 **MF** C<sub>9</sub>H<sub>22</sub>O<sub>4</sub>P<sub>2</sub>S<sub>4</sub> **MW** 384.48 **PS** L  
**SG** 1.22 g/cm<sup>3</sup> **BP** 164-165 °C (0.3mm Hg)  
**FP** 176 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-048N	10 mg
100 µg/mL in MeOH	P-048S	1 mL
1000 µg/mL in Hexane	P-048S-H-10X	1 mL

## Ethiozin

4-Amino-6-(1,1-dimethylethyl)-3-(ethylthio)-1,2,4-triazine-5(4H)-one

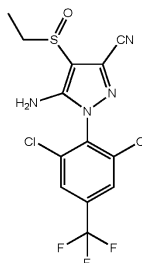


**CAS** 64529-56-2 **MF** C<sub>8</sub>H<sub>16</sub>N<sub>4</sub>OS **MW** 228.35 **PS** S  
**SG** 1.27 g/cm<sup>3</sup> **MP** 96-98 °C **SOL** D,IPA,T,M

Matrix	Cat. No.	Unit
NEAT	P-660N	10 mg
100 µg/mL in MeOH	P-660S	1 mL

## Ethiprole

5-Amino-1-(2,6-dichloro-a,a,a-trifluoro-p-tolyl)-4-ethylsulfanylpyrazole-3-carbonitrile

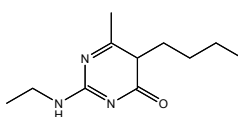


**CAS** 181587-01-9 **MF** C<sub>13</sub>H<sub>9</sub>Cl<sub>2</sub>F<sub>3</sub>N<sub>4</sub>OS **MW** 397.20  
**PS** S **SG** 1.54 g/cm<sup>3</sup> **SOL** CN

Matrix	Cat. No.	Unit
Neat	P-964N	10 mg
100 µg/mL in AcCN	P-964S-CN	1 mL

## Ethirimol

5-Butyl-2-ethylamino-6-methylpyrimidin-4-ol

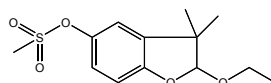


**CAS** 23947-60-6 **MF** C<sub>11</sub>H<sub>19</sub>N<sub>3</sub>O **MW** 209.33  
**PS** S **SG** 1.21 g/cm<sup>3</sup> **MP** 159-160 °C **BP** Decomp.  
**SOL** M,CN

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



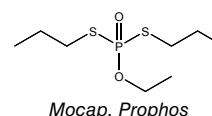
**CAS** 26225-79-6 **MF** C<sub>13</sub>H<sub>18</sub>O<sub>5</sub>S **MW** 286.35 **PS** S  
**SG** 1.3 g/cm<sup>3</sup> **MP** 70-72 °C **BP** Decomp.  
**SOL** M,A,D,CN,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-387N	10 mg
100 µg/mL in MeOH	P-387S	1 mL

*Ethophenprox, see Etofenprox*

## Ethoprop

O-Ethyl S,S-dipropyl phosphorodithioate



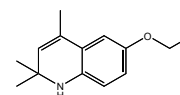
Mocap, Prophos

**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  
**SG** 1.09 g/cm<sup>3</sup> **BP** 296-303 °C **FP** >100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-129N	10 mg
100 µg/mL in MeOH	P-129S	1 mL
1000 µg/mL in Hexane	P-129S-H-10X	1 mL

## Ethoxyquin

1,2-Dihydro-6-ethoxy-2,2,4-trimethyl quinoline

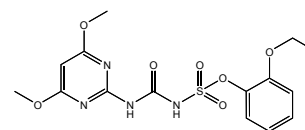


**CAS** 91-53-2 **MF** C<sub>14</sub>H<sub>19</sub>NO **MW** 217.34 **PS** L  
**SG** 1.03 g/cm<sup>3</sup> **BP** 296-298 °C **SOL** M,A,EA,T,CN

Matrix	Cat. No.	Unit
NEAT	P-388N	10 mg
100 µg/mL in AcCN	P-388S-CN	1 mL

## Ethoxysulfuron

1-(4,6-Dimethoxypyrimidin-2-yl)-3-(2-ethoxyphenoxysulfonyl)urea

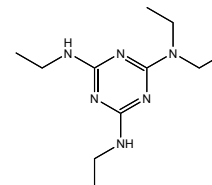


**CAS** 126801-58-9 **MF** C<sub>15</sub>H<sub>18</sub>N<sub>4</sub>O<sub>7</sub>S **MW** 398.39  
**PS** S **SG** 1.44 g/cm<sup>3</sup> **MP** 150 °C  
**SOL** H,T,A,M,CN,D,IPA,EA

Matrix	Cat. No.	Unit
NEAT	P-847N	10 mg
100 µg/mL in AcCN	P-847S-CN	1 mL

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

2,4-bis(Ethylamino)-6-diethylamino-1,3,5-triazine



**CAS** N/A **MF** C<sub>11</sub>H<sub>22</sub>N<sub>6</sub> **MW** 238.33 **PS** L **SOL** MC

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

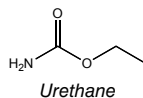


*Ethylan, see Perthane*

*Ethyl azinphos, see Azinphos-ethyl*

## Ethyl carbamate

Carbamic acid, ethyl ester

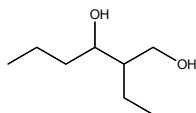


**CAS** 51-79-6 **MF** C<sub>3</sub>H<sub>7</sub>NO<sub>2</sub> **MW** 89.11 **PS** S  
**SG** 0.99 g/cm<sup>3</sup> **MP** 48-50 °C **BP** 182-184 °C  
**FP** 92 °C **SOL** M,D

Matrix	Cat. No.	Unit
NEAT	P-419N	10 mg
100 µg/mL in MeOH	P-419S	1 mL

*Ethyl 2,4-Dichlorophenoxyacetate, see 2,4-D Ethyl ester*

## Ethyl hexanediol (mixed isomers)

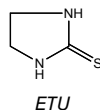


**CAS** 94-96-2 **MF** C<sub>8</sub>H<sub>18</sub>O<sub>2</sub> **MW** 146.26 **PS** L  
**SG** 0.93 g/cm<sup>3</sup> **BP** 244.2 °C **FP** 127 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-389N	10 mg
100 µg/mL in MeOH	P-389S	1 mL

## Ethylene thiourea

2-Imidazolidinethione

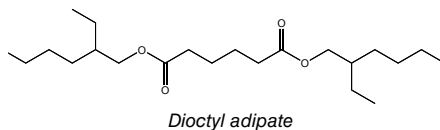


**CAS** 96-45-7 **MF** C<sub>3</sub>H<sub>6</sub>N<sub>2</sub>S **MW** 102.16 **PS** S  
**SG** 1.42 g/cm<sup>3</sup> **MP** 196-200 °C **BP** 347 °C **FP** 252 °C  
**SOL** M,H,EA

Matrix	Cat. No.	Unit
NEAT	P-588N	10 mg
100 µg/mL in MeOH	P-588S	1 mL

## bis(2-Ethylhexyl)adipate

Di(2-ethylhexyl)adipate



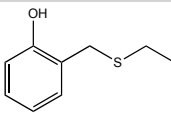
**CAS** 103-23-1 **MF** C<sub>22</sub>H<sub>42</sub>O<sub>4</sub> **MW** 370.57 **PS** L  
**SG** 0.92 g/cm<sup>3</sup> **BP** 175 °C (2mm Hg) **FP** 196 °C  
**SOL** M,A,D,H,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-233N	10 mg
100 µg/mL in MeOH	P-233S	1 mL
1000 µg/mL in MeOH	P-233S-10X	1 mL

*Ethylan, see Perthane*

*Ethyl parathion, see Parathion*

## 2-Ethylthiomethyl phenol

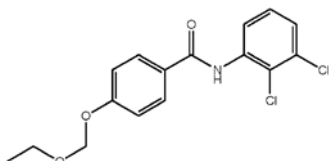


**CAS** N/A **MF** C<sub>9</sub>H<sub>12</sub>OS **MW** 168.26 **SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-423S	1 mL
1000 µg/mL in MeOH	P-423S-10X	1 mL

## Etobenzanid

2',3'-Dichloro-4-ethoxymethoxybenzanilide



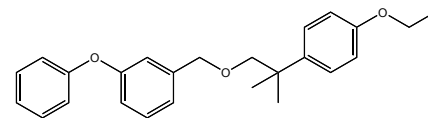
**CAS** 79540-50-4 **MF** C<sub>16</sub>H<sub>15</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 340.20  
**PS** S **MP** 92-93 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1136S-CN	1 mL

*Etoc, see Prallethrin*

## Etofenprox

2-(4-Ethoxyphenyl)-2-methylpropyl  
3-phenoxybenzyl ether



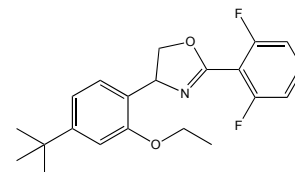
*Ethophenprox*

**CAS** 80844-07-1 **MF** C<sub>25</sub>H<sub>28</sub>O<sub>3</sub> **MW** 376.49 **PS** S  
**SG** 1.17 g/cm<sup>3</sup> **MP** 37 °C **BP** 200 °C (decomp.)  
**SOL** EA,A,M,CN,T,H,D

Matrix	Cat. No.	Unit
NEAT	P-848N	10 mg
100 µg/mL in AcCN	P-848S-CN	1 mL

## Etoazole

2-(2,6-Difluorophenyl)-4-[4-(1,1-dimethylethyl)-2-ethoxyphenyl]-4,5-dihydrooxazole



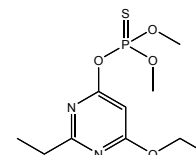
**CAS** 153233-91-1 **MF** C<sub>21</sub>H<sub>23</sub>F<sub>2</sub>NO<sub>2</sub> **MW** 359.41  
**PS** S **SG** 1.24 g/cm<sup>3</sup> **MP** 102 °C **FP** 457 °C  
**SOL** M,A,CN,EA,H

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-991S	1 mL

*Etridiazole, see Terrazole*

## Etrimfos

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 **SG** 1.20 g/cm<sup>3</sup> **FP** >100 °C **SOL** M,A,D,T,CN

Matrix	Cat. No.	Unit
NEAT	P-480N	10 mg
100 µg/mL in MeOH	P-480S	1 mL

*Euparen, see Dichlofluanid*

*ETU, see Ethylene thiourea*

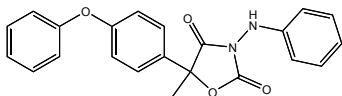
*Facet, see Quinlorac*

*Famophos, see Famphur*

# Pesticide Standards

## Famoxadon

3-Anilino-5-methyl-5-(4-phenoxyphenyl)-1,3-oxazolidine-2,4-dione

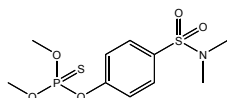


CAS 131807-57-3 MF C<sub>22</sub>H<sub>18</sub>N<sub>2</sub>O MW 374.39 PS S  
SG 1.31 g/cm<sup>3</sup> MP 142 °C SOL A,T,H,EA,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-849S-CN	1 mL

## Famphur

O-4-Dimethylsulfamoylphenyl  
O,O-dimethyl phosphorothioate



Famphos

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  
SG 1.18 g/cm<sup>3</sup> MP 52.5-53.5 °C FP >100 °C  
SOL M,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-147N	10 mg
100 µg/mL in MeOH	P-147S	1 mL

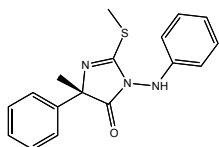
Faneron, see Bromofenoxim

Far-Go, see Triallate

Fenac, see Fenatrol

## Fenamidone

(S)-1-Anilino-4-methyl-2-methylthio-4-phenyl-2-imidazolin-5-one

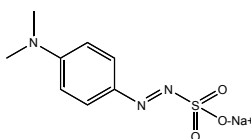


CAS 161326-34-7 MF C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>OS MW 311.4  
PS S SG 1.29 g/cm<sup>3</sup> MP 137 °C BP Decomp.  
240 °C SOL M,A,CN,EA,D

Matrix	Cat. No.	Unit
NEAT	P-850N	10 mg
100 µg/mL in AcCN	P-850S-CN	1 mL

## Fenamiosulf

Sodium 4-dimethylaminobenzenediazosulfonate



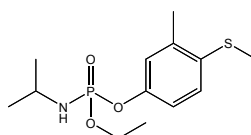
Dexon, Lesan

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 MP Decomp. 200 °C SOL M

Matrix	Cat. No.	Unit
NEAT	P-058N	10 mg
100 µg/mL in MeOH	P-058S	1 mL
1000 µg/mL in MeOH	P-058S-10X	1 mL

## Fenamiphos

Ethyl 4-methylthio-m-tolyl isopropylphosphoramidate



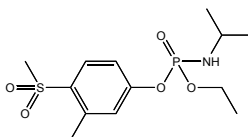
Phenamiphos

CAS 22224-92-6 MF C<sub>13</sub>H<sub>22</sub>NO<sub>3</sub>PS MW 303.36  
PS S SG 1.19 g/cm<sup>3</sup> MP 46 °C  
SOL M,A,D,H,T,CN,TP,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-114N	10 mg
100 µg/mL in MeOH	P-114S	1 mL

## Fenamiphos sulfone

Ethyl 3-methyl-4-(methylsulfonyl)phenyl isopropylphosphoramidate

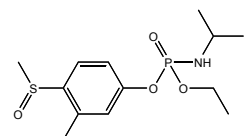


CAS 31972-44-8 MF C<sub>13</sub>H<sub>22</sub>NO<sub>3</sub>PS MW 335.36  
PS S SG 1.21 g/cm<sup>3</sup> FP >80 °C SOL M,T,CN

Matrix	Cat. No.	Unit
NEAT	P-623N	10 mg
100 µg/mL in MeOH	P-623S	1 mL

## Fenamiphos sulfoxide

Ethyl 3-methyl-4-(methylsulfinyl)phenyl isopropylphosphoramidate



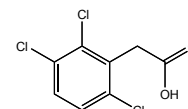
CAS 31972-43-7 MF C<sub>13</sub>H<sub>22</sub>NO<sub>3</sub>PS MW 319.36  
PS S SG 1.22 g/cm<sup>3</sup> MP 65-67 °C FP >65 °C  
SOL M,T,CN

Matrix	Cat. No.	Unit
NEAT	P-622N	10 mg
100 µg/mL in MeOH	P-622S	1 mL

Fenarimol, see Bloc

## Fenatrol

2,3,6-Trichlorophenylacetic acid



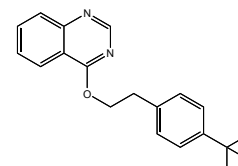
Chlorfenac, Fenac

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  
MP 156 °C SOL M

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

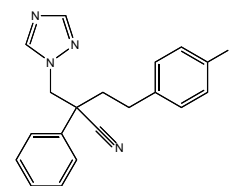


CAS 120928-09-8 MF C<sub>20</sub>H<sub>22</sub>N<sub>2</sub>O MW 306.4  
SG 1.16 g/cm<sup>3</sup> MP 78-80 °C SOL M,A,H,CN,T,D,IPA

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



Indar

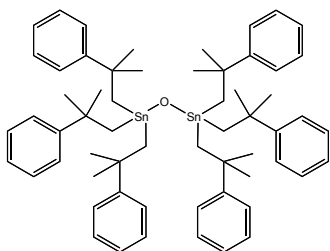
CAS 114369-43-6 MF C<sub>19</sub>H<sub>17</sub>ClN<sub>4</sub> MW 336.85  
PS S SG 1.28 g/cm<sup>3</sup> MP 124-126 °C  
SOL M,A,D,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-662N	10 mg
100 µg/mL in MeOH	P-662S	1 mL

# Pesticide Standards

## Fenbutatin oxide

hexakis(2-Methyl-2-phenylpropyl)distannoxane



Vendex

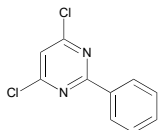
CAS 13356-08-6 MF C<sub>60</sub>H<sub>78</sub>OSn<sub>2</sub> MW 1052.68  
PS S SG 1.31 g/cm<sup>3</sup> MP 138-139 °C  
BP 235-240 °C (0.05mm Hg)  
SOL H,T,A,D,M,CN,IPA,EA

Matrix	Cat. No.	Unit
NEAT	P-481N	10 mg
100 µg/mL in Acetone	P-481S-A	1 mL

Fenchlorphos, see Ronnel

## Fenclorim

4,6-Dichloro-2-phenylpyrimidine

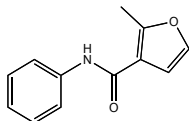


CAS 3740-92-9 MF C<sub>10</sub>H<sub>8</sub>Cl<sub>2</sub>N<sub>2</sub> MW 225.07 PS S  
SG 1.5 g/cm<sup>3</sup> MP 97 °C BP decomp. 400 °C SOL M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1293S	1 mL
1000 µg/mL in MeOH	P-1293S-10X	1 mL

## Fenfuram

2-Methylfuran-3-carboxanilide



Pano-ram

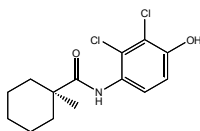
CAS 24691-80-3 MF C<sub>12</sub>H<sub>11</sub>NO<sub>2</sub> MW 201.22 PS S  
MP 109-110 °C SOL A,M

Matrix	Cat. No.	Unit
NEAT	P-896N	10 mg
100 µg/mL in MeOH	P-896S	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## Fenhexamid

N-(2,3-Dichloro-4-hydroxyphenyl)-1-methylcyclohexanecarboxamide

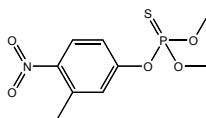


CAS 126833-17-8 MF C<sub>14</sub>H<sub>17</sub>Cl<sub>2</sub>NO<sub>2</sub> MW 302.2  
PS S SG 1.34 g/cm<sup>3</sup> MP 153 °C  
SOL A,D,H,T,M,CN,IPA

Matrix	Cat. No.	Unit
NEAT	P-783N	10 mg
100 µg/mL in MeOH	P-783S	1 mL

## Fenitrothion

O,O-Dimethyl O-4-nitro-m-tolyl phosphorothioate



MEP

CAS 122-14-5 MF C<sub>9</sub>H<sub>12</sub>NO<sub>5</sub>PS MW 277.24 PS L  
SG 1.33 g/cm<sup>3</sup> BP 140-145 °C (0.1mm Hg)  
FP 188 °C SOL M,A,D,H,T,CN,TP,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-259N	10 mg
100 µg/mL in MeOH	P-259S	1 mL

Fenitrothion-oxon, see MEP Oxon

Fenobucarb, see Baycarb

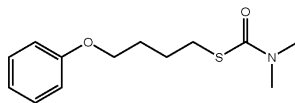
Fenoprop, see Silvex

Fenoprop 2-ethylhexyl ester, see Silvex 2-ethylhexyl ester

Fenoprop methyl ester, see Silvex methyl ester

## Fenothiocarb

S-(4-Phenoxybutyl) dimethylcarbamothioate

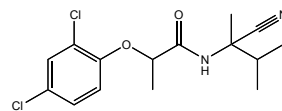


CAS 62850-32-2 MF C<sub>13</sub>H<sub>19</sub>NO<sub>2</sub>S MW 253.36  
PS S SG 1.21 g/cm<sup>3</sup> MP 39-40 °C BP 444 °C  
SOL CN,A,M,H,T,EA,D

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1021S	1 mL
50 µg/mL in MeOH	P-1021S-0.5X	1 mL

## Fenoxanil

N-(1-Cyano-1,2-dimethylpropyl)-2-(2,4-dichlorophenoxy)propanamide

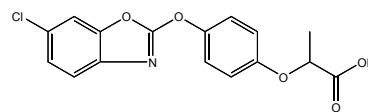


CAS 115852-48-7 MF C<sub>15</sub>H<sub>18</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub> MW 329.22  
PS S SG 1.22 g/cm<sup>3</sup> MP 71 °C  
BP Decomp. 420 °C FP 420 °C SOL M,A,W

Matrix	Cat. No.	Unit
NEAT	P-997N	10 mg
100 µg/mL in MeOH	P-997S	1 mL

## Fenoxaprop

2-[4-[(6-Chloro-2-benzoxazolyl)oxy]phenoxy] propanoic acid

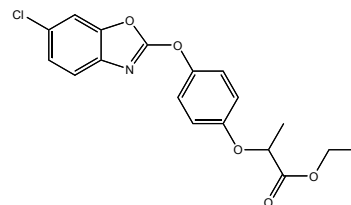


CAS 95617-09-7 MF C<sub>16</sub>H<sub>12</sub>ClNO<sub>5</sub> MW 333.72  
PS S SG 1.42 g/cm<sup>3</sup> MP 166 °C SOL A

Matrix	Cat. No.	Unit
NEAT	P-884N	10 mg
100 µg/mL in MeOH	P-884S ▲	1 mL

## Fenoxaprop-ethyl

Ethyl 2-[4-[(6-chloro-2-benzoxazolyl)oxy]phenoxy] propanoate

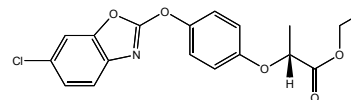


CAS 66441-23-4 MF C<sub>18</sub>H<sub>16</sub>ClNO<sub>5</sub> MW 361.8 PS S  
SG 1.30 g/cm<sup>3</sup> MP 84-85 °C  
SOL M,A,T,CN,TP,EA,H

Matrix	Cat. No.	Unit
NEAT	P-365N	10 mg
100 µg/mL in MeOH	P-365S	1 mL

## Fenoxaprop-p-ethyl

(R)-2-[4-[(6-chloro-1,3-benzoxazolyl)oxy]phenoxy] propanoate ethyl



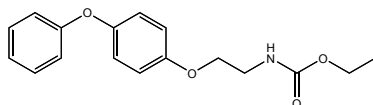
CAS 71283-80-2 MF C<sub>18</sub>H<sub>16</sub>ClNO<sub>5</sub> MW 361.78  
PS S SG 1.31 g/cm<sup>3</sup> MP 89-91 °C BP 478 °C  
FP 242 °C SOL H,A,M,EA,CN,T

Matrix	Cat. No.	Unit
NEAT	P-694N	10 mg
100 µg/mL in MeOH	P-694S	1 mL

# Pesticide Standards

## Fenoxycarb

Ethyl 2-(4-phenoxyphenoxy)ethylcarbamate



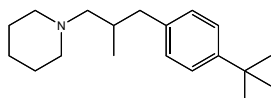
**CAS** 72940-01-8 **MF** C<sub>19</sub>H<sub>19</sub>NO<sub>4</sub> **MW** 301.37 **PS** S  
**SG** 1.23 g/cm<sup>3</sup> **MP** 53 °C **FP** 224 °C  
**SOL** M,CN,A,T

Matrix	Cat. No.	Unit
NEAT	P-686N	10 mg
100 µg/mL in MeOH	P-686S	1 mL

*Fenpropathrin, see Danitol*

## Fenpropidin

1-(3-(4-tert-Butylphenyl)-2-methylpropyl)piperidine

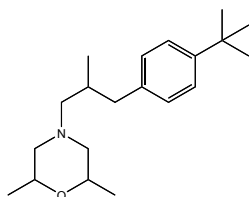


**CAS** 67306-00-7 **MF** C<sub>19</sub>H<sub>29</sub>N **MW** 273.46 **PS** L  
**SG** 0.91 g/cm<sup>3</sup> **BP** 100 °C (0.004mm Hg)  
**FP** 156 °C **SOL** M,A,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-802N	10 mg
100 µg/mL in MeOH	P-802S	1 mL

## Fenpropimorph

cis-4-[3-(4-tert-Butylphenyl)-2-methylpropyl]-2,6-dimethylmorpholine

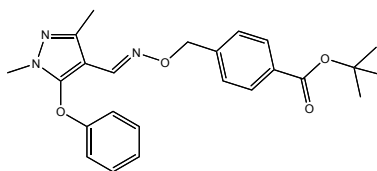


**CAS** 67564-91-4 **MF** C<sub>20</sub>H<sub>33</sub>NO **MW** 303.54 **PS** L  
**SG** 0.93 g/cm<sup>3</sup> **BP** Decomp. 310 °C **FP** 105 °C  
**SOL** A,T,EA,M,CN

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-phenoxypyrazol-4-ylmethyleneamino-oxy)-p-toluate

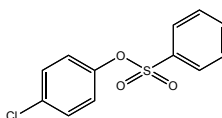


**CAS** 111812-58-9 **MF** C<sub>24</sub>H<sub>27</sub>N<sub>3</sub>O<sub>4</sub> **MW** 421.49  
**PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** 102 °C **FP** 85 °C  
**SOL** M,A,CN,EA,H,T

Matrix	Cat. No.	Unit
NEAT	P-724N	10 mg
100 µg/mL in MeOH	P-724S	1 mL

## Fenson

4-Chlorophenyl benzenesulfonate



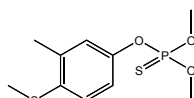
**CAS** 80-38-6 **MF** C<sub>12</sub>H<sub>9</sub>ClO<sub>3</sub>S **MW** 268.72 **PS** S  
**SG** 1.38 g/cm<sup>3</sup> **MP** 59-61 °C **BP** Decomp.  
**FP** >100 °C **SOL** A,CN

Matrix	Cat. No.	Unit
NEAT	P-551N	10 mg
100 µg/mL in MeOH	P-551S	1 mL

*Fensulfothion, see Dasanit*

## Fenthion

O,O-Dimethyl O-4-methylthio-m-tolyl phosphorothioate



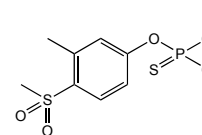
*Baytex, Entex, Mercaptophos*

**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  
**SG** 1.25 g/cm<sup>3</sup> **BP** 87 °C (1.4 Pa) **FP** >100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-148N	10 mg
100 µg/mL in MeOH	P-148S	1 mL
1000 µg/mL in MeOH	P-148S-10X	1 mL
1000 µg/mL in Hexane	P-148S-H-10X	1 mL

## Fenthion sulfone

O,O-Dimethyl O-(4-(methylsulfonyl)-m-tolyl) phosphorothioate

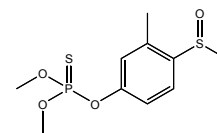


**CAS** 3761-42-0 **MF** C<sub>10</sub>H<sub>15</sub>O<sub>5</sub>PS<sub>2</sub> **MW** 310.33 **PS** S  
**SG** 1.35 g/cm<sup>3</sup> **MP** 78 °C **BP** >348 °C  
**SOL** M,T,TP,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-953S-CN	1 mL

## Fenthion sulfoxide

O,O-Dimethyl O-((4-methylthio)-m-tolyl) phosphorothioate

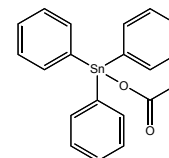


**CAS** 3761-41-9 **MF** C<sub>10</sub>H<sub>15</sub>O<sub>4</sub>PS<sub>2</sub> **MW** 294.33  
**PS** S **SG** 1.32 g/cm<sup>3</sup> **MP** 55-59 °C  
**SOL** M,D,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-1052N	10 mg
100 µg/mL in CH <sub>2</sub> Cl <sub>2</sub>	P-1052S-D	1 mL

## Fentin acetate

Acetoxytriphenylstannane



*Batasan*

**CAS** 900-95-8 **MF** C<sub>20</sub>H<sub>18</sub>O<sub>2</sub>Sn **MW** 409.07 **PS** S  
**SG** 1.55 g/cm<sup>3</sup> **MP** 121-123 °C **FP** 185 °C  
**SOL** D,EA,H,M,T

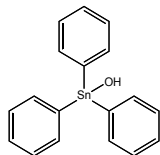
Matrix	Cat. No.	Unit
NEAT	P-680N	10 mg
100 µg/mL in MeOH	P-680S	1 mL

*Fentin chloride, see Triphenyltin chloride*

# Pesticide Standards

## Fentin hydroxide

Triphenylstannylum hydroxide

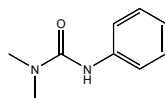


**CAS** 76-87-9 **MF** C<sub>18</sub>H<sub>10</sub>OSn **MW** 367.03 **PS** S  
**SG** 1.54 g/cm<sup>3</sup> **MP** 118-120 °C **FP** 174 °C  
**SOL** CN,A,IPA

Matrix	Cat. No.	Unit
NEAT	P-1042N	10 mg
100 µg/mL in AcCN	P-1042S-CN	1 mL

## Fenuron

1,1-Dimethyl-3-phenylurea



*Dybar*

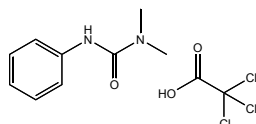
**CAS** 101-42-8 **MF** C<sub>9</sub>H<sub>12</sub>N<sub>2</sub>O **MW** 164.2 **PS** S  
**SG** 1.10 g/cm<sup>3</sup> **MP** 133-134 °C **SOL** M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-004N	10 mg
100 µg/mL in MeOH	P-004S	1 mL

*Fenuron trichloroacetate, see Fenuron-TCA*

## Fenuron TCA

1,1-Dimethyl-3-phenyluronium trichloroacetate



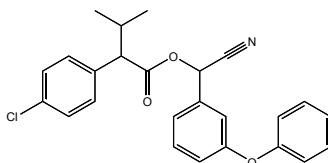
*Fenuron trichloroacetate*

**CAS** 4482-55-7 **MF** C<sub>9</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>·C<sub>2</sub>HCl<sub>3</sub>O<sub>2</sub>  
**MW** 327.59 **PS** S **MP** 65-68 °C **SOL** M,CN

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



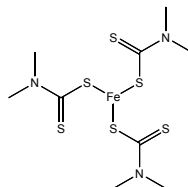
*Belmark, Pydrin*

**CAS** 51630-58-1 **MF** C<sub>25</sub>H<sub>22</sub>ClNO<sub>3</sub> **MW** 419.9 **PS** L  
**SG** 1.18 g/cm<sup>3</sup> **FP** 230 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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>6</sub>S<sub>6</sub>Fe **MW** 416.5  
**PS** S **SG** 0.60 g/cm<sup>3</sup> **MP** 180 °C **SOL** M

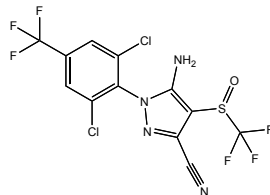
Matrix	Cat. No.	Unit
NEAT	P-110N	10 mg
100 µg/mL in MeOH	P-110S	1 mL

*Ficam, see Bendiocarb*

*Fintryne, see Irgarol*

## Fipronil

(±)-5-Amino-1-(2,6-dichloro-α,α,α-trifluoro-p-tolyl)-4-trifluoromethylsulfanylpyrazole-3-carbonitrile

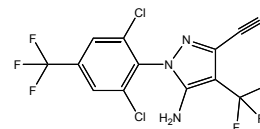


**CAS** 120068-37-3 **MF** C<sub>12</sub>H<sub>4</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>4</sub>OS **MW** 437.16  
**PS** S **SG** 1.71 g/cm<sup>3</sup> **MP** 196-202 °C **BP** Decomp.  
230 °C **SOL** M,A,D,H,T,CN,TP,EA

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

## Fipronil desulfinyl

1H-Pyrazole-3-carbonitrile, 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-(trifluoromethyl)-



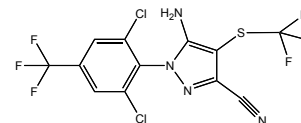
*Desulfinyl fipronil*

**CAS** 205650-65-3 **MF** C<sub>12</sub>H<sub>4</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>4</sub> **MW** 389.08  
**MP** 189-190 °C **SOL** A,D,CN

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

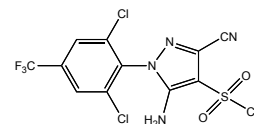


**CAS** 120067-83-6 **MF** C<sub>12</sub>H<sub>4</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>4</sub>S **MW** 421.15  
**PS** S **MP** 169-171 °C **SOL** A,D,CN

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<sub>12</sub>H<sub>4</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>4</sub>O<sub>2</sub>S **PS** S  
**MW** 453.15 **MP** 214-216 °C **SOL** A,D,CN

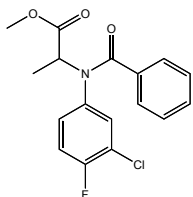
Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-780S-A	1 mL

*Flamprop-isopropyl, see Barnon*

# Pesticide Standards

## Flamprop-methyl

Methyl N-benzoyl-N-(3-chloro-4-fluorophenyl)-DL-alaninate



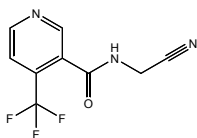
Mataven

**CAS** 52756-25-9 **MF** C<sub>17</sub>H<sub>15</sub>ClFNO<sub>3</sub> **MW** 335.76  
**PS S SG** 1.31 g/cm<sup>3</sup> **MP** 85 °C **FP** >100 °C  
**SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-366N	10 mg
100 µg/mL in MeOH	P-366S	1 mL

## Flonicamid

N-(Cyanomethyl)-4-(trifluoromethyl)-3-pyridinecarboxamide

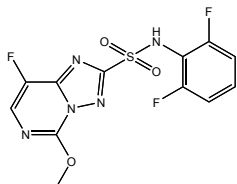


**CAS** 158062-67-0 **MF** C<sub>9</sub>H<sub>6</sub>F<sub>3</sub>N<sub>3</sub>O **MW** 229.16 **PS S SG** 1.54 g/cm<sup>3</sup> **MP** 157-158 °C **BP** Decomp. 313 °C  
**SOL** A,EA,D,T,M,CN,W

Matrix	Cat. No.	Unit
NEAT	P-926N	10 mg
100 µg/mL in MeOH	P-926S	1 mL

## Florasulam

2',6'-Trifluoro-5-methoxy[1,2,4]triazolo [1,5-c]pyrimidine-2-sulfonanilide

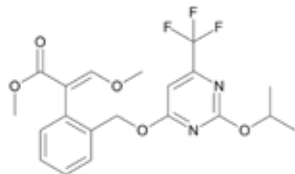


**CAS** 145701-23-1 **MF** C<sub>12</sub>H<sub>6</sub>F<sub>3</sub>N<sub>5</sub>O<sub>3</sub>S **MW** 359.29  
**PS S SG** 1.53 g/cm<sup>3</sup> **MP** 194 °C **SOL** M,A,CN,EA,D

Matrix	Cat. No.	Unit
10 µg/mL in AcCN	P-827S-CN-0.1X	1 mL

## Fluacrypyrim

Methyl (E)-2-[a-[2-isopropoxy-6-(trifluoromethyl)pyrimidin-4-yloxy]-o-tolyl]-3-methoxyacrylate

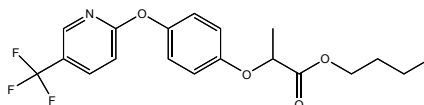


**CAS** 229977-93-9 **MF** C<sub>20</sub>H<sub>21</sub>F<sub>3</sub>N<sub>2</sub>O<sub>5</sub> **MW** 426.39  
**PS S SG** 1.26 g/cm<sup>3</sup> **MP** 108 °C **BP** 530 °C  
**FP** 274 °C **SOL** A,M,CN,D,EA,H

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1056S	1 mL

## Fluazifop-butyl

Butyl 2-(4-((5-(trifluoromethyl)-2-pyridyl)oxy)phenoxy)propionate



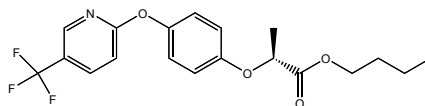
Fusilade

**CAS** 69806-50-4 **MF** C<sub>19</sub>H<sub>20</sub>F<sub>3</sub>NO<sub>4</sub> **MW** 383.36 **PS L SG** 1.21 g/cm<sup>3</sup> **BP** 165 °C (0.02mm Hg) **FP** >38 °C  
**SOL** M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-310N	10 mg
100 µg/mL in MeOH	P-310S	1 mL

## Fluazifop-p-butyl

Butyl (R)-2-[4-[5-(trifluoromethyl)-2-pyridyloxy]phenoxy]propionate

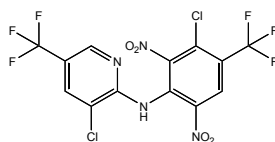


**CAS** 79241-46-6 **MF** C<sub>19</sub>H<sub>20</sub>F<sub>3</sub>NO<sub>4</sub> **MW** 383.36  
**PS L SG** 1.22 g/cm<sup>3</sup> **BP** 164 °C (0.02mm Hg)  
**FP** >50 °C **SOL** A,M,T,CN

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

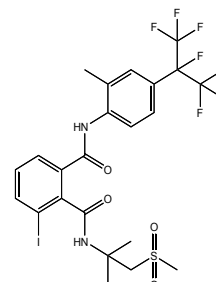


**CAS** 79622-59-6 **MF** C<sub>13</sub>H<sub>4</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>4</sub>O<sub>4</sub> **MW** 465.09  
**PS S SG** 1.81 g/cm<sup>3</sup> **MP** 119 °C  
**SOL** H,M,T,A,CN,D,EA

Matrix	Cat. No.	Unit
NEAT	P-586N	10 mg
100 µg/mL in MeOH	P-586S	1 mL

## Flubendiamide

3-Iodo-N'-(2-mesy-1,1-dimethylethyl)-N-[4-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-o-tolyl]phthalamide



Flubendiamide

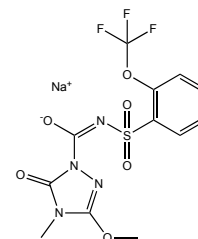
**CAS** 272451-65-7 **MF** C<sub>23</sub>H<sub>27</sub>F<sub>7</sub>IN<sub>2</sub>O<sub>5</sub>S **MW** 682.39  
**PS S SG** 1.66 g/cm<sup>3</sup> **MP** 217-218 °C  
**SOL** A,CN,M,EA

Matrix	Cat. No.	Unit
NEAT	P-1025N	10 mg
100 µg/mL in AcCN	P-1025S-CN	1 mL

Flubendiamide, see Flubendiamide

## Flucarbazone-sodium

Sodium 4,5-dihydro-3-methoxy-4-methyl-5-oxo-N-([2-(trifluoromethoxy)phenyl]sulfonyl)-1H-1,2,4-triazole-1-carboximidate



Flubendiamide

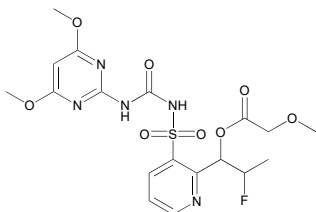
**CAS** 181274-17-9 **MF** C<sub>12</sub>H<sub>10</sub>F<sub>3</sub>N<sub>4</sub>NaO<sub>5</sub>S **MW** 418.28 **MP** 200 °C **PS S SOL** W

Matrix	Cat. No.	Unit
NEAT	P-1124N	10 mg
100 µg/mL in AcCN	P-1124S-CN	1 mL

# Pesticide Standards

## Flucetosulfuron

1-[3-[(4,6-Dimethoxypyrimidin-2-ylcarbamoyl)sulfamoyl]-2-pyridyl]-2-fluoropropyl methoxyacetate

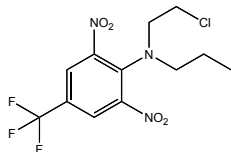


**CAS** 412928-75-7 **MF** C<sub>18</sub>H<sub>22</sub>FN<sub>5</sub>O<sub>8</sub>S **MW** 487.46  
**PS S** **MP** 176 °C decomp. **SOL** A,N,M,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1218S-CN	1 mL
1000 µg/mL in AcCN	P-1218S-CN-10X	1 mL

## Fluchloralin

N-(2-Chloroethyl)-2,6-dinitro-N-propyl-4-(trifluoromethyl)aniline

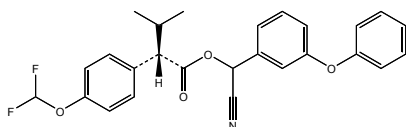


**CAS** 33245-39-5 **MF** C<sub>12</sub>H<sub>13</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>4</sub> **MW** 355.7  
**PS S** **SG** 1.45 g/cm<sup>3</sup> **MP** 42-43 °C **BP** 392 °C  
**FP** 30 °C **SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-270N	10 mg
100 µg/mL in MeOH	P-270S	1 mL

## Flucythrinate

(RS)-a-Cyano-3-phenoxybenzyl (S)-2-(4-difluoromethoxyphenyl)-3-methylbutyrate

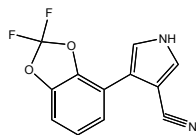


**CAS** 70124-77-5 **MF** C<sub>19</sub>H<sub>23</sub>F<sub>2</sub>NO<sub>4</sub> **MW** 451.46  
**PS L** **SG** 1.19 g/cm<sup>3</sup> **BP** 108 °C (0.35mm Hg)  
**FP** 45 °C **SOL** M,A,CN,EA,D

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

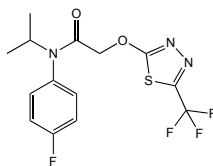


**CAS** 131341-86-1 **MF** C<sub>12</sub>H<sub>8</sub>F<sub>2</sub>N<sub>2</sub>O<sub>2</sub> **MW** 248.19  
**PS S** **SG** 1.55 g/cm<sup>3</sup> **MP** 199 °C  
**BP** Decomp. 306 °C **SOL** M,A,D,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-698N	10 mg
100 µg/mL in MeOH	P-698S	1 mL

## Flufenacet

N-(4-Fluorophenyl)-N-(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide

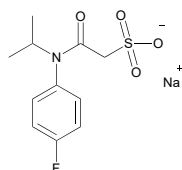


**CAS** 142459-58-3 **MF** C<sub>14</sub>H<sub>15</sub>F<sub>4</sub>N<sub>3</sub>O<sub>2</sub>S **MW** 363.33  
**PS S** **SG** 1.45 g/cm<sup>3</sup> **MP** 78 °C  
**BP** Decomp. 150 °C **SOL** A,T,H,CN,IPA,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-902S-CN	1 mL

## Flufenacet ESA sodium salt

Sodium 2-[(4-fluorophenyl)(1-methylethyl)amino]-2-oxo-ethanesulfonate

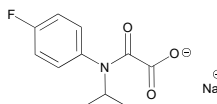


**CAS** 947601-87-8 **MF** C<sub>11</sub>H<sub>13</sub>FNO<sub>3</sub>Na **MW** 297  
**PS S** **MP** 151-152 °C **SOL** A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-920S	1 mL

## Flufenacet OA sodium salt

Sodium [(4-fluorophenyl)(1-methylethyl)amino]-oxo-acetate

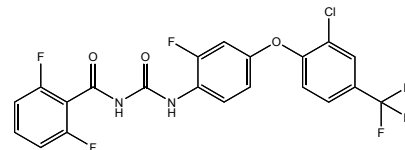


**CAS** N/A **MF** C<sub>11</sub>H<sub>12</sub>NNaO<sub>3</sub> **MW** 247 **PS S**  
**MP** 230-232 °C **SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-922S	1 mL

## Flufenoxuron

1-[4-(2-Chloro-a,a,a-trifluoro-p-tolyloxy)-2-fluorophenyl]-3-(2,6-difluorobenzoyl)urea

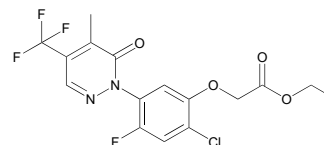


**CAS** 101463-69-8 **MF** C<sub>21</sub>H<sub>11</sub>ClF<sub>6</sub>N<sub>2</sub>O<sub>3</sub> **MW** 488.77  
**PS S** **SG** 1.57 g/cm<sup>3</sup> **MP** 169-172 °C  
**SOL** A,T,D,M,CN

Matrix	Cat. No.	Unit
NEAT	P-687N	10 mg
100 µg/mL in MeOH	P-687S	1 mL

## Flufenpyr-ethyl

Ethyl 2-chloro-5-[1,6-dihydro-5-methyl-6-oxo-4-(trifluoromethyl)pyridazin-1-yl]-4-fluorophenoxyacetate

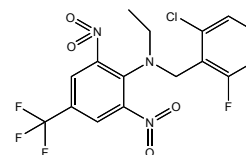


**CAS** 188489-07-8 **MF** C<sub>16</sub>H<sub>13</sub>ClF<sub>4</sub>N<sub>2</sub>O<sub>4</sub> **MW** 408.73  
**PS S** **MP** 100 °C **SOL** A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1160S-CN	1 mL
1000 µg/mL in AcCN	P-1160S-CN-10X	1 mL

## Flumetralin

N-[(2-Chloro-6-fluorophenyl)methyl]-N-ethyl-2,6-dinitro-4-(trifluoromethyl)aniline



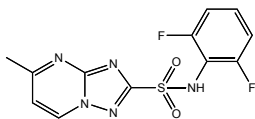
**CAS** 62924-70-3 **MF** C<sub>16</sub>H<sub>12</sub>ClF<sub>4</sub>N<sub>3</sub>O<sub>4</sub> **MW** 421.73  
**PS S** **SG** 1.54 g/cm<sup>3</sup> **MP** 102 °C **FP** >100 °C  
**SOL** M,A,D,H,CN,EA,T

Matrix	Cat. No.	Unit
NEAT	P-491N	10 mg
100 µg/mL in MeOH	P-491S	1 mL

# Pesticide Standards

## Flumetsulam

2',6'-Difluoro-5-methyl[1,2,4]triazolo[1,5-a]pyrimidine-2-sulfonanilide

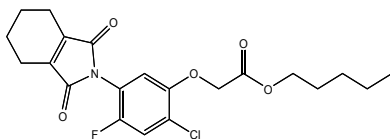


**CAS** 98967-40-9 **MF** C<sub>12</sub>H<sub>9</sub>F<sub>2</sub>N<sub>5</sub>O<sub>2</sub>S **MW** 325.32  
**PS S SG** 1.77 g/cm<sup>3</sup> **MP** 251-253 °C **FP** 93 °C  
**SOL** M,CN,A

Matrix	Cat. No.	Unit
NEAT	P-659N	10 mg
100 µg/mL in MeOH	P-659S	1 mL

## Flumiclorac-pentyl

Pentyl [2-chloro-5-(cyclohex-1-ene-1,2-dicarboximido)-4-fluorophenoxy]acetate

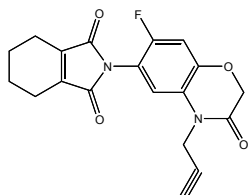


**CAS** 87546-18-7 **MF** C<sub>21</sub>H<sub>23</sub>ClFNO<sub>5</sub> **MW** 423.86  
**PS S SG** 1.33 g/cm<sup>3</sup> **MP** 89 °C **FP** >88 °C  
**SOL** M,H,A,CN

Matrix	Cat. No.	Unit
NEAT	P-993N	10 mg
100 µg/mL in MeOH	P-993S	1 mL

## Flumioxazin

7-Fluoro-6-(3,4,5,6-tetrahydrophthalimido)-4-(2-propynyl)-1,4-benzoxazin-3(2H)-one



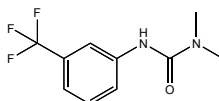
*Flumyzin, Pledge, Vulcan*

**CAS** 103361-09-7 **MF** C<sub>16</sub>H<sub>16</sub>FN<sub>2</sub>O<sub>4</sub> **MW** 354.33  
**PS S SG** 1.51 g/cm<sup>3</sup> **MP** 203 °C  
**BP** Decomp. 273 °C **SOL** A,EA,H,M,D,CN

Matrix	Cat. No.	Unit
100 µg/mL in CH <sub>2</sub> Cl <sub>2</sub>	P-992S-D	1 mL

## Fluometuron

1,1-Dimethyl-3-(alpha,alpha,alpha-trifluoro-m-tolyl) urea



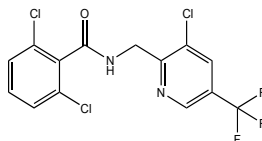
*Cotoran, Cottonex*

**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 SG** 1.39 g/cm<sup>3</sup> **MP** 163 °C **SOL** M,A,CN,D,W

Matrix	Cat. No.	Unit
NEAT	P-014N	10 mg
100 µg/mL in MeOH	P-014S	1 mL

## Fluopicolide

2,6-Dichloro-N-[3-chloro-5-(trifluoromethyl)-2-pyridylmethyl]benzamide

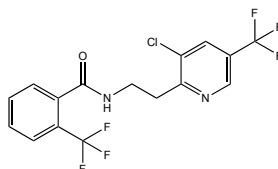


**CAS** 239110-15-7 **MF** C<sub>14</sub>H<sub>8</sub>Cl<sub>3</sub>F<sub>3</sub>N<sub>2</sub>O **MW** 383.58  
**PS S SG** 1.65 g/cm<sup>3</sup> **MP** 150 °C  
**BP** Decomp. 320 °C **SOL** H,E,T,A,CN,EA,D

Matrix	Cat. No.	Unit
NEAT	P-1024N	10 mg
100 µg/mL in Acetone	P-1024S-A	1 mL

## Fluopyram

N-[2-[3-Chloro-5-(trifluoromethyl)-2-pyridyl]ethyl]-a,a,a-trifluoro-ortho-toluamide

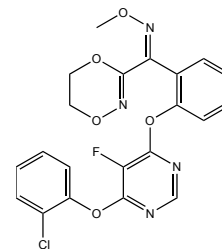


**CAS** 658066-35-4 **MF** C<sub>16</sub>H<sub>11</sub>ClF<sub>3</sub>N<sub>2</sub>O **MW** 396.71  
**PS S MP** 117-118 °C **BP** 318 °C **SOL** M,A

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1094S	1 mL

## Fluoxastrobin

(E)-{2-[6-(2-Chlorophenoxy)-5-fluoropyrimidin-4-yloxy]phenyl}(5,6-dihydro-1,4,2-dioxazin-3-yl)methanone O-methylloxime



**CAS** 361377-29-9 **MF** C<sub>21</sub>H<sub>16</sub>ClFN<sub>4</sub>O<sub>5</sub> **MW** 458.83  
**PS S SG** 1.42 g/cm<sup>3</sup> **MP** 105 °C  
**SOL** EA,M,CN,A,IPA,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-963S-CN	1 mL

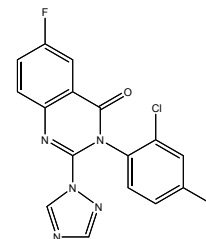
*Flumyzin, see Flumioxazin*

*Flurochloridone, see Flurochloridone*

*Fluorodifen, see Fluorodifen*

## Fluquinconazole

3-(2,4-Dichlorophenyl)-6-fluoro-2-(1H-1,2,4-triazol-1-yl)quinazolin-4(3H)-one

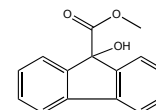


**CAS** 136426-54-5 **MF** C<sub>16</sub>H<sub>8</sub>Cl<sub>2</sub>FN<sub>5</sub>O **MW** 376.17  
**PS S SG** 1.58 g/cm<sup>3</sup> **MP** 192 °C  
**BP** Decomp. 320 °C **SOL** M,A,H,CN,EA,D

Matrix	Cat. No.	Unit
NEAT	P-878N	10 mg
100 µg/mL in AcCN	P-878S-CN	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** 161-163 °C **FP** >100 °C  
**SOL** M

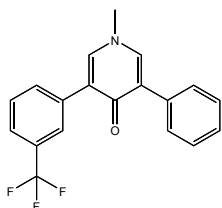
Matrix	Cat. No.	Unit
NEAT	P-412N	10 mg
100 µg/mL in MeOH	P-412S	1 mL



# Pesticide Standards

## Fluridone

1-Methyl-3-phenyl-5-[3-(trifluoromethyl)phenyl]-4(1H)-pyridinone



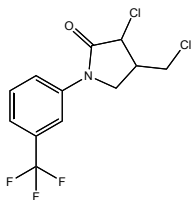
Sonar

CAS 59756-60-4 MF C<sub>19</sub>H<sub>14</sub>F<sub>3</sub>NO MW 329.32  
PS S SG 1.09 g/cm<sup>3</sup> MP 232 °C  
BP Decomp. 154-155 °C SOL M,A,H,CN,EA

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



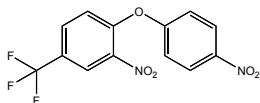
Flurochloridone

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 SG 1.52 g/cm<sup>3</sup> MP 61-73 °C  
SOL A,EA,M,T,CN

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



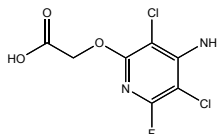
Flurodifen

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 >200 °C  
FP 178 °C SOL A,H,M,T,CN

Matrix	Cat. No.	Unit
NEAT	P-676N	10 mg
100 µg/mL in MeOH	P-676S	1 mL

## Fluroxypyry

((4-Amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid



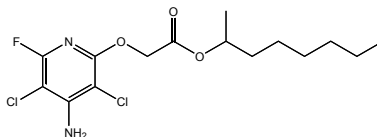
CAS 69377-81-7 MF C<sub>7</sub>H<sub>6</sub>Cl<sub>2</sub>FN<sub>2</sub>O<sub>3</sub> MW 255.03  
PS S SG 1.09 g/cm<sup>3</sup> MP 232 °C  
BP Decomp. 360 °C SOL H,A,M,D,CN,EA,IPA,W

Matrix	Cat. No.	Unit
NEAT	P-521N	10 mg
100 µg/mL in MeOH	P-521S ▲	1 mL

*Fluroxypyry-methyl*, see *Fluroxypyry-1-methylheptyl ester*

## Fluroxypyry-1-methylheptyl ester

1-Methylheptyl [(4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy]acetate



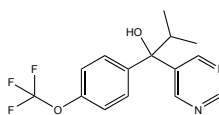
Fluroxypyry-methyl

CAS 81406-37-3 MF C<sub>15</sub>H<sub>21</sub>Cl<sub>2</sub>FN<sub>2</sub>O<sub>3</sub> MW 367.24  
PS S SG 1.32 g/cm<sup>3</sup> MP 59 °C BP Decomp. 312 °C  
SOL M,A,EA,CN

Matrix	Cat. No.	Unit
NEAT	P-927N	10 mg
100 µg/mL in MeOH	P-927S	1 mL

## Flurprimidol

(RS)-2-Methyl-1-pyrimidin-5-yl-1-(4-trifluoromethoxyphenyl)propan-1-ol

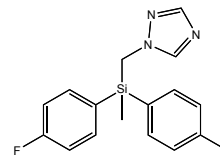


CAS 56425-91-3 MF C<sub>15</sub>H<sub>15</sub>F<sub>3</sub>N<sub>2</sub>O<sub>2</sub> MW 312.29  
PS S SG 1.341 g/cm<sup>3</sup> MP 93-97 °C  
BP Decomp. 200 °C SOL A,CN,T,EA,M,H,D

Matrix	Cat. No.	Unit
NEAT	P-1155N	10 mg

## Flusilazole

1-((bis(4-Fluorophenyl)methylsilyl)methyl)-1H-1,2,4-triazole

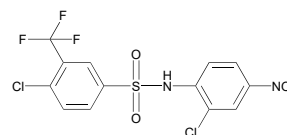


CAS 85509-19-9 MF C<sub>16</sub>H<sub>15</sub>F<sub>2</sub>N<sub>3</sub>Si MW 315.43  
PS S SG 1.17 g/cm<sup>3</sup> MP 53 °C BP Decomp. 310 °C  
FP 191 °C SOL M,A,H,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-578N	10 mg
100 µg/mL in MeOH	P-578S	1 mL

## Flusulfamide

4-Chloro-N-(2-chloro-4-nitrophenyl)-3-(trifluoromethyl)benzenesulfonamide

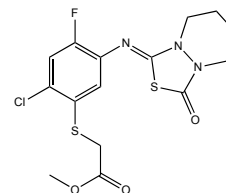


CAS 106917-52-6 MF C<sub>13</sub>H<sub>7</sub>Cl<sub>2</sub>F<sub>3</sub>N<sub>2</sub>O<sub>4</sub>S  
MW 415.17 PS S SG 1.75 g/cm<sup>3</sup> MP 170-171 °C  
BP decomp. 250 °C SOL CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1088S-CN	1 mL
1000 µg/mL in AcCN	P-1088S-CN-10X	1 mL

## Fluthiacet-methyl

Methyl[[2-chloro-4-fluoro-5-[(tetrahydro-3-oxo-1H,3H-[1,3,4]thiazolo[3,4-a]pyridazin-1-ylidene)amino]phenyl]thio]acetate



CAS 117337-19-6 MF C<sub>15</sub>H<sub>15</sub>ClFN<sub>3</sub>O<sub>3</sub>S<sub>2</sub> MW 403.88  
PS S SG 0.43 g/cm<sup>3</sup> MP 106 °C  
BP Decomp. 249 °C SOL CN

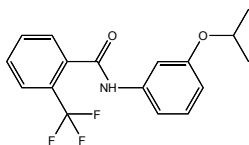
Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1095S-CN	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## Flutolanil

a,a,a,-Trifluoro-3'-isopropoxy-o-toluanilide



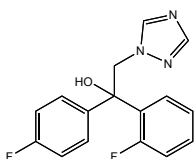
Moncut™

**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 **SG** 1.32 g/cm<sup>3</sup> **MP** 102-103 °C  
**SOL** A,EA,M,T,H,CN,D

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

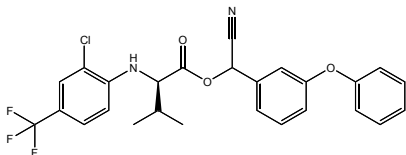


**CAS** 76674-21-0 **MF** C<sub>16</sub>H<sub>13</sub>F<sub>2</sub>N<sub>3</sub>O **MW** 301.29 **PS** S  
**SG** 1.41 g/cm<sup>3</sup> **MP** 130 °C **SOL** M,A,CN,H,D,W

Matrix	Cat. No.	Unit
NEAT	P-699N	10 mg
100 µg/mL in MeOH	P-699S	1 mL

## tau-Fluvalinate

(RS)-alpha-Cyano-3-phenoxybenzyl N-(2-chloro-alpha,alpha,alpha-trifluoro-p-tolyl)-D-valinate



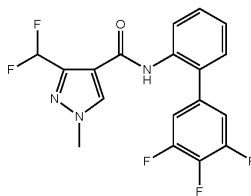
Mavrik

**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 **SG** 1.27 g/cm<sup>3</sup> **BP** 164 °C (0.007mm Hg)  
**FP** 90 °C **SOL** M,A,T,CN,TP,EA,H,IPA

Matrix	Cat. No.	Unit
NEAT	P-356N	10 mg
100 µg/mL in MeOH	P-356S	1 mL
1000 µg/mL in MeOH	P-356S-10X	1 mL
100 µg/mL in AcCN	P-356S-CN	1 mL

## Fluxapyroxad

3-(Difluoromethyl)-1-methyl-N-(3',4',5'-trifluoro-2-biphenyl)-1H-pyrazole-4-carboxamide



**CAS** 907204-31-3 **MF** C<sub>18</sub>H<sub>12</sub>F<sub>5</sub>N<sub>3</sub>O **MW** 381.30  
**PS** S **MP** 157 °C **SOL** A,EA,M,T,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1150S-CN	1 mL

**Focus**, see Cycloxydime

**Folbex**, see Chlorobenzilate

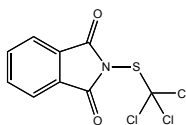
**Folex**, see Merphos

**Folicur**, see Tebuconazole

**Folosan**, see Pentachloronitrobenzene

## Folpet

N-(Trichloromethylthio)phthalimide

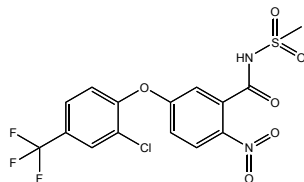


**CAS** 133-07-3 **MF** C<sub>9</sub>H<sub>4</sub>Cl<sub>3</sub>NO<sub>2</sub> **MW** 296.56  
**PS** S **SG** 1.72 g/cm<sup>3</sup> **MP** 178 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-258N	10 mg
100 µg/mL in MeOH	P-258S	1 mL

## Fomesafen

5-[2-Chloro-4-(trifluoromethyl)phenoxy]-N-(methylsulphonyl)-2-nitrobenzamide



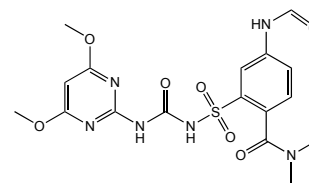
**CAS** 72178-02-0 **MF** C<sub>15</sub>H<sub>10</sub>ClF<sub>3</sub>N<sub>2</sub>O<sub>6</sub>S **MW** 438.76  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 220-221 °C  
**SOL** A,M,D,CN

Matrix	Cat. No.	Unit
NEAT	P-907N	10 mg
100 µg/mL in MeOH	P-907S	1 mL

**Fonofos**, see Dyfonate

## Foramsulfuron

2-[3-(4,6-Dimethoxy-2-pyrimidinyl)ureidosulfonyl]-4-(formamido)-N,N-dimethylbenzamide

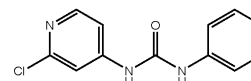


**CAS** 173159-57-4 **MF** C<sub>17</sub>H<sub>20</sub>N<sub>6</sub>O<sub>7</sub>S **MW** 452.44  
**PS** S **SG** 1.44 g/cm<sup>3</sup> **MP** 195 °C **SOL** A,EA,M,CN

Matrix	Cat. No.	Unit
NEAT	P-852N	10 mg
100 µg/mL in AcCN	P-852S-CN	1 mL

## Forchlorfenuron

N-(2-Chloro-4-pyridyl)-N'-phenylurea

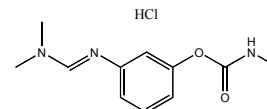


**CAS** 68157-60-8 **MF** C<sub>12</sub>H<sub>10</sub>ClN<sub>3</sub>O **MW** 247.68  
**PS** S **SG** 1.38 g/cm<sup>3</sup> **MP** 165-170 °C **SOL** M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-753N	10 mg
100 µg/mL in MeOH	P-753S	1 mL

## Formetanate HCl

3-Dimethylaminomethyleneaminophenyl methylcarbamate hydrochloride

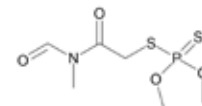


**CAS** 23422-53-9 **MF** C<sub>11</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub>·HCl **MW** 257.72  
**PS** S **MP** 200-202 °C **SOL** H,M,D,T,A,CN,W

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



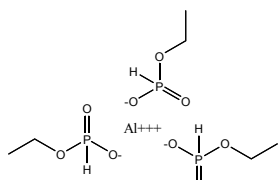
**CAS** 2540-82-1 **MF** C<sub>6</sub>H<sub>12</sub>NO<sub>4</sub>PS<sub>2</sub> **MW** 257.27  
**PS** L **SG** 1.36 g/cm<sup>3</sup> **SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-149N	10 mg
100 µg/mL in AcCN	P-149S-CN	1 mL

# Pesticide Standards

## Fosetyl aluminum

Aluminum tris(O-ethylphosphonate)

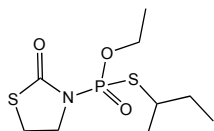


**CAS** 39148-24-8 **MF** C<sub>6</sub>H<sub>18</sub>AlO<sub>9</sub>P<sub>3</sub> **MW** 354.13 **PS** S  
**SG** 1.53 g/cm<sup>3</sup> **MP** 215 °C **BP** Decomp. 277 °C  
**SOL** A,M,W

Matrix	Cat. No.	Unit
NEAT	P-532N	10 mg
100 µg/mL in MeOH:Water (90:10)	P-532S	1 mL

## Fosthiazate

(RS)-S-sec-Butyl O-ethyl 2-oxo-1,3-thiazolidin-3-ylphosphothioate

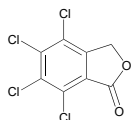


**CAS** 98886-44-3 **MF** C<sub>9</sub>H<sub>18</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 283.35  
**PS** L **SG** 1.23 g/cm<sup>3</sup> **BP** 198 °C (0.5mm Hg)  
**SOL** H,A,M,EA,CN,W

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-828S-CN	1 mL

## Fthalide

4,5,6,7-Tetrachlorophthalide

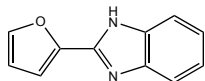


**CAS** 27355-22-2 **MF** C<sub>8</sub>H<sub>4</sub>Cl<sub>4</sub>O<sub>2</sub> **MW** 271.9 **PS** S  
**SG** 1.77 g/cm<sup>3</sup> **MP** 210 °C **SOL** A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-1128S-A	1 mL
1000 µg/mL in Acetone	P-1128S-A-10X	1 mL

## Fuberidazole

2-(2'-Furyl)benzimidazole

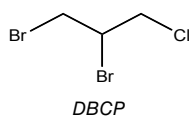


**CAS** 3878-19-1 **MF** C<sub>11</sub>H<sub>8</sub>N<sub>2</sub>O **MW** 184.19 **PS** S  
**MP** Decomp. **SOL** T,A,EA,D,M,CN,IPA

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-789S-CN	1 mL

## Fumazone

3-Chloro-1,2-Dibromopropane



**CAS** 96-12-8 **MF** C<sub>3</sub>H<sub>4</sub>Br<sub>2</sub>Cl **MW** 236.33 **PS** L  
**SG** 2.05 g/cm<sup>3</sup> **BP** 195 °C **FP** 90 °C  
**SOL** M,A,D,H,T,CN,TP

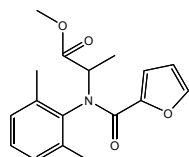
Matrix	Cat. No.	Unit
NEAT	P-341N	10 mg
100 µg/mL in MeOH	P-341S	1 mL

**Fundazol**, see *Benomyl*

**Furadan**, see *Carbofuran*

## Furalaxyl

Methyl N-(2-furoyl)-N-(2,6-xylyl)-DL-alaninate

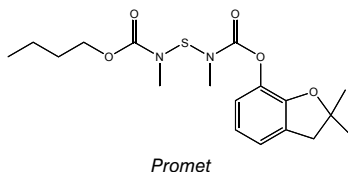


**CAS** 57646-30-7 **MF** C<sub>14</sub>H<sub>19</sub>NO<sub>4</sub> **MW** 301.34 **PS** S  
**SG** 1.22 g/cm<sup>3</sup> **MP** 70 °C **SOL** D,A,M,H,CN

Matrix	Cat. No.	Unit
NEAT	P-605N	10 mg
100 µg/mL in MeOH	P-605S	1 mL

## Furathiocarb

Butyl 2,3-dihydro-2,2-dimethylbenzofuran-7-yl N,N'-dimethyl-N,N'-thiodicarbamate

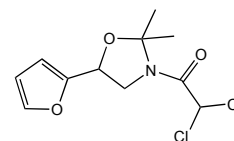


**CAS** 65907-30-4 **MF** C<sub>18</sub>H<sub>26</sub>N<sub>2</sub>O<sub>5</sub>S **MW** 382.48  
**PS** L **SG** 1.15 g/cm<sup>3</sup> **BP** >250 °C  
**SOL** M,A,T,H,CN,IPA

Matrix	Cat. No.	Unit
NEAT	P-569N	10 mg
100 µg/mL in MeOH	P-569S	1 mL

## Furilazole

2,2-Dichloro-1-[5-(2-furyl)-2,2-dimethyl-1,3-oxazolidin-3-yl]ethanone



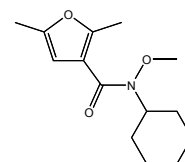
Oxazolidine

**CAS** 121776-33-8 **MF** C<sub>11</sub>H<sub>13</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 278.13  
**PS** S **MP** 95-96 °C **FP** 135 °C **SOL** M,CN,EA,W

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-810S-CN	1 mL

## Furmecyclox

N-Cyclohexyl-N-methoxy-2,5-dimethyl-3-furamide



**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 **FP** >100 °C **SOL** M,A

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-607S	1 mL

**Fusilade**, see *Fluazifop-butyl*

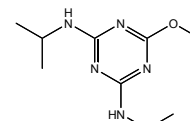
**Gardoprim**, see *Terbuthylazine*

**Garlon**, see *Triclopyr*

**Garrathion**, see *Carbophenothion*

## Gesatamine

N-Ethyl-6-methoxy-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine



Atraton, Atrazine-methoxy

**CAS** 1610-17-9 **MF** C<sub>9</sub>H<sub>17</sub>N<sub>5</sub>O **MW** 211.26 **PS** S  
**MP** 95-96 °C **SOL** M,A,D,H,T,TP,EA

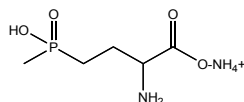
Matrix	Cat. No.	Unit
NEAT	P-189N	10 mg
100 µg/mL in MeOH	P-189S	1 mL

**Gesatop**, see *Simazine*

# Pesticide Standards

## Glufosinate, ammonium salt

2-Amino-4-(hydroxymethylphosphinyl) butanoic acid monoammonium salt



*Liberty*

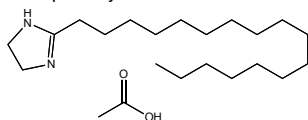
**CAS** 77182-82-2 **MF** C<sub>5</sub>H<sub>15</sub>N<sub>2</sub>O<sub>4</sub>P **MW** 198.2 **PS** S  
**SG** 1.40 g/cm<sup>3</sup> **MP** 215 °C **SOL** A,EA,M,T,H,W

Matrix	Cat. No.	Unit
NEAT	P-475N	10 mg
100 µg/mL in MeOH	P-475S	1 mL

*Glyphophene, see Iprodione*

## Glyodan

2-Heptadecyl-2-imidazoline acetate

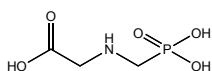


**CAS** 556-22-9 **MF** C<sub>22</sub>H<sub>44</sub>N<sub>2</sub>O<sub>2</sub> **MW** 368.22  
**PS** S **SG** 1.04 g/cm<sup>3</sup> **MP** 65 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-528N	10 mg
100 µg/mL in MeOH	P-528S	1 mL

## Glyphosate

N-(Phosphonomethyl)glycine



*Roundup*

**CAS** 1071-83-6 **MF** C<sub>3</sub>H<sub>5</sub>NO<sub>3</sub>P **MW** 169.07 **PS** S  
**SG** 1.68 g/cm<sup>3</sup> **MP** 219 °C (decomp.)  
**SOL** A,H,M,EA,CN,W

Matrix	Cat. No.	Unit
NEAT	P-015N	10 mg
100 µg/mL in H <sub>2</sub> O	P-015S-W	1 mL
1000 µg/mL in H <sub>2</sub> O	P-015S-W-10X	1 mL
5000 µg/mL in H <sub>2</sub> O	P-015S-W-50X	1 mL

*Gokilaht, see Cyphenothrin*

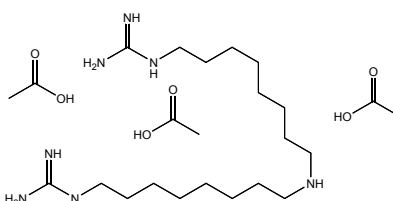
*Gratil, see Amidosulfuron*

*GTA, see Guazatine acetate*

*Guardian, see Ethaboxam*

## Guazatine acetate

Mixture of acetates of guanidated di and triamines and oligomeric amines



*GTA*

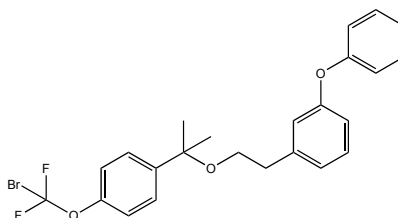
**CAS** 115044-19-4 **MF** C<sub>23</sub>H<sub>53</sub>N<sub>7</sub>O<sub>6</sub> **MW** 535.72  
**PS** S **SG** 1.09 g/cm<sup>3</sup> **MP** 60 °C **SOL** M,W

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-612S	1 mL

*Guthion, see Azinphos-methyl*

## Halfenprox

2-(4-Bromodifluoromethoxyphenyl)-2-methylpropyl 3-phenoxybenzyl ether

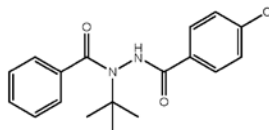


**CAS** 111872-58-3 **MF** C<sub>24</sub>H<sub>23</sub>BrF<sub>2</sub>O<sub>3</sub> **MW** 477.34  
**PS** L **SG** 1.32 g/cm<sup>3</sup> **BP** Decomp. 291 °C  
**FP** 272 °C **SOL** M,A,CN,H,T,D,EA

Matrix	Cat. No.	Unit
10 µg/mL in MeOH	P-1050S-0.1X	1 mL

## Halofenozide

2-Benzoyl-2-(1,1-dimethylethyl)hydrazide 4-chlorobenzoic acid

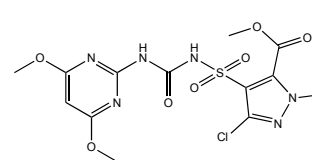


**CAS** 112226-61-6 **MF** C<sub>18</sub>H<sub>19</sub>ClN<sub>2</sub>O<sub>2</sub> **MW** 330.81  
**PS** S **SG** 0.46 g/cm<sup>3</sup> **MP** 200 °C **SOL** D,CN,IPA

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-804S-CN	1 mL

## Halosulfuron methyl

Methyl 3-chloro-5-(4,6-dimethoxypyrimidin-2-ylcarbonyl)amoylsulfamoyl)-1-methylpyrazole-4-carboxylate

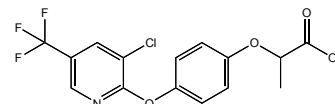


**CAS** 100784-20-1 **MF** C<sub>13</sub>H<sub>15</sub>ClN<sub>6</sub>O<sub>7</sub>S **MW** 434.81  
**PS** S **SG** 1.62 g/cm<sup>3</sup> **MP** 175-177 °C  
**BP** Decomp. 182 °C **SOL** M,A,CN,IPA,D,EA,T

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1089S-CN	1 mL

## Haloxypop

2-[4-[[3-Chloro-5-(trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoic acid

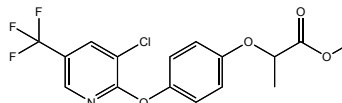


**CAS** 69806-34-4 **MF** C<sub>13</sub>H<sub>11</sub>ClF<sub>3</sub>NO<sub>2</sub> **MW** 361.7  
**PS** S **SG** 1.64 g/cm<sup>3</sup> **MP** 107-108 °C  
**SOL** A,EA,H,M,CN,IPA,D,T

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)propanoate



**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 **SG** 1.09 g/cm<sup>3</sup> **MP** 55-57 °C **FP** >100 °C  
**SOL** M,A,CN,IPA,D,EA,T

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*

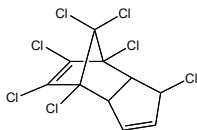
*HEOD, see Dieldrin*

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## 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** 1.58 g/cm<sup>3</sup> **MP** 95 °C **BP** 135-145 °C  
**SOL** M,A,D,H,T,CN,TP,EA

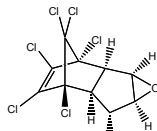
Matrix	Cat. No.	Unit
NEAT	P-053N	10 mg
100 µg/mL in MeOH	P-053S	1 mL
1000 µg/mL in MeOH	P-053S-10X	1 mL

**Heptachlor endo-epoxide**,  
see *Heptachlor epoxide (Isomer A)*

**trans-Heptachlor epoxide**,  
see *Heptachlor epoxide (Isomer A)*

## Heptachlor epoxide (Isomer A)

1,4,5,6,7,8,8-Heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro-4,7-methanoindan



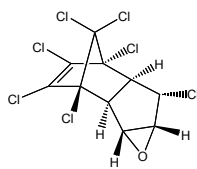
*Heptachlor endo-epoxide, trans-Heptachlor epoxide*

**CAS** 28044-83-9 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>7</sub>O **MW** 389.31 **PS** S  
**MP** 160 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-294S	1 mL

## Heptachlor epoxide (Isomer B)

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



*Heptachlor exo-epoxide, cis-Heptachlor epoxide*

**CAS** 1024-57-3 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>7</sub>O **MW** 389.31 **PS** S  
**MP** 159-160 °C **SOL** M,A,D,H,T,CN,TP,EA

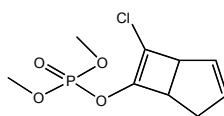
Matrix	Cat. No.	Unit
NEAT	P-054N	10 mg
100 µg/mL in MeOH	P-054S	1 mL
1000 µg/mL in MeOH	P-054S-10X	1 mL

**cis-Heptachlor epoxide**, see *Heptachlor epoxide (Isomer B)*

**Heptachlor exo-epoxide**, see *Heptachlor epoxide (Isomer B)*

## Heptenophos

7-Chlorobicyclo[3.2.0]hepta-2,6-dien-6-yl dimethyl phosphate



*Hostaquick*

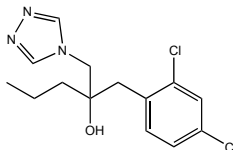
**CAS** 23560-59-0 **MF** C<sub>9</sub>H<sub>12</sub>ClO<sub>4</sub>P **MW** 250.62 **PS** L  
**SG** 1.28 g/cm<sup>3</sup> **BP** 64 °C (0.075mm Hg)  
**FP** 152 °C **SOL** M,A,T,CN,H,W

Matrix	Cat. No.	Unit
NEAT	P-547N	10 mg
100 µg/mL in MeOH	P-547S	1 mL

**Hexabutyldistannoxane**, see *bis(Tributyltin)oxide*

## Hexaconazole

(RS)-2-(2,4-Dichlorophenyl)-1-(1H-1,2,4-triazol-1-yl)hexan-2-ol



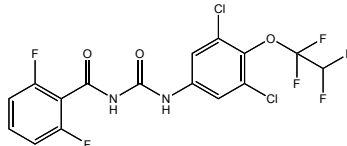
**CAS** 79983-71-4 **MF** C<sub>17</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O **MW** 314.21  
**PS** S **SG** 1.29 g/cm<sup>3</sup> **MP** 110-112 °C  
**SOL** M,H,T,CN,EA,A,D

Matrix	Cat. No.	Unit
NEAT	P-500N	10 mg
100 µg/mL in MeOH	P-500S	1 mL

**Hexadrin**, see *Endrin*

## Hexaflumuron

1-[3,5-Dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl]-3-(2,6-difluorobenzoyl)urea

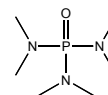


**CAS** 86479-06-3 **MF** C<sub>16</sub>H<sub>9</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>2</sub>O<sub>3</sub> **MW** 461.14  
**PS** S **SG** 1.68 g/cm<sup>3</sup> **MP** 203-204 °C  
**BP** Decomp. 300 °C **SOL** M,CN,A,EA,IPA,D,T

Matrix	Cat. No.	Unit
NEAT	P-697N	10 mg
100 µg/mL in MeOH	P-697S	1 mL

## Hexamethylphosphoramide

tris(Dimethylamino)phosphine oxide



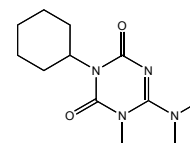
*HMPA*

**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> **BP** 230-232 °C **FP** 144 °C  
**SOL** M,D,H

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

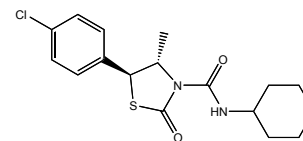


**CAS** 51235-04-2 **MF** C<sub>12</sub>H<sub>20</sub>N<sub>4</sub>O<sub>2</sub> **MW** 252.31  
**PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** 115-117 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W,H

Matrix	Cat. No.	Unit
NEAT	P-123N	10 mg
100 µg/mL in MeOH	P-123S	1 mL
1000 µg/mL in MeOH	P-123S-10X	1 mL

## Hexythiazox

trans-5-(4-Chlorophenyl)-N-cyclohexyl-4-methyl-2-oxo-3-thiazolidinecarboxamide



*Nissorun*

**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 **SG** 1.31 g/cm<sup>3</sup> **MP** 108-109 °C **BP** 222 °C  
**FP** 100 °C **SOL** M,A,CN,H

Matrix	Cat. No.	Unit
NEAT	P-658N	10 mg
100 µg/mL in MeOH	P-658S	1 mL

**Hinochloa**, see *Mefenacet*

**HMPA**, see *Hexamethylphosphoramide*

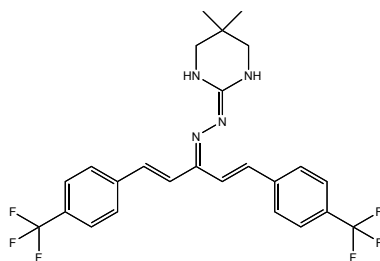
**Hoe-grass**, see *Diclofop*

**Hostaquick**, see *Heptenophos*

# Pesticide Standards

## Hydamethylnon

5,5-Dimethylperhydropyrimidin-2-one 4-trifluoromethyl-*a*-(4-trifluoromethylstyryl)cinnamylidenehydrazone



Amdro

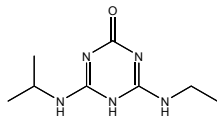
CAS 67485-29-4 MF C<sub>25</sub>H<sub>24</sub>F<sub>6</sub>N<sub>4</sub> MW 494.48 PS S  
SG 1.67 g/cm<sup>3</sup> MP 185-190 °C SOL A,M,CN,IPA

Matrix	Cat. No.	Unit
NEAT	P-403N	10 mg
100 µg/mL in MeOH	P-403S	1 mL

Hydroxyatrazine, see 2-Hydroxyatrazine

## 2-Hydroxyatrazine

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



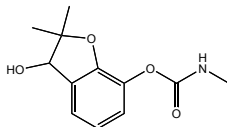
Hydroxyatrazine

CAS 2163-68-0 MF C<sub>8</sub>H<sub>16</sub>N<sub>6</sub>O MW 197.24 PS S  
SG 1.30 g/cm<sup>3</sup> MP 320 °C BP 410 °C SOL M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH:A (98:2)	P-326S	1 mL
100 µg/mL in MC	P-326S-MC	1 mL

## 3-Hydroxycarbofuran

2,3-Dihydro-2,2-dimethyl-3,7-benzofurandiolo-7-methyl carbamate



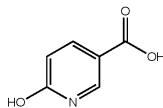
Carbofuran 3-hydroxy

CAS 16655-82-6 MF C<sub>15</sub>H<sub>18</sub>NO<sub>4</sub> MW 237.25 PS S  
SG 1.24 g/cm<sup>3</sup> MP 138-140 °C SOL M,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-186S	1 mL

## 6-Hydroxypyridine-3-carboxylic acid

6-Hydroxynicotinic acid

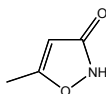


CAS 5006-66-6 MF C<sub>6</sub>H<sub>5</sub>NO<sub>3</sub> MW 139.11 PS S  
SG 1.55 g/cm<sup>3</sup> MP 310 °C SOL M

Matrix	Cat. No.	Unit
NEAT	P-1226N	10 mg
100 µg/mL in MeOH	P-1226S ▲	1 mL

## Hymexazol

3-Hydroxy-5-methylisoxazole



3-Isloxazolol

CAS 10004-44-1 MF C<sub>4</sub>H<sub>5</sub>NO<sub>2</sub> MW 99.09 PS S  
MP 86-87 °C BP Decomp. 180 °C  
SOL W,A,D,EA,H,M,T

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-571S	1 mL

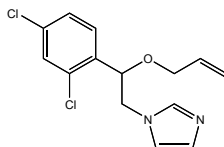
IBP, see Iprobenfos

Icon, see L-Cyhalothrin

Igran, see Prebane

## Imazalil

1-[2-(2,4-Dichlorophenyl)-2-(2-propenyloxy)ethyl]-1H-imidazole



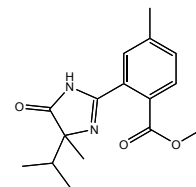
Chloramizol, Enilconazole

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  
SG 1.35 g/cm<sup>3</sup> MP 53 °C BP Decomp. 285 °C  
FP 192 °C SOL M,A,D,H,T,CN,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-332N	10 mg
100 µg/mL in MeOH	P-332S	1 mL

## Imazamethabenz methyl

Methyl 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-4(or 5)-methylbenzoate

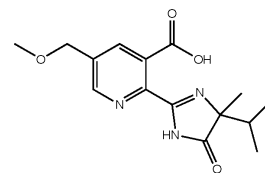


CAS 81405-85-8 MF C<sub>16</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub> MW 288.34 PS S  
SG 0.22 g/cm<sup>3</sup> MP 113-153 °C FP >93 °C  
SOL M,A,D,H,W,IPA,T

Matrix	Cat. No.	Unit
NEAT	P-414N	10 mg
100 µg/mL in MeOH	P-414S	1 mL

## Imazamox

(RS)-2-(4-Isopropyl-4-methyl-5-oxo-2-imidazolyl)-5-methoxy-methylnicotinic acid



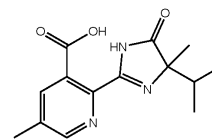
Raptor

CAS 114311-32-9 MF C<sub>15</sub>H<sub>19</sub>N<sub>3</sub>O<sub>4</sub> MW 305.33  
PS S SG 1.35 g/cm<sup>3</sup> MP 166 °C  
SOL H,M,T,EA,A,CN,W

Matrix	Cat. No.	Unit
NEAT	P-806N	10 mg
100 µg/mL in AcCN	P-806S-CN	1 mL

## Imazapic

2-[(RS)-4-Isopropyl-4-methyl-5-oxo-2-imidazolyl]-5-methylnicotinic acid



CAS 104098-48-8 MF C<sub>14</sub>H<sub>17</sub>N<sub>3</sub>O<sub>3</sub> MW 275.30 PS S  
SG 1.31 g/cm<sup>3</sup> MP 205 °C BP >400 °C FP 216 °C  
SOL M,A

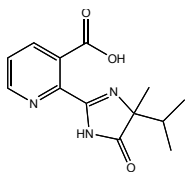
Matrix	Cat. No.	Unit
NEAT	P-1063N	10 mg
100 µg/mL in MeOH	P-1063S ▲	1 mL
100 µg/mL in AcCN	P-1063S-CN ▲	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## Imazapyr

2-(4-Isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)nicotinic acid

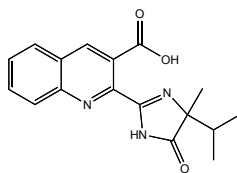


**CAS** 81334-34-1 **MF** C<sub>13</sub>H<sub>15</sub>N<sub>3</sub>O<sub>3</sub> **MW** 261.28 **PS S**  
**SG** 1.34 g/cm<sup>3</sup> **MP** 169-173 °C  
**SOL** M,A,T,H,CN,W,D

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



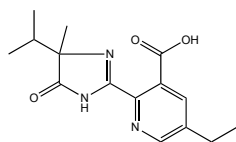
**CAS** 81335-37-7 **MF** C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>O<sub>3</sub> **MW** 311.34 **PS S**  
**SG** 0.41 g/cm<sup>3</sup> **MP** 224 °C  
**SOL** T,E,A,EA,M,CN,D,DMSO

Matrix	Cat. No.	Unit
NEAT	P-283N	10 mg
100 µg/mL in MeOH	P-283S ▲	1 mL

Imzasulfuron, see Imazosulfuron

## Imazethapyr

5-Ethyl-2-(4-isopropyl-4-methyl-5-oxo-4,5-dihydro-1H-imidazol-2-yl)nicotinic acid

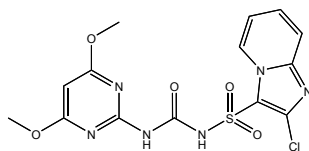


**CAS** 81335-77-5 **MF** C<sub>15</sub>H<sub>19</sub>N<sub>3</sub>O<sub>3</sub> **MW** 289.33 **PS S**  
**SG** 1.10 g/cm<sup>3</sup> **MP** 169-173 °C **BP** Decomp. 180 °C  
**SOL** CN,M,D,A

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-285S-CN ▲	1 mL

## Imazosulfuron

2-Chloro-N-(((4,6-dimethoxy-2-pyrimidinyl)amino)carbonyl)imidazo(1,2-a)pyridine-3-sulfonamide



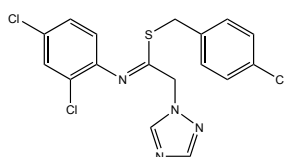
Imazosulfuron

**CAS** 122548-33-8 **MF** C<sub>14</sub>H<sub>13</sub>ClN<sub>5</sub>O<sub>3</sub> **MW** 412.81  
**SG** 1.57 g/cm<sup>3</sup> **MP** 183-184 °C **SOL** EA,A,D,CN,M

Matrix	Cat. No.	Unit
10 µg/mL in AcCN	P-853S-CN-0.1X	1 mL

## Imibenconazole

(4-Chlorophenyl)methyl N-(2,4-dichlorophenyl)-1H-1,2,4-triazole-1-ethanimidothioate

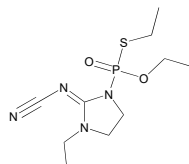


**CAS** 86598-92-7 **MF** C<sub>17</sub>H<sub>13</sub>Cl<sub>3</sub>N<sub>3</sub>S **MW** 411.74  
**PS S** **SG** 1.42 g/cm<sup>3</sup> **MP** 89-90 °C  
**BP** 567-568 °C **FP** 297 °C **SOL** A,M,CN

Matrix	Cat. No.	Unit
50 µg/mL in AcCN	P-1019S-CN-0.5X	1 mL

## Imicyafos

O-Ethyl S-propyl (E)-[2-(Cyanoimino)-3-ethylimidazolidin-1-yl]phosphonothioate

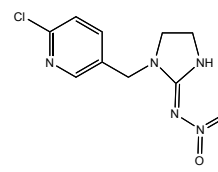


**CAS** 140163-89-9 **MF** C<sub>11</sub>H<sub>21</sub>N<sub>3</sub>O<sub>2</sub>PS **MW** 304.35  
**PS L** **BP** 392 °C **FP** 191 °C **SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1215S-CN	1 mL
1000 µg/mL in AcCN	P-1215S-CN-10X	1 mL

## Imidacloprid

1-(6-Chloro-3-pyridinylmethyl)-N-nitro-2-imidazolidinimine



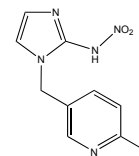
Marathon, Merit

**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** **SG** 1.54 g/cm<sup>3</sup> **MP** 144 °C  
**SOL** M,A,D,CN,EA,T,H,W,IPA

Matrix	Cat. No.	Unit
NEAT	P-596N	10 mg
100 µg/mL in MeOH	P-596S	1 mL

## Imidacloprid-olefin

1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-1H-imidazol-2-amine

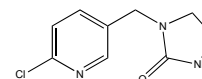


**CAS** 115086-54-9 **MF** C<sub>9</sub>H<sub>8</sub>ClN<sub>3</sub>O<sub>2</sub> **MW** 253.65  
**PS S** **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1366S-CN	1 mL

## Imidacloprid urea

1-[(6-Chloro-3-pyridinyl)methyl]-4,5-dihydro-1H-imidazol-2-ol

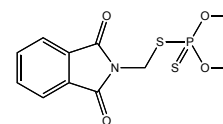


**CAS** 120868-66-8 **MF** C<sub>9</sub>H<sub>10</sub>ClN<sub>3</sub>O **MW** 211.65  
**PS S** **MP** 137-138 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1365S-CN	1 mL

## Imidan

N-(Mercaptomethyl)phthalimide S-(O,O-dimethylphosphorodithioate)



Percolate, Phosmet

**CAS** 732-11-6 **MF** C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O<sub>4</sub>PS<sub>2</sub> **MW** 317.32 **PS S**  
**SG** 1.44 g/cm<sup>3</sup> **MP** 72-73 °C **BP** Decomp. 100 °C  
**FP** >106 °C **SOL** M,A,D,H,T,CN,TP,EA

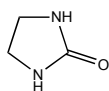
Matrix	Cat. No.	Unit
NEAT	P-055N	10 mg
100 µg/mL in MeOH	P-055S	1 mL

# Pesticide Standards

2-Imidazolidinethione, see Ethylene thiourea

## 2-Imidazolidone

N,N'-Ethyleneurea



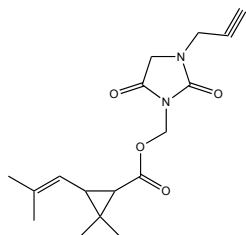
2-Oxoimidazolidine

CAS 120-93-4 MF C<sub>3</sub>H<sub>6</sub>N<sub>2</sub>O MW 86.09 PS S  
MP 129-132 °C BP 336 °C SOL M

Matrix	Cat. No.	Unit
NEAT	P-1224N	10 mg
100 µg/mL in MeOH	P-1224S	1 mL

## Imiprothrin

[2,5-Dioxo-3-(2-propynyl)-1-imidazolidinyl]methyl (1R)-2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate

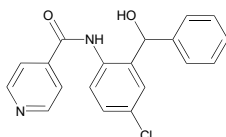


CAS 72963-72-5 MF C<sub>17</sub>H<sub>22</sub>N<sub>2</sub>O<sub>4</sub> MW 318.37 PS L  
SOL CN,H SG 1.12 g/cm<sup>3</sup> FP 110 °C

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-983S-CN	1 mL

## Inabenfide

4'-Chloro-2'-(alpha-hydroxybenzyl)isonicotinilide

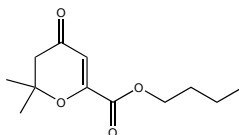


CAS 82211-24-3 MF C<sub>19</sub>H<sub>15</sub>ClN<sub>2</sub>O<sub>2</sub> MW 338.79  
PS S MP 211 °C SOL A,CN,N,M

Matrix	Cat. No.	Unit
100 µg/mL in A/AcCN	P-1219S-A-CN	1 mL
1000 µg/mL in A/AcCN	P-1219S-A-CN-10X	1 mL

## Indalone

Butyl 2,2-dimethyl-4-oxo-3,4-dihydro-2H-pyran-6-carboxylate



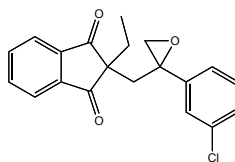
Butopyronoxyl

CAS 532-34-3 MF C<sub>12</sub>H<sub>16</sub>O<sub>4</sub> MW 226.27 PS L  
SG 1.06 g/cm<sup>3</sup> BP 256-270 °C FP 157 °C SOL M

Matrix	Cat. No.	Unit
NEAT	P-648N	10 mg
100 µg/mL in MeOH	P-648S	1 mL

## Indanofan

2-[[2-(3-Chlorophenyl)oxiranyl]methyl]-2-ethyl-1H-indene-1,3(2H)-dione



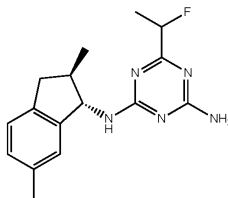
CAS 133220-30-1 MF C<sub>20</sub>H<sub>17</sub>ClO<sub>3</sub> MW 340.80  
PS S SG 1.24 g/cm<sup>3</sup> MP 60-61 °C  
SOL H,M,A,EA,CN,T,D

Matrix	Cat. No.	Unit
NEAT	P-988N	10 mg
100 µg/mL in MeOH	P-988S	1 mL

Indar, see Fenbuconazole

## Indaziflam

N-[(1R,2S)-2,3-Dihydro-2,6-dimethyl-1H-inden-1-yl]-6-[(1RS)-1-fluoroethyl]-1,3,5-triazine-2,4-diamine

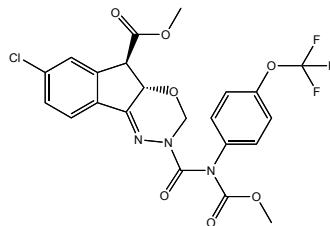


CAS 950782-86-2 MF C<sub>16</sub>H<sub>20</sub>FN<sub>5</sub> MW 301.36  
PS S SG 1.23 g/cm<sup>3</sup> SOL A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1168S-CN	1 mL

## Indoxacarb

Methyl 7-chloro-2,5-dihydro-2-[N-(methoxycarbonyl)-4-(trifluoromethoxy)anilino]carbonyl]indeno[1,2-e][1,3,4]oxadiazine-4a(3H)carboxylate

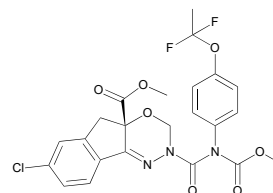


CAS 144171-61-9 MF C<sub>22</sub>H<sub>17</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>7</sub>  
MW 527.83 PS S SG 1.44 g/cm<sup>3</sup> MP 88.1 °C  
SOL M,A,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-829N	10 mg
100 µg/mL in AcCN	P-829S-CN	1 mL

## S-Indoxacarb

Methyl (S)-N-[7-chloro-2,3,4a,5-tetrahydro-4a-(methoxycarbonyl)indeno[1,2-e][1,3,4]oxadiazin-2-yl]carbonyl]-4'-(trifluoromethoxy)carbanilate

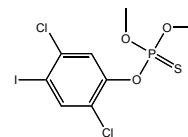


CAS 173584-44-6 MF C<sub>22</sub>H<sub>17</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>7</sub> MW 527.84  
PS S SG 1.44 g/cm<sup>3</sup> MP 88 °C  
BP decomp. 235 °C SOL A,CN,M,T

Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-1233S-A	1 mL
1000 µg/mL in Acetone	P-1233S-A-10X	1 mL

## Iodofenphos

O-2,5-Dichloro-4-iodophenyl O,O-dimethyl phosphorothioate



Jodfenphos

CAS 18181-70-9 MF C<sub>8</sub>H<sub>8</sub>Cl<sub>2</sub>I<sub>2</sub>O<sub>3</sub>PS MW 413 PS S  
SG 1.87 g/cm<sup>3</sup> MP 75 °C SOL M,A,D,H,T,CN

Matrix	Cat. No.	Unit
NEAT	P-379N	10 mg
100 µg/mL in MeOH	P-379S	1 mL

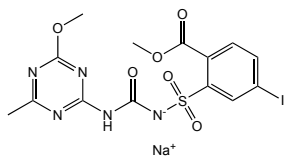
Iodosulfuron methyl ester sodium salt, see Iodosulfuron-methyl-sodium



# Pesticide Standards

## Iodosulfuron-methyl-sodium

Methyl-4-iodo-2-[3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-ureidosulfonyl]benzoate sodium salt



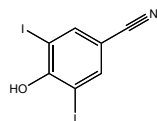
*Iodosulfuron methyl ester sodium salt*

**CAS** 144550-36-7 **MF** C<sub>14</sub>H<sub>13</sub>IN<sub>3</sub>NaO<sub>6</sub>S **MW** 529.27  
**PS S** **SG** 1.76 g/cm<sup>3</sup> **MP** 152 °C  
**BP** Decomp. 155 °C **SOL** H,T,M,CN,IPA,EA

Matrix	Cat. No.	Unit
NEAT	P-830N	10 mg
100 µg/mL in AcCN	P-830S-CN	1 mL

## loxynil

4-Hydroxy-3,5-diiodobenzonitrile

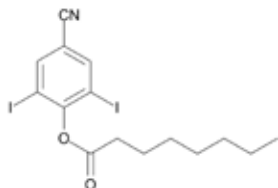


**CAS** 1689-83-4 **MF** C<sub>7</sub>H<sub>3</sub>I<sub>2</sub>NO **MW** 370.91 **PS S**  
**SG** 2.71 g/cm<sup>3</sup> **MP** 212-213 °C  
**BP** 283 °C (0.013kPa) **SOL** M,A,D,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-522N	10 mg
100 µg/mL in MeOH	P-522S	1 mL

## loxynil octanoate

4-Cyano-2,6-diiodophenyl octanoate



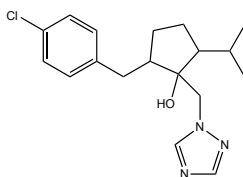
**CAS** 3861-47-0 **MF** C<sub>15</sub>H<sub>11</sub>I<sub>2</sub>NO<sub>2</sub> **MW** 497.1 **PS S**  
**SG** 1.81 g/cm<sup>3</sup> **MP** 57 °C **BP** Decomp. 218 °C  
**SOL** A,EA,M,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1329S-CN	1 mL

*IPC, see Propham*

## Ipconazole

2-[(4-Chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)cyclopentanol

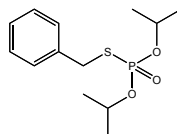


**CAS** 125225-28-7 **MF** C<sub>18</sub>H<sub>24</sub>ClN<sub>3</sub>O **MW** 333.86  
**PS S** **SG** 1.20 g/cm<sup>3</sup> **MP** 88-89 °C **BP** 400 °C  
**SOL** A,EA,M,CN,D,T

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-958S-CN	1 mL

## Iprobenfos

S-Benzyl O,O-diisopropyl phosphorothioate



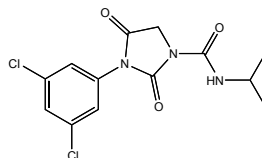
*IBP, Kitazin*

**CAS** 26087-47-8 **MF** C<sub>13</sub>H<sub>21</sub>O<sub>3</sub>PS **MW** 288.37 **PS L**  
**SG** 1.03 g/cm<sup>3</sup> **BP** 126 °C (1.12mm Hg) **FP** 168 °C  
**SOL** M,A,T,CN,D,EA,W

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-dioximidazolidine-1-carboxamide



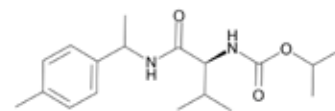
*Glycophene*

**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** 134 °C **FP** 150 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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

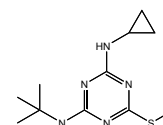


**CAS** 140923-17-7 **MF** C<sub>18</sub>H<sub>28</sub>N<sub>2</sub>O<sub>3</sub> **MW** 320.43  
**PS S** **SG** 1.11 g/cm<sup>3</sup> **MP** 164 °C  
**SOL** T,A,EA,D,M,CN

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



*Cybutryne, Fintryne*

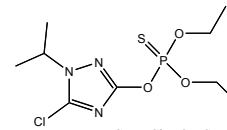
**CAS** 28159-98-0 **MF** C<sub>11</sub>H<sub>19</sub>N<sub>3</sub>S **MW** 253.37  
**PS S** **SG** 1.20 g/cm<sup>3</sup> **MP** 128-133 °C **SOL** M,D

Matrix	Cat. No.	Unit
NEAT	P-746N	10 mg
100 µg/mL in MeOH	P-746S	1 mL

*Isazofos, see Isazophos*

## Isazophos

O-5-Chloro-1-isopropyl-1H-1,2,4-triazol-3-yl O,O-diethyl phosphorothioate



*Isazofos*

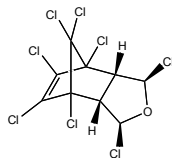
**CAS** 42509-80-8 **MF** C<sub>9</sub>H<sub>17</sub>ClN<sub>3</sub>O<sub>3</sub>PS **MW** 313.74  
**PS L** **SG** 1.23 g/cm<sup>3</sup> **BP** 170 °C  
**SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-449N	10 mg
100 µg/mL in MeOH	P-449S	1 mL

# Pesticide Standards

## Isobenzan

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

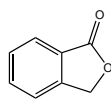


Telodrin

**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 **SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-323S	1 mL

## Isobenzofuranone



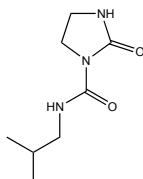
Phthalide

**CAS** 87-41-2 **MF** C<sub>8</sub>H<sub>6</sub>O<sub>2</sub> **MW** 134.13 **PS** S  
**SG** 1.41 g/cm<sup>3</sup> **MP** 72-74 °C **BP** 289-291 °C  
**FP** 152 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1022N	10 mg
100 µg/mL in MeOH	P-1022S	1 mL

## Isocarbamid

N-(2-Methylpropyl)-2-oxoimidazolidine-1-carboxamide



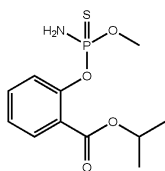
**CAS** 30979-48-7 **MF** C<sub>7</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub> **MW** 185.22 **PS** S  
**SG** 1.14 g/cm<sup>3</sup> **MP** 95-96 °C **FP** >100 °C **SOL** A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-880S-CN	1 mL

**Isocarbofos**, see **Isocarbophos**

## Isocarbophos

O-Methyl O-[2-(isopropoxycarbonyl)phenyl] phosphoramidothioate



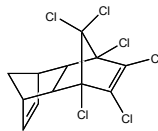
Isocarbophos

**CAS** 24353-61-5 **MF** C<sub>11</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>PS **MW** 289.29  
**PS** S **SG** 1.35 g/cm<sup>3</sup> **MP** 56-57 °C **BP** 385 °C  
**FP** >150 °C **SOL** M,A,H,T,CN

Matrix	Cat. No.	Unit
NEAT	P-893N	10 mg
100 µg/mL in AcCN	P-893S-CN	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

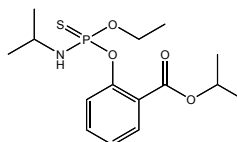


**CAS** 465-73-6 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub> **MW** 364.91 **PS** S  
**MP** 239-241 °C **BP** Decomp. **SOL** M,A,D,H,T,EA

Matrix	Cat. No.	Unit
NEAT	P-471N	10 mg
100 µg/mL in MeOH	P-471S	1 mL
1000 µg/mL in MeOH	P-471S-10X	1 mL

## Isufenphos

O-Ethyl O-2-isopropoxycarbonylphenyl isopropylphosphoramidothioate

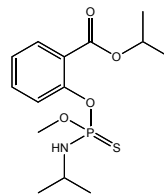


**CAS** 25311-71-1 **MF** C<sub>15</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub>PS **MW** 345.4  
**PS** L **SG** 1.13 g/cm<sup>3</sup> **BP** 120 °C (0.0013kPa)  
**FP** >115 °C **SOL** M,A,D,H,EA,T,IPA

Matrix	Cat. No.	Unit
NEAT	P-018N	10 mg
100 µg/mL in MeOH	P-018S	1 mL

## Isufenphos-methyl

1-Methylethyl 2-[[[methoxy[(1-methylethyl)amino]phosphinothioyl]oxy]benzoate

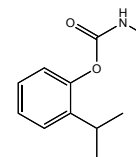


**CAS** 99675-03-3 **MF** C<sub>11</sub>H<sub>22</sub>N<sub>2</sub>O<sub>4</sub>PS **MW** 331.37  
**PS** L **SG** 1.2 g/cm<sup>3</sup> **BP** 398 °C **FP** 194 °C  
**SOL** M,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-984S	1 mL

## Isoprocab

o-Cumenyl methylcarbamate



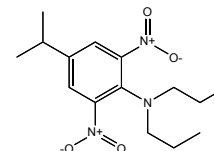
MIPC

**CAS** 2631-40-5 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub> **MW** 193.25 **PS** S  
**SG** 0.62 g/cm<sup>3</sup> **MP** 93-96 °C **BP** 128-129 °C (20mm Hg)  
**FP** 114 °C **SOL** H,T,A,EA,M,CN,D

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



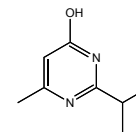
**CAS** 33820-53-0 **MF** C<sub>15</sub>H<sub>23</sub>N<sub>3</sub>O<sub>4</sub> **MW** 309.36 **PS** L  
**FP** 40 °C **SOL** M,A,D,CN,TP,EA

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

**Isopropyl 3-chlorocarbanilate**, see **Chlorpropham**

**2-Isopropyl-4-methyl-6-pyrimidinol**, see **2-Isopropyl-6-methyl-4-pyrimidinol**

## 2-Isopropyl-6-methyl-4-pyrimidinol



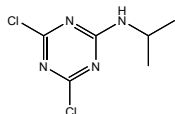
2-Isopropyl-4-methyl-6-pyrimidinol

**CAS** 2814-20-2 **MF** C<sub>8</sub>H<sub>12</sub>N<sub>2</sub>O **MW** 152.19 **PS** S  
**MP** 172-175 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-631N	10 mg
100 µg/mL in MeOH	P-631S	1 mL

# Pesticide Standards

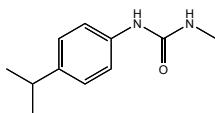
## 2-Isopropylamino-4,6-dichloro-s-triazine



CAS 3703-10-4 MF C<sub>8</sub>H<sub>8</sub>Cl<sub>2</sub>N<sub>4</sub> MW 207.06 PS S  
SOL M

Matrix	Cat. No.	Unit
NEAT	P-635N	10 mg
100 µg/mL in MeOH	P-635S	1 mL

## 1-(4-Isopropylphenyl)-3-methylurea



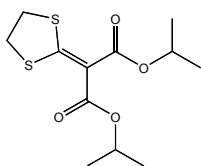
Desmethyl isoproturon

CAS 34123-57-4 MF C<sub>11</sub>H<sub>16</sub>N<sub>2</sub>O MW 192.26  
PS S SOL M,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1040S	1 mL

## Isoprothiolane

Diisopropyl 1,3-dithiolan-2-ylidenemalonate

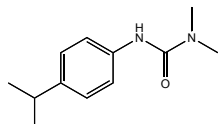


CAS 50512-35-1 MF C<sub>12</sub>H<sub>18</sub>O<sub>4</sub>S<sub>2</sub> MW 290.4 PS S  
SG 1.04 g/cm<sup>3</sup> MP 54 °C FP 159 °C  
BP 167-169 °C (0.5mm Hg) SOL M,A,H,CN

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



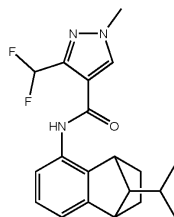
*N,N*-Dimethyl-*N'*-(4-(1-methylethyl)phenyl)urea

CAS 34123-59-6 MF C<sub>9</sub>H<sub>16</sub>N<sub>2</sub>O MW 206.28  
PS S SG 1.16 g/cm<sup>3</sup> MP 158 °C FP 100 °C  
SOL M,A,CN,D

Matrix	Cat. No.	Unit
NEAT	P-302N	10 mg
100 µg/mL in MeOH	P-302S	1 mL

## Isopyrazam

3-(Difluoromethyl)-1-methyl-N-(1,2,3,4-tetrahydro-9-(1-methylethyl)-1,4-methanonaphthalen-5-yl)-1H-pyrazole-4-carboxamide

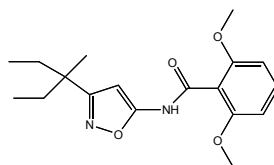


CAS 881685-58-1 MF C<sub>20</sub>H<sub>23</sub>F<sub>2</sub>N<sub>3</sub>O MW 359.41  
PS S SG 1.33 g/cm<sup>3</sup> MP 137 °C BP 267 °C  
SOL A,D,H,T,CN,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1159S-CN	1 mL

## Isoxaben

2,6-Dimethoxy-N-[3-(3-methyl-3-pentanyl)-1,2-oxazol-5-yl]benzamide

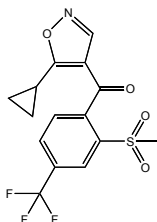


CAS 82558-50-7 MF C<sub>18</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub> MW 332.39 PS S  
SG 0.58 g/cm<sup>3</sup> MP 176-179 °C  
SOL M,A,CN,EA,T,D

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

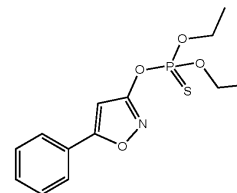


CAS 141112-29-0 MF C<sub>15</sub>H<sub>12</sub>F<sub>3</sub>NO<sub>4</sub>S MW 359.32  
PS S SG 1.59 g/cm<sup>3</sup> MP 140 °C FP >130 °C  
SOL A,EA,T,M,CN,D

Matrix	Cat. No.	Unit
NEAT	P-832N	10 mg
100 µg/mL in AcCN	P-832S-CN	1 mL

## Isoxathion

O,O-Diethyl O-(5-phenyl-1,2-oxazol-3-yl) phosphorothioate

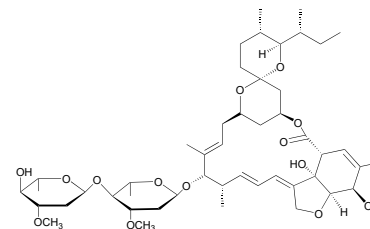


CAS 18854-01-8 MF C<sub>15</sub>H<sub>16</sub>NO<sub>4</sub>PS MW 313.31  
PS L SG 1.23 g/cm<sup>3</sup> BP 160 °C (0.15mm Hg)  
SOL M,CN

Matrix	Cat. No.	Unit
NEAT	P-1096N	10 mg
100 µg/mL in AcCN	P-1096S-CN	1 mL

3-Isoxazolol, see Hymexazol

## Ivermectin



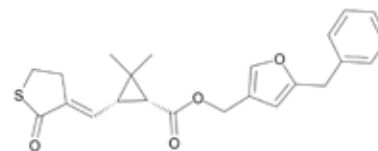
CAS 70288-86-7 MF C<sub>48</sub>H<sub>74</sub>O<sub>14</sub> MW 875.11 PS S  
MP 155 °C SOL A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1084S-CN	1 mL
1000 µg/mL in AcCN	P-1084S-CN-10X	1 mL

Jodfenphos, see Iodofenphos

## Kadethrine

5-Benzyl-3-furylmethyl (E)-(1R,3S)-2,2-dimethyl-3-(2-oxo-thiolan-3-ylidenemethyl) cyclopropanecarboxylate



RU 15525

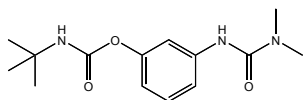
CAS 58769-20-3 MF C<sub>22</sub>H<sub>24</sub>O<sub>4</sub>S MW 396.5 PS L  
SG 1.28 g/cm<sup>3</sup> FP >100 °C SOL M,A,D

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

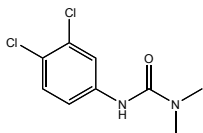


**CAS** 4849-32-5 **MF** C<sub>14</sub>H<sub>21</sub>N<sub>3</sub>O<sub>3</sub> **MW** 279.33 **PS** S  
**SG** 1.15 g/cm<sup>3</sup> **MP** 176-176.5 °C **FP** >100 °C  
**SOL** M,CN,EA,A,IPA,DMSO

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



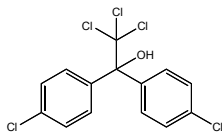
*DCMU, Diuron*

**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** 1.5 g/cm<sup>3</sup> **MP** 158-159 °C **BP** Decomp. 180 °C  
**SOL** M,A,D,H,CN,TP,EA

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



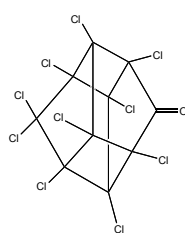
*Dicofol, p,p'-Dicofol*

**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 (360mm Hg) **FP** 193 °C  
**SOL** M,A,D,H,T,CN,TP,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-057N	10 mg
100 µg/mL in MeOH	P-057S	1 mL

## Kepone

Decachlorotetracyclodecanone



*Chlordecone*

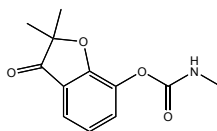
**CAS** 143-50-0 **MF** C<sub>10</sub>Cl<sub>10</sub>O **MW** 490.63 **PS** S  
**SG** 1.64 g/cm<sup>3</sup> **MP** 350 °C **FP** >100 °C  
**SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-152N	10 mg
100 µg/mL in MeOH	P-152S	1 mL
1000 µg/mL in MeOH	P-152S-10X	1 mL

*Kerb, see Pronamide*

## 3-Ketocarbofuran

2,2-Dimethyl-7-((methylamino)carbonyl)oxy)-3(2H)-benzofuranone



*Carbofuran-3-keto*

**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** 187-188 °C **FP** >100 °C  
**SOL** M,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-298S-A	1 mL

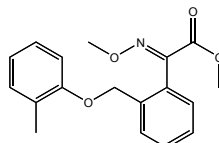
*delta-Ketoendrin, see Endrin ketone*

*Kilval, see Vamidothion*

*Kitazin, see Iprobenfos*

## Kresoxim-methyl

Methyl-methoxyimino-alpha-(o-tolyloxy)-o-tolylacetate



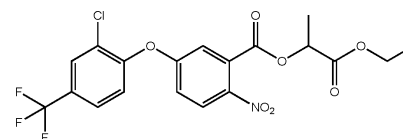
*BAS 490 F*

**CAS** 143390-89-0 **MF** C<sub>18</sub>H<sub>19</sub>NO<sub>4</sub> **MW** 313.35 **PS** S  
**SG** 1.26 g/cm<sup>3</sup> **MP** 102 °C **BP** Decomp. 310 °C  
**SOL** M,A,H,T,CN,EA,D

Matrix	Cat. No.	Unit
NEAT	P-740N	10 mg
100 µg/mL in MeOH	P-740S	1 mL

## Lactofen

1-Ethoxy-1-oxo-2-propanyl 5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitrobenzoate



**CAS** 77501-63-4 **MF** C<sub>19</sub>H<sub>15</sub>ClF<sub>3</sub>NO<sub>7</sub> **MW** 461.77  
**PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 43-45 °C **SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-979N	10 mg
100 µg/mL in AcCN	P-979S-CN	1 mL

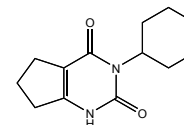
*Lannate, see Methomyl*

*Lanray, see Orbencarb*

*Lasso, see Alachlor*

## Lenacil

3-Cyclohexyl-1,5,6,7-tetrahydrocyclopentapyrimidine-2,4(3H)-dione



*3-Cyclohexyl-5,6-trimethyleuracil*

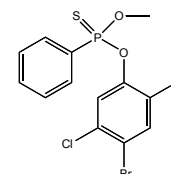
**CAS** 2164-08-1 **MF** C<sub>13</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub> **MW** 234.29 **PS** S  
**SG** 1.32 g/cm<sup>3</sup> **MP** 316-317 °C (decomp.)  
**SOL** A,T,H,EA,M,CN,D

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



*Phosvel*

**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 **SG** 1.53 **MP** 70 °C **SOL** M,A,D,H,T,CN,TD

Matrix	Cat. No.	Unit
NEAT	P-206N	10 mg
100 µg/mL in MeOH	P-206S	1 mL
1000 µg/mL in Hexane	P-206S-H-10X	1 mL

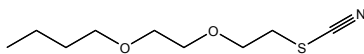
*Lesan, see Fenaminosulf*

*Lethane, see Lethane 384*

# Pesticide Standards

## Lethane 384

2-(2-Butoxyethoxy)ethyl thiocyanate



Lethane

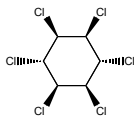
CAS 112-56-1 MF C<sub>9</sub>H<sub>17</sub>NO<sub>2</sub>S MW 203.33 PS L  
SG 0.915-0.930 BP 120-125 °C (0.25mm Hg)  
FP 52 °C SOL M,H

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



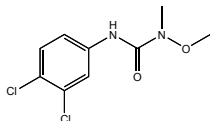
g-BHC, g-HCH

CAS 58-89-9 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 113-115 °C BP 311 °C  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-059N	10 mg
100 µg/mL in MeOH	P-059S	1 mL
1000 µg/mL in MeOH	P-059S-10X	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  
SG 1.49 g/cm<sup>3</sup> MP 93-94 °C  
SOL M,A,D,H,CN,TP,EA,T

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

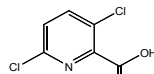
Lironion, see Difenoxuron

Lonacol, see Zineb

Londax, see Bensulfuron-methyl

## Lontrel

3,6-Dichloropyridine-2-carboxylic acid



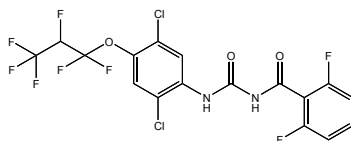
Clopyralid

CAS 1702-17-6 MF C<sub>5</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  
SOL M,A,D,CN,EA,H,W

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-hexafluoropropyl)phenyl]-3-(2,6-difluorobenzoyl)urea



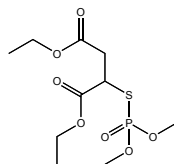
CAS 103055-07-8 MF C<sub>17</sub>H<sub>8</sub>Cl<sub>2</sub>F<sub>8</sub>N<sub>2</sub>O<sub>3</sub> MW 511.15  
SG 1.66 g/cm<sup>3</sup> MP 165-168 °C  
SOL A,EA,H,T,M,CN,D

Matrix	Cat. No.	Unit
NEAT	P-704N	10 mg
100 µg/mL in MeOH	P-704S	1 mL

Machette, see Butachlor

## Malaoxon

Diethyl 2-[(dimethoxyphosphoryl)sulfanyl]succinate



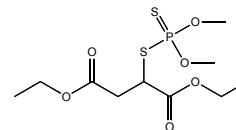
Malathion-O-analog

CAS 1634-78-2 MF C<sub>10</sub>H<sub>18</sub>O<sub>7</sub>PS MW 314.1 PS L  
FP >100 °C SOL M,A,D,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-529N	10 mg
100 µg/mL in MeOH	P-529S	1 mL

## Malathion

Diethyl[(dimethoxyphosphinothioyl)thio]butanedioate



Phosphothion

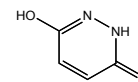
CAS 121-75-5 MF C<sub>10</sub>H<sub>19</sub>O<sub>6</sub>PS<sub>2</sub> MW 330.36 PS L  
SG 1.23 g/cm<sup>3</sup> BP 156-157 °C (0.7mm Hg)  
FP 163 °C SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-060N	10 mg
100 µg/mL in MeOH	P-060S	1 mL
1000 µg/mL in MeOH	P-060S-10X	1 mL
1000 µg/mL in Hexane	P-060S-H-10X	1 mL

Malathion-O-analog, see Malaoxon

## Maleic hydrazide

3,6-Dihydroxypyridazine



1,2-Dihydro-3,6-pyridazinedione

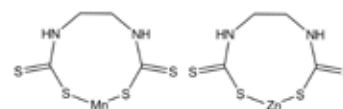
CAS 123-33-1 MF C<sub>4</sub>H<sub>4</sub>N<sub>2</sub>O<sub>2</sub> MW 112.09 PS S  
SG 1.61 g/cm<sup>3</sup> MP 300 °C FP 300 °C  
SOL M,T,H,EA,CN,W

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



Manzeb

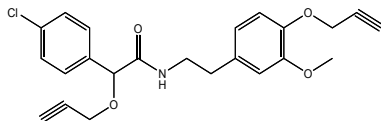
CAS 8018-01-7 MF C<sub>8</sub>H<sub>8</sub>MnN<sub>2</sub>S<sub>4</sub>/C<sub>4</sub>H<sub>6</sub>N<sub>2</sub>S<sub>4</sub>Zn  
MW 265.31/275.76 PS S SG 1.99 g/cm<sup>3</sup>  
MP 192-204 °C (decomp.) FP 138 °C SOL CN

Matrix	Cat. No.	Unit
NEAT	P-322N	10 mg

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## Mandipropamid

2-(4-Chlorophenyl)-N-[2-[3-methoxy-4-(prop-2-ynyloxy)phenyl]ethyl]-2-(prop-2-ynyloxy)acetamide

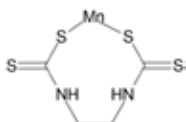


**CAS** 374726-62-2 **MF** C<sub>23</sub>H<sub>26</sub>ClNO<sub>4</sub> **MW** 411.88  
**PS** S **SG** 1.24 g/cm<sup>3</sup> **MP** 97 °C **BP** Decomp. 200 °C  
**FP** >200 °C **SOL** A,EA,T,D,CN,M

Matrix	Cat. No.	Unit
NEAT	P-1023N	10 mg
100 µg/mL in AcCN	P-1023S-CN	1 mL

## Maneb

[1,2-Ethanediy]bis[carbamo(dithio)ato](2-)]manganese



*MEB, Manganese ethylenebis(dithiocarbamate)*

**CAS** 12427-38-2 **MF** C<sub>4</sub>H<sub>8</sub>MnN<sub>2</sub>S<sub>4</sub> **MW** 265.31  
**PS** S **SG** 1.92 g/cm<sup>3</sup> **MP** Decomp. **SOL** EA,A

Matrix	Cat. No.	Unit
NEAT	P-282N	10 mg

*Manganese ethylenebis(dithiocarbamate), see Maneb*

*Manzeb, see Mancozeb*

*Marathon, see Imidacloprid*

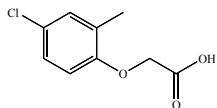
*Mataven, see Flamprop-methyl*

*Mavrik, see Tau-Fluvalinate*

*MBC, see Carbendazim*

## MCPA acid

4-Chloro-o-tolyloxyacetic acid

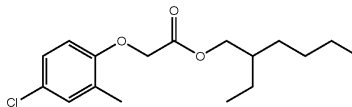


*Methoxone*

**CAS** 94-74-6 **MF** C<sub>8</sub>H<sub>9</sub>ClO<sub>3</sub> **MW** 200.62 **PS** S  
**SG** 1.41 g/cm<sup>3</sup> **MP** 119-120 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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 2-ethylhexyl ester

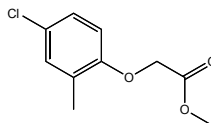


**CAS** 29450-45-1 **MF** C<sub>17</sub>H<sub>25</sub>ClO<sub>3</sub> **MW** 312.83 **PS** L  
**SG** 1.06 g/cm<sup>3</sup> **BP** 168-169 °C (0.75mm Hg)  
**FP** >100 °C **SOL** M,A

Matrix	Cat. No.	Unit
NEAT	P-1082N	10 mg
100 µg/mL in MeOH	P-1082S	1 mL

## MCPA methyl ester

Methyl 4-chloro-2-methylphenoxyacetate



*4-Chloro-o-tolyloxyacetic acid, methyl ester*

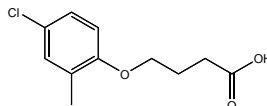
**CAS** 2436-73-9 **MF** C<sub>10</sub>H<sub>11</sub>ClO<sub>3</sub> **MW** 214.65 **PS** L  
**SG** 1.20 g/cm<sup>3</sup> **BP** 127 °C (3mm Hg)  
**SOL** M,A,D,H,T,TP

Matrix	Cat. No.	Unit
NEAT	P-038N	10 mg
100 µg/mL in MeOH	P-038S	1 mL

*2,4-MCPB, see MCPB acid*

## MCPB acid

4-(4-Chloro-o-tolyloxy)butyric acid



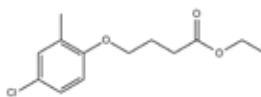
*2,4-MCPB*

**CAS** 94-81-5 **MF** C<sub>11</sub>H<sub>13</sub>ClO<sub>3</sub> **MW** 228.67 **PS** S  
**SG** 1.23 g/cm<sup>3</sup> **MP** 100 °C **BP** >280 °C  
**SOL** M,A,D,CN,EA,H,T

Matrix	Cat. No.	Unit
NEAT	P-370N	10 mg
100 µg/mL in MeOH	P-370S ▲	1 mL

## MCPB ester

Ethyl 4-(4-chloro-2-methylphenoxy)butanoate

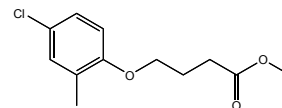


**CAS** 10443-70-6 **MF** C<sub>13</sub>H<sub>17</sub>ClO<sub>3</sub> **MW** 256.73 **PS** L  
**SG** 1.13 g/cm<sup>3</sup> **BP** Decomp. 150 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1347S-CN	1 mL

## MCPB methyl ester

Methyl 4-(4-chloro-2-methylphenoxy)butyrate

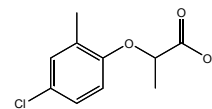


**CAS** 57153-18-1 **MF** C<sub>14</sub>H<sub>15</sub>ClO<sub>3</sub> **MW** 242.7 **PS** L  
**BP** 138-140 °C (5.25mm Hg) **SOL** M,D,H,TP

Matrix	Cat. No.	Unit
NEAT	P-371N	10 mg
100 µg/mL in MeOH	P-371S	1 mL

## MCPP acid

2-(4-Chloro-2-methylphenoxy)propanoic acid



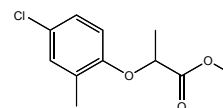
*Mechlorprop, Mecoprop acid*

**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 **FP** 100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W

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



*Mecoprop methyl ester*

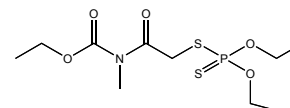
**CAS** 23844-56-6 **MF** C<sub>11</sub>H<sub>13</sub>ClO<sub>3</sub> **MW** 228.67 **PS** S  
**SG** 1.21 g/cm<sup>3</sup> **MP** 95-96 °C **FP** 100 °C  
**SOL** M,A,D,H,T,TP

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-methylcarbamoyl)methyl) O,O-diethyl phosphorodithioate



**CAS** 2595-54-2 **MF** C<sub>10</sub>H<sub>20</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 329.38  
**PS** L **SG** 1.22 g/cm<sup>3</sup> **BP** 144 °C (0.02mm Hg)  
**FP** >100 °C **SOL** M,A,CN,W

Matrix	Cat. No.	Unit
NEAT	P-318N	10 mg
100 µg/mL in MeOH	P-318S	1 mL

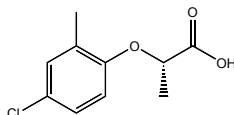
# Pesticide Standards

**Mechlorprop**, see *MCPP Acid*

**Mecoprop acid**, see *MCPP acid*

## Mecoprop-P

(R)-(+)-2-(4-Chloro-2-methylphenoxy)propionic acid

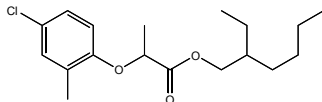


**CAS** 16484-77-8 **MF** C<sub>9</sub>H<sub>11</sub>ClO<sub>3</sub> **MW** 214.65 **PS** S  
**SG** 1.31 g/cm<sup>3</sup> **MP** 95-96 °C **FP** 70-80 °C  
**SOL** A,EA,M,W,T,D,H

Matrix	Cat. No.	Unit
NEAT	P-1053N	10 mg
100 µg/mL in Acetone	P-1053S-A	1 mL

## Mecoprop-2-ethylhexyl ester

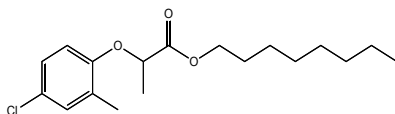
2-Ethylhexyl 2-(4-chloro-2-ethylphenoxy)propanoate



**CAS** 71526-69-7 **MF** C<sub>18</sub>H<sub>27</sub>ClO<sub>3</sub> **MW** 326.86 **PS** S  
**SOL** M,A

Matrix	Cat. No.	Unit
NEAT	P-502N	10 mg
100 µg/mL in MeOH	P-502S	1 mL

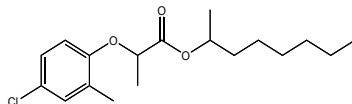
## Mecoprop-1-octyl ester



**CAS** 161922-37-8 **MF** C<sub>18</sub>H<sub>27</sub>ClO<sub>3</sub> **MW** 326.86 **PS** L

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1028S-CN	1 mL

## Mecoprop-2-octyl ester



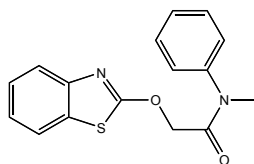
**CAS** 28473-03-2 **MF** C<sub>18</sub>H<sub>27</sub>ClO<sub>3</sub> **MW** 326.86 **PS** L  
**BP** >100 °C (0.2mm Hg) **FP** 100 °C **SOL** A,CN

Matrix	Cat. No.	Unit
NEAT	P-1029N	10 mg
100 µg/mL in AcCN	P-1029S-CN	1 mL

**Mecoprop methyl ester**, see *MCPP methyl ester*

## Mefenacet

2-(1,3-Benzothiazol-2-yloxy)-N-methylacetanilide



*Hincholea*

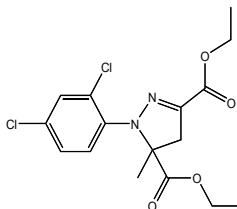
**CAS** 73250-68-7 **MF** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 298.38  
**PS** S **SG** 1.32 g/cm<sup>3</sup> **MP** 134-135 °C **FP** >100 °C  
**SOL** D,H,T,IPA,M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-745N	10 mg
100 µg/mL in MeOH	P-745S	1 mL

**Mefenoxam**, see *Metalaxyl-M*

## Mefenpyr-diethyl

1-(2,4-Dichlorophenyl)-4,5-dihydro-5-methyl-1H-pyrazole-3,5-dicarboxylic acid



**CAS** 135590-91-9 **MF** C<sub>16</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>4</sub> **MW** 373.23  
**PS** S **SG** 1.31 g/cm<sup>3</sup> **MP** 51 °C **SOL** A,T,M,EA,CN

Matrix	Cat. No.	Unit
NEAT	P-1010N	10 mg
100 µg/mL in MeOH	P-1010S	1 mL

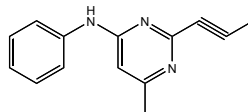
**Meltatox**, see *Dodemorph acetate*

**Meothrin**, see *Danitol*

**MEP**, see *Fenitrothion*

## Mepanipyrin

N-(4-Methyl-6-prop-1-ynylpyrimidin-2-yl)aniline



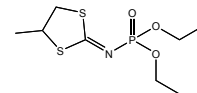
**CAS** 110235-47-7 **MF** C<sub>14</sub>H<sub>13</sub>N<sub>3</sub> **MW** 223.27 **PS** S  
**SG** 1.21 g/cm<sup>3</sup> **MP** 125-126 °C **BP** Decomp. 288 °C  
**FP** 131 °C **SOL** A,M,H,EA,T,D,CN

Matrix	Cat. No.	Unit
NEAT	P-855N	10 mg
100 µg/mL in AcCN	P-855S-CN	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## Mephosfolan

Diethyl-4-methyl-1,3-dithiolan-2-ylidene phosphoramidate

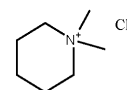


**CAS** 950-10-7 **MF** C<sub>8</sub>H<sub>16</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 269.32 **PS** L  
**SG** 1.54 g/cm<sup>3</sup> **BP** 120 °C (0.001mm Hg)  
**SOL** M,T,CN

Matrix	Cat. No.	Unit
NEAT	P-718N	10 mg
100 µg/mL in MeOH	P-718S	1 mL

## Mepiquat chloride

1,1-Dimethylpiperidinium chloride

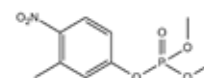


**CAS** 24307-26-4 **MF** C<sub>8</sub>H<sub>16</sub>ClN **MW** 149.66 **PS** S  
**SG** 1.16 g/cm<sup>3</sup> **MP** 223 °C **BP** Decomp. 285 °C  
**FP** >200 °C **SOL** M,A,T,W

Matrix	Cat. No.	Unit
NEAT	P-1062N	10 mg
100 µg/mL in MeOH	P-1062S	1 mL

## MEP Oxon

Dimethyl 3-methyl-4-nitrophenyl phosphate



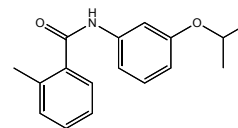
*Fenitrothion-oxon*

**CAS** 2255-17-6 **MF** C<sub>8</sub>H<sub>12</sub>NO<sub>6</sub>P **MW** 261.17 **PS** L  
**BP** 134-136 °C (0.093hPa) **SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1344S	1 mL

## Mepronil

3'-Isopropoxy-o-toluanilide



*Basitac*

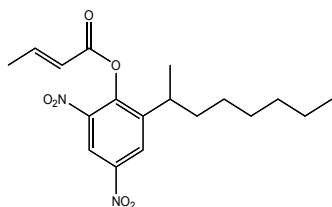
**CAS** 55814-41-0 **MF** C<sub>17</sub>H<sub>19</sub>NO<sub>2</sub> **MW** 269.37 **PS** S  
**SG** 1.11 g/cm<sup>3</sup> **MP** 94 °C **SOL** M,A,CN,H,T,EA,D

Matrix	Cat. No.	Unit
NEAT	P-736N	10 mg
100 µg/mL in MeOH	P-736S	1 mL

# Pesticide Standards

## Meptyldinocap

2-(1-Methylheptyl)-4,6-dinitrophenyl (2E)-2-butenate



**CAS** 131-72-6 **MF** C<sub>18</sub>H<sub>24</sub>N<sub>2</sub>O<sub>6</sub> **MW** 364.39 **PS** L  
**SG** 1.11 g/cm<sup>3</sup> **BP** Decomp. 200 °C **FP** 30 °C  
**SOL** M,A,T,H

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1043S	1 mL

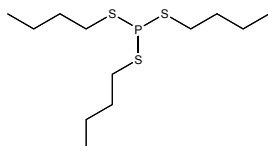
**Mercaptodimethur**, see *Methiocarb*

**Mercaptophos**, see *Fenthion*

**Merit**, see *Imidacloprid*

## Merphos

Tributylphosphorotrithioite



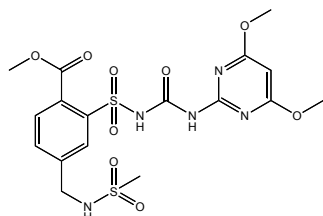
*Folex*

**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> **BP** 115-134 °C (0.011 kPa)  
**FP** 146 °C **SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-124N	10 mg
100 µg/mL in MeOH	P-124S	1 mL
1000 µg/mL in Hexane	P-124S-H-10X	1 mL

## Mesosulfuron-methyl

Methyl -2-[[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-4-[[[(methylsulfonyl)amino]methyl]benzoate

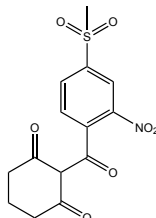


**CAS** 208465-21-8 **MF** C<sub>17</sub>H<sub>21</sub>N<sub>5</sub>O<sub>5</sub>S<sub>2</sub> **MW** 503.51  
**PS** S **SG** 1.48 g/cm<sup>3</sup> **MP** 195-196 °C **BP** Decomp.  
**SOL** M,CN,H,A,EA,T,D

Matrix	Cat. No.	Unit
NEAT	P-1044N	10 mg
100 µg/mL in MeOH	P-1044S	1 mL

## Mesotrione

2-[4-(Methylsulfonyl)-2-nitrobenzoyl]cyclohexane-1,3-dione



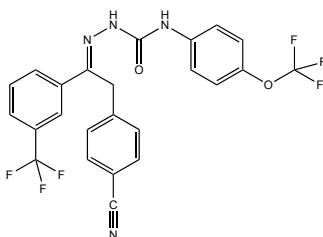
**CAS** 104206-82-8 **MF** C<sub>14</sub>H<sub>13</sub>NO<sub>7</sub>S **MW** 339.32  
**PS** L **SG** 1.49 g/cm<sup>3</sup> **MP** 165-166 °C  
**SOL** M,A,CN,EA,T

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-962S-CN	1 mL

**Metacil**, see *Aminocarb*

## Metaflumizone

(EZ)-2'-[2-(4-Cyanophenyl)-1-(a,a,a-trifluoro-m-tolyl)ethylidene]-4-(trifluoromethoxy)carbanilohydrazide

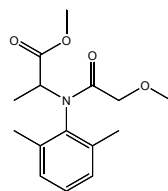


**CAS** 139968-49-3 **MF** C<sub>24</sub>H<sub>16</sub>F<sub>6</sub>N<sub>4</sub>O<sub>2</sub> **MW** 506.40  
**PS** S **SG** 1.46 g/cm<sup>3</sup> **MP** 133 °C  
**BP** Decomp. 232 °C **SOL** CN,T

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1090S-CN	1 mL

## Metalaxyl

Methyl N-(2,6-dimethylphenyl)-N-(methoxyacetyl)alaninate



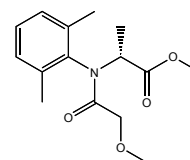
**CAS** 57837-19-1 **MF** C<sub>15</sub>H<sub>21</sub>NO<sub>4</sub> **MW** 279.33 **PS** S  
**SG** 1.20 g/cm<sup>3</sup> **MP** 72-73 °C **BP** 296 °C **FP** 100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-120N	10 mg
100 µg/mL in MeOH	P-120S	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## Metalaxyl-M

Methyl N-(2,6-dimethylphenyl)-N-(methoxyacetyl)-D-alaninate



*Mefenoxam*

**CAS** 70630-17-0 **MF** C<sub>15</sub>H<sub>21</sub>NO<sub>4</sub> **MW** 279.33 **PS** L  
**SG** 1.13 g/cm<sup>3</sup> **BP** Decomp. 270 °C **FP** 179 °C  
**SOL** M,A,T,H,CN,W

Matrix	Cat. No.	Unit
NEAT	P-874N	10 mg
100 µg/mL in MeOH	P-874S	1 mL

## Metaldehyde

2,4,6,8-Tetramethyl-1,3,5,7-tetraoxocane



*Metaldehyde homopolymer*

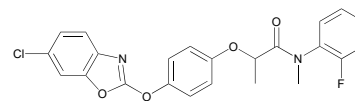
**CAS** 9002-91-9 **MF** (C<sub>2</sub>H<sub>4</sub>O)<sub>n</sub> **MW** (44.05)<sub>n</sub> **PS** S  
**SG** 1.27 g/cm<sup>3</sup> **MP** 190-196 °C **FP** 55 °C  
**SOL** M,A,CN,W,T

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

*Metaldehyde homopolymer*, see *Metaldehyde*

## Metamifop

(2R)-2-[4-[(6-Chloro-1,3-benzoxazol-2-yl)oxy]phenoxy]-N-(2-fluorophenyl)-N-methylpropanamide



**CAS** 256412-89-2 **MF** C<sub>23</sub>H<sub>18</sub>ClFN<sub>2</sub>O<sub>4</sub> **MW** 440.86  
**PS** S **SG** 1.39 g/cm<sup>3</sup> **MP** 78 °C **BP** decomp.  
**SOL** A,CN,M

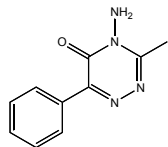
Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1114S-CN	1 mL
1000 µg/mL in AcCN	P-1114S-CN-10X	1 mL



# Pesticide Standards

## 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  
**SG** 1.34 g/cm<sup>3</sup> **MP** 166-167 °C **BP** Decomp. 250 °C  
**SOL** M,A,CN,EA,D,W,T,IPA

Matrix	Cat. No.	Unit
NEAT	P-252N	10 mg
100 µg/mL in MeOH	P-252S	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** M

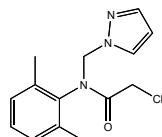
Matrix	Cat. No.	Unit
NEAT	P-381N	10 mg
100 µg/mL in MeOH	P-381S	1 mL
1000 µg/mL in MeOH	P-381S-10X	1 mL

**Metasystox I**, see *Demeton-S-methyl*

**MetaSystox-R**, see *Oxydemeton-methyl*

## Metazachlor

2-Chloro-N-(pyrazol-1-ylmethyl)acet-2',6'-xylidide

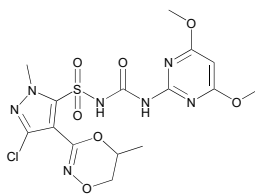


**CAS** 67129-08-2 **MF** C<sub>14</sub>H<sub>16</sub>ClN<sub>3</sub>O **MW** 277.75  
**PS** S **SG** 1.31 g/cm<sup>3</sup> **MP** 85 °C  
**SOL** M,A,H,CN,EA,T,D,W

Matrix	Cat. No.	Unit
NEAT	P-249N	10 mg
100 µg/mL in MeOH	P-249S	1 mL

## Metazosulfuron

1-[3-Chloro-1-methyl-4-[(5RS)-5,6-dihydro-5-methyl-1,4,2-dioxazin-3-yl]pyrazol-5-ylsulfonyl]-3-(4,6-dimethoxy-pyrimidin-2-yl)urea

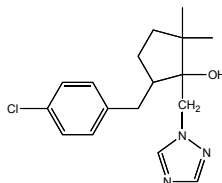


**CAS** 868680-84-6 **MF** C<sub>15</sub>H<sub>18</sub>ClN<sub>7</sub>O<sub>7</sub>S **MW** 475.86  
**PS** S **SG** 1.72 g/cm<sup>3</sup> **MP** 185 °C decomp. **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1220S-CN	1 mL
1000 µg/mL in AcCN	P-1220S-CN-10X	1 mL

## Metconazole

(1RS,5RS:1RS,5SR)-5-(4-Chlorobenzyl)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-ylmethyl)cyclopentanol

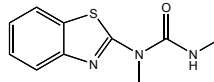


**CAS** 125116-23-6 **MF** C<sub>17</sub>H<sub>22</sub>ClN<sub>3</sub>O **MW** 319.83  
**SG** 1.31 g/cm<sup>3</sup> **MP** 110-113 °C **BP** 285 °C  
**SOL** M,A,T,H,CN,W,IPA

Matrix	Cat. No.	Unit
NEAT	P-856N	10 mg
100 µg/mL in AcCN	P-856S-CN	1 mL
10 µg/mL in AcCN	P-856S-CN-0.1X	1 mL

## Methabenzthiazuron

1-(1,3-Benzothiazol-2-yl)-1,3-dimethylurea

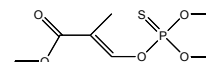


**CAS** 18691-97-9 **MF** C<sub>10</sub>H<sub>11</sub>N<sub>3</sub>OS **MW** 221.28  
**PS** S **SG** 1.33 g/cm<sup>3</sup> **MP** 119-121 °C  
**SOL** M,A,CN,EA,T,H,D,IPA

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



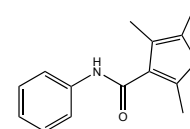
**CAS** 62610-77-9 **MF** C<sub>7</sub>H<sub>10</sub>O<sub>5</sub>PS **MW** 240.21 **PS** L  
**SG** 1.25 g/cm<sup>3</sup> **BP** 90 °C (0.01mm Hg)  
**FP** 69-73 °C **SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-556N	10 mg
100 µg/mL in MeOH	P-556S	1 mL

**Methamidophos**, see *Monitor*

## Methfuroxam

2,4,5-Trimethyl-3-furanilid

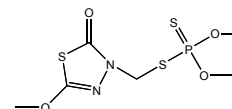


**CAS** 28730-17-8 **MF** C<sub>14</sub>H<sub>15</sub>NO<sub>2</sub> **MW** 229.27 **PS** S  
**SG** 1.15 g/cm<sup>3</sup> **SOL** A,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-881S-CN	1 mL

## Methidathion

O,O-Dimethyl-S-(5-methoxy-1,3,4-thiadiazolyl-3-methyl) dithiophosphate



*Suprathion*

**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  
**SG** 1.51 g/cm<sup>3</sup> **MP** 40 °C **FP** 100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W

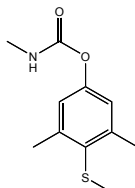
Matrix	Cat. No.	Unit
NEAT	P-195N	10 mg
100 µg/mL in MeOH	P-195S ‡	1 mL

**Methidathion Oxon**, see *DMTP Oxon*

‡ V-Rated packaging surcharge applies for international shipments

## Methiocarb

4-Methylthio-3,5-xylyl methylcarbamate



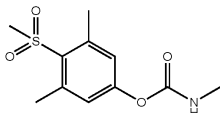
*Mercaptodimethur*

**CAS** 2032-65-7 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub>S **MW** 225.31 **PS** S  
**SG** 1.24 g/cm<sup>3</sup> **MP** 119 °C  
**SOL** M,A,D,T,CN,TP,EA,H,IPA

Matrix	Cat. No.	Unit
NEAT	P-156N	10 mg
100 µg/mL in MeOH	P-156S	1 mL

## Methiocarb sulfone

3,5-Dimethyl-4-(methylsulfonyl)phenyl methylcarbamate

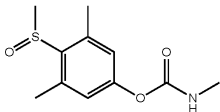


**CAS** 2179-25-1 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>4</sub>S **MW** 257.31 **PS** S  
**SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-570N	10 mg
100 µg/mL in AcCN	P-570S-CN	1 mL

## Methiocarb sulfoxide

3,5-Dimethyl-4-(methylsulfinyl)phenyl methylcarbamate

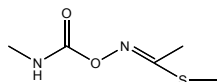


**CAS** 2635-10-1 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>3</sub>S **MW** 241.31 **PS** S  
**SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-650N	10 mg
100 µg/mL in MeOH	P-650S	1 mL

## Methomyl

S-Methyl N-(methylcarbamoyloxy)thioacetimidate



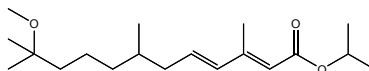
*Lannate*

**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** 1.29 g/cm<sup>3</sup> **MP** 78 °C **BP** Decomp. 192 °C  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-032N	10 mg
100 µg/mL in MeOH	P-032S	1 mL
1000 µg/mL in MeOH	P-032S-10X	1 mL

## Methoprene

Isopropyl (E,E)-(RS)-11-methoxy-3,7,11-trimethyldodeca-2,4-dienoate

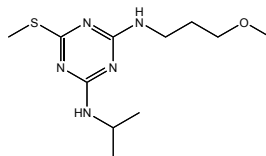


**CAS** 40596-69-8 **MF** C<sub>19</sub>H<sub>34</sub>O<sub>3</sub> **MW** 310.47 **PS** L  
**SG** 0.921 g/cm<sup>3</sup> **BP** 100 °C (0.05mm Hg) **FP** 96 °C  
**SOL** M,A,D,H,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-157N	10 mg
100 µg/mL in MeOH	P-157S	1 mL

## Methoprotryne

N-Isopropyl-N'-(3-methoxypropyl)-6-(methylsulfonyl)-1,3,5-triazine-2,4-diamine



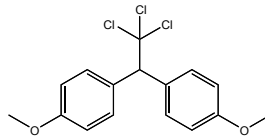
**CAS** 841-06-5 **MF** C<sub>11</sub>H<sub>17</sub>N<sub>5</sub>OS **MW** 271.38 **PS** S  
**SG** 1.19 g/cm<sup>3</sup> **MP** 68-70 °C **FP** >100 °C  
**SOL** M,A,CN,EA,D,H,T

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)



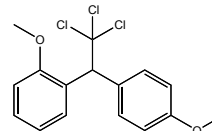
*p,p'-Methoxychlor, DMDT*

**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  
**SG** 1.41 g/cm<sup>3</sup> **MP** 89 °C **BP** Decomp.  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-064N	10 mg
100 µg/mL in MeOH	P-064S	1 mL
1000 µg/mL in MeOH	P-064S-10X	1 mL

## o,p'-Methoxychlor

1,1,1-Trichloro-2-(o-methoxyphenyl)-2-(p-methoxyphenyl)ethane



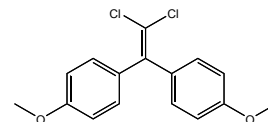
**CAS** 30667-99-3 **MF** C<sub>16</sub>H<sub>15</sub>Cl<sub>3</sub>O<sub>2</sub> **MW** 345.65 **PS** S  
**SG** 1.41 g/cm<sup>3</sup> **SOL** M,A,D,H,CN,TP,EA

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-535S	1 mL
100 µg/mL in Isooctane	P-535S-TP	1 mL

*p,p'-Methoxychlor, see Methoxychlor*

## p,p'-Methoxychlor-olefin

1,1'-(Dichloroethylenylidene)bis(4-methoxybenzene)

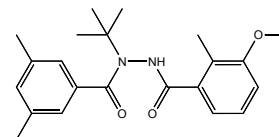


**CAS** 2132-70-9 **MF** C<sub>16</sub>H<sub>14</sub>Cl<sub>2</sub>O<sub>2</sub> **MW** 309.19 **PS** S  
**SG** 1.41 g/cm<sup>3</sup> **MP** 106-108 °C **SOL** M,TP

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-466S	1 mL
1000 µg/mL in MeOH	P-466S-10X	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 **SG** 0.63 g/cm<sup>3</sup> **MP** 185 °C  
**SOL** M,CN,A,D,EA,DMSO

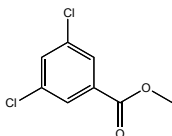
Matrix	Cat. No.	Unit
NEAT	P-857N	10 mg
100 µg/mL in AcCN	P-857S-CN	1 mL

*p-Methoxynitrobenzene, see 4-Nitroanisole*

# Pesticide Standards

## 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 1.45 g/cm<sup>3</sup> MP 58-60 °C SOL M

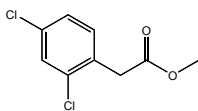
Matrix	Cat. No.	Unit
NEAT	P-247N	10 mg
100 µg/mL in MeOH	P-247S	1 mL
1000 µg/mL in MeOH	P-247S-10X	1 mL

*Methyl 2,4-Dichlorophenoxyacetate, see 2,4-D Methyl ester*

*Methyl 2,6-dichlorophenoxyacetate, see 2,6-D methyl ester*

## Methyl-2,4-dichlorophenylacetate

2,4-Dichlorophenylacetic acid methyl ester

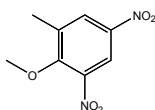


DCAA methyl ester

CAS 55954-23-9 MF C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>2</sub> MW 219.06 S L  
SG 1.32 g/cm<sup>3</sup> BP 153 °C (27mm Hg) FP 112 °C  
SOL M,H

Matrix	Cat. No.	Unit
NEAT	P-214N	10 mg
100 µg/mL in MeOH	P-214S	1 mL

## 2-Methyl-4,6-dinitroanisole

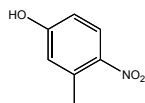


CAS 29027-13-2 MF C<sub>8</sub>H<sub>8</sub>N<sub>2</sub>O<sub>5</sub> MW 212.16 SOL M

Matrix	Cat. No.	Unit
NEAT	P-611N	10 mg
100 µg/mL in MeOH	P-611S	1 mL

## 3-Methyl-4-nitrophenol

4-Nitro-3-cresol

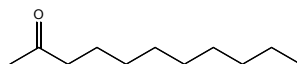


CAS 2581-34-2 MF C<sub>7</sub>H<sub>7</sub>NO<sub>3</sub> MW 153.14 PS S  
SG 1.32 g/cm<sup>3</sup> MP 125-130 °C BP 200 °C FP 110 °C  
SOL M,A

Matrix	Cat. No.	Unit
NEAT	P-509N	10 mg
100 µg/mL in MeOH	P-509S	1 mL

## Methyl nonyl ketone

2-Undecanone

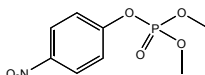


CAS 112-12-9 MF C<sub>11</sub>H<sub>22</sub>O MW 170.29 PS L  
SG 0.82 g/cm<sup>3</sup> BP 236 °C FP 89 °C  
SOL A,M,IPA,D

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

## Methyl paraoxon

Dimethyl-p-nitrophenylphosphate



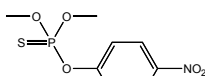
Paraoxon-methyl

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> BP 315 °C FP 100 °C  
SOL M,A,D,T,CN,EA

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



Azophos

CAS 298-00-0 MF C<sub>8</sub>H<sub>10</sub>NO<sub>3</sub>PS MW 263.33 PS S  
SG 1.38 g/cm<sup>3</sup> MP 35-36 °C BP 154 °C (136Pa)  
FP >150 °C SOL M,A,D,H,T,CN,TP,EA

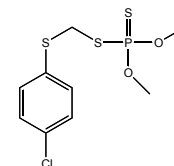
Matrix	Cat. No.	Unit
NEAT	P-065N	10 mg
100 µg/mL in MeOH	P-065S	1 mL
1000 µg/mL in MeOH	P-065S-10X	1 mL
1000 µg/mL in Hexane	P-065S-H-10X	1 mL

*Methyl (2,4,5-trichlorophenoxy)acetate, see 2,4,5-T methyl ester*

*Methyl 3,5,6-Trichloro-2-pyridyloxyacetate, see Triclopyr methyl ester*

## Methyl trithion

S-(((4-Chlorophenyl)sulfanyl)methyl) O,O-dimethyl phosphorodithioate



Carbophenothion methyl

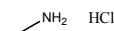
CAS 953-17-3 MF C<sub>9</sub>H<sub>12</sub>ClO<sub>2</sub>PS<sub>3</sub> MW 314.81 PS L  
SG 1.4 g/cm<sup>3</sup> BP 371 °C FP 178 °C SOL M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-652S	1 mL

*Methyl viologen dichloride hydrate, see Paraquat dichloride tetrahydrate*

## Methylamine hydrochloride

Methylammonium chloride

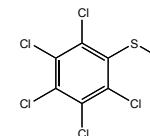


CAS 593-51-1 MF CH<sub>3</sub>N • HCl MW 67.52 PS S  
MP 231-233 °C BP 225-230 °C (15mm Hg)  
FP 209 °C SOL M

Matrix	Cat. No.	Unit
NEAT	P-624N	10 mg
100 µg/mL in MeOH	P-624S	1 mL

## Methylpentachlorophenyl sulfide

Pentachloroanisole



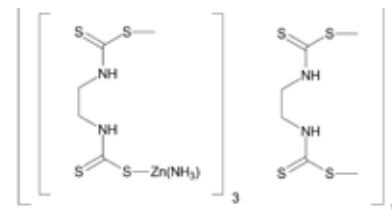
MPCPS

CAS 1825-19-0 MF C<sub>6</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 SOL M,A,D,H,T,CN

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>x</sub>  
MW (1088.6)x PS S SG 1.86 g/cm<sup>3</sup>  
MP 162-165 °C SOL M,A,T,EA

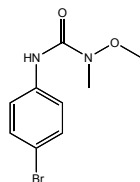
Matrix	Cat. No.	Unit
NEAT	P-416N	10 mg

*Metizolin, see Benazolin*

# Pesticide Standards

## Metobromuron

3-(4-Bromophenyl)-1-methoxy-1-methylurea

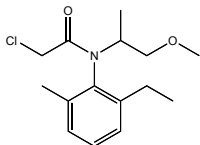


CAS 3060-89-7 MF C<sub>9</sub>H<sub>11</sub>BrN<sub>2</sub>O<sub>2</sub> MW 259.1 PS S  
SG 1.6 g/cm<sup>3</sup> MP 95-96 °C  
SOL M,A,CN,EA,H,D,W

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

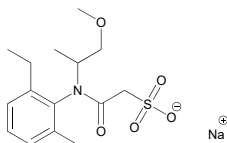


CAS 51218-45-2 MF C<sub>16</sub>H<sub>22</sub>ClNO<sub>2</sub> MW 283.8 PS L  
SG 1.12 g/cm<sup>3</sup> BP 100 °C (0.001 mm Hg)  
FP >100 °C SOL M,A,D,H,T,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-158N	10 mg
100 µg/mL in MeOH	P-158S	1 mL
1000 µg/mL in MeOH	P-158S-10X	1 mL

## Metolachlor ESA sodium salt

Sodium 2-[(2-ethyl-6-methylphenyl)(2-methoxy-1-methylethyl)amino]-2-oxo-ethanesulfonate

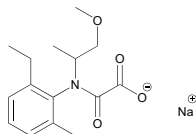


CAS 947601-85-6 MF C<sub>15</sub>H<sub>22</sub>NNaO<sub>5</sub>S MW 351.39  
PS S SOL A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-915S	1 mL

## Metolachlor OA sodium salt

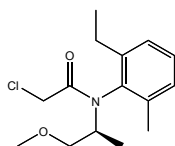
Sodium [(2-ethyl-6-methylphenyl)(2-methoxy-1-methylethyl)amino]-oxo-acetate



CAS N/A MF C<sub>15</sub>H<sub>20</sub>NO<sub>4</sub>Na MW 301 PS S  
MP 162 °C SOL CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-916S	1 mL

## S-Metolachlor

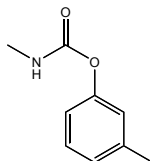


CAS 87392-12-9 MF C<sub>16</sub>H<sub>22</sub>ClNO<sub>2</sub> MW 283.79  
PS L SG 1.12 g/cm<sup>3</sup> BP 334 °C  
SOL M,A,T,H,EA,W,D

Matrix	Cat. No.	Unit
NEAT	P-1013N	10 mg
100 µg/mL in MeOH	P-1013S	1 mL

## Metolcarb

m-Tolyl methylcarbamate



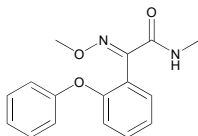
MTMC

CAS 1129-41-5 MF C<sub>9</sub>H<sub>11</sub>NO<sub>2</sub> MW 165.2 PS S  
SG 1.08 g/cm<sup>3</sup> MP 76-77 °C BP 180 °C FP 145 °C  
SOL M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-494N	10 mg
100 µg/mL in MeOH	P-494S	1 mL

## (E)-Metominostrobin

(E)-2-(Methoxyimino)-N-methyl-2-(2-phenoxyphenyl)acetamide

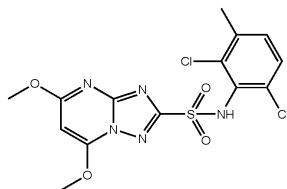


CAS 133408-50-1 MF C<sub>16</sub>H<sub>16</sub>N<sub>2</sub>O<sub>3</sub> MW 284.32  
PS S MP 86-90 °C SOL CN,EA

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1164S-CN	1 mL
1000 µg/mL in AcCN	P-1164S-CN-10X	1 mL

## Metosulam

2',6'-Dichloro-5,7-dimethoxy-3'-methyl[1,2,4]triazolo[1,5-a]pyrimidine-2-sulfonanilide

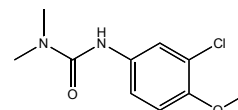


CAS 139528-85-1 MF C<sub>14</sub>H<sub>13</sub>Cl<sub>2</sub>N<sub>5</sub>O<sub>4</sub>S MW 418.26  
PS S SG 1.49 g/cm<sup>3</sup> MP 211 °C  
SOL A,EA,M,T,CN,W,D,H

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-900S-CN	1 mL

## Metoxuron

3-(3-Chloro-4-methoxyphenyl)-1,1-dimethylurea

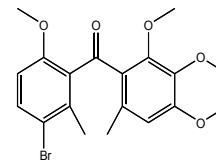


CAS 19937-59-8 MF C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O<sub>2</sub> MW 228.7 PS S  
SG 0.8 g/cm<sup>3</sup> MP 126-127 °C SOL M,A,CN,W

Matrix	Cat. No.	Unit
NEAT	P-437N	10 mg
100 µg/mL in MeOH	P-437S	1 mL

## Metrafenone

3'-Bromo-2,3,4,6'-tetramethoxy-2',6-dimethylbenzophenone

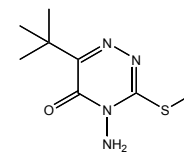


CAS 220899-03-6 MF C<sub>19</sub>H<sub>21</sub>BrO<sub>5</sub> MW 409.27  
PS S SG 1.45 g/cm<sup>3</sup> MP 100 °C  
BP Decomp. 310 °C SOL M,A,CN,D,EA,T,H

Matrix	Cat. No.	Unit
NEAT	P-1032N	10 mg
100 µg/mL in AcCN	P-1032S-CN	1 mL

## Metribuzin

4-Amino-6-tert-butyl-3-methylthio-1,2,4-triazin-5(4H)-one



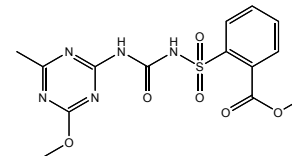
Sencor

CAS 21087-64-9 MF C<sub>8</sub>H<sub>14</sub>N<sub>4</sub>O<sub>2</sub>S MW 214.32 PS S  
SG 1.31 g/cm<sup>3</sup> MP 126 °C BP 132 °C (2Pa)  
SOL M,A,D,H,T,CN,TP,EA,IPA,W

Matrix	Cat. No.	Unit
NEAT	P-089N	10 mg
100 µg/mL in MeOH	P-089S	1 mL
1000 µg/mL in MeOH	P-089S-10X	1 mL

## Metsulfuron-methyl

Methyl 2-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)carbamoylsulfamoylbenzoate



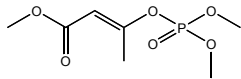
CAS 74223-64-6 MF C<sub>14</sub>H<sub>15</sub>N<sub>5</sub>O<sub>5</sub>S MW 381.37  
PS S SG 1.46 g/cm<sup>3</sup> MP 158 °C  
SOL M,A,T,H,W,D,EA

Matrix	Cat. No.	Unit
NEAT	P-463N	10 mg
100 µg/mL in MeOH	P-463S	1 mL

# Pesticide Standards

## Mevinphos

Methyl 3-((dimethoxyphosphoryl)oxy)-2-butenate



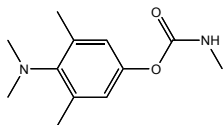
*Phosdrin*

**CAS** 7786-34-7 **MF** C<sub>7</sub>H<sub>13</sub>O<sub>6</sub>P **MW** 224.15 **PS** L  
**SG** 1.23 g/cm<sup>3</sup> **BP** 99-103 °C (0.3mm Hg)  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-074N	10 mg
100 µg/mL in MeOH	P-074S	1 mL
1000 µg/mL in Hexane	P-074S-H-10X	1 mL

## Mexacarbate

4-Dimethylamino-3,5-xyllyl methylcarbamate



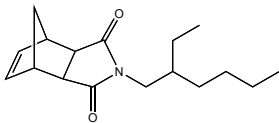
*Zectran*

**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  
**SG** 1.08 g/cm<sup>3</sup> **MP** 85 °C **SOL** M,A,D,CN

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



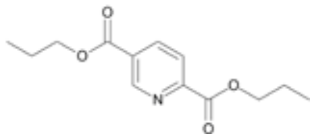
*ENT 8184*

**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> **BP** >280 °C **FP** 177 °C  
**SOL** M,A,D,EA

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



*Dipropyl isocinchomerate*

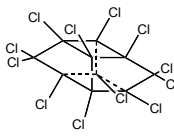
**CAS** 136-45-8 **MF** C<sub>14</sub>H<sub>17</sub>NO<sub>4</sub> **MW** 251.28 **PS** L  
**SG** 1.12 g/cm<sup>3</sup> **BP** 278 °C **FP** 93 °C **SOL** M,A

Matrix	Cat. No.	Unit
NEAT	P-342N	10 mg
100 µg/mL in MeOH	P-342S	1 mL

*MIPC, see Isoprocarb*

## Mirex

Dodecachloropentacyclo[5.3.0.0.2,6.0.3,9.0.4,8]decane



*Dechlorane*

**CAS** 2385-85-5 **MF** C<sub>10</sub>Cl<sub>12</sub> **MW** 545.5 **PS** S  
**MP** 485 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-066N	10 mg
100 µg/mL in MeOH	P-066S	1 mL
1000 µg/mL in MeOH	P-066S-10X	1 mL

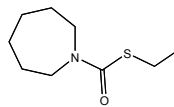
*Mitotane, see o,p'-DDD*

*Mocap, see Ethoprop*

*Molinat, see Molinate*

## Molinate

S-Ethyl azepan-1-carbothioate



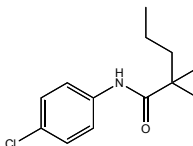
*Molinat*

**CAS** 2212-67-1 **MF** C<sub>9</sub>H<sub>17</sub>NOS **MW** 187.3 **PS** L  
**SG** 1.06 g/cm<sup>3</sup> **BP** 202 °C (10mm Hg) **FP** >100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-176N	10 mg
100 µg/mL in MeOH	P-176S	1 mL

## Monalide

4-Chloro-2,2-dimethylvaleraniide



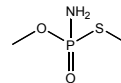
**CAS** 7287-36-7 **MF** C<sub>13</sub>H<sub>18</sub>ClNO **MW** 239.74 **PS** S  
**SG** 1.10 g/cm<sup>3</sup> **MP** 87-88 °C **SOL** M,CN

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



*Methamidophos, Tamaron*

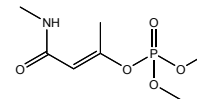
**CAS** 10265-92-6 **MF** C<sub>2</sub>H<sub>8</sub>NO<sub>2</sub>PS **MW** 141.13 **PS** S  
**SG** 1.31 g/cm<sup>3</sup> **MP** 45 °C **FP** 93 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W,IPA

Matrix	Cat. No.	Unit
NEAT	P-155N	10 mg
100 µg/mL in MeOH	P-155S	1 mL
1000 µg/mL in MeOH	P-155S-10X	1 mL

*Monocron, see Monocrotophos*

## Monocrotophos

Dimethyl (2E)-4-(methylamino)-4-oxo-2-buten-2-yl phosphate



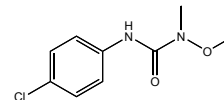
*Azodrin, Monocron, Nunacton*

**CAS** 6923-22-4 **MF** C<sub>7</sub>H<sub>14</sub>NO<sub>3</sub>P **MW** 223.16 **PS** S  
**SG** 1.22 g/cm<sup>3</sup> **MP** 55 °C **BP** 125 °C (0.0005mm Hg)  
**SOL** M,A,D,H,T,CN,EA,W

Matrix	Cat. No.	Unit
NEAT	P-112N	10 mg
100 µg/mL in MeOH	P-112S	1 mL
1000 µg/mL in MeOH	P-112S-10X	1 mL

## Monolinuron

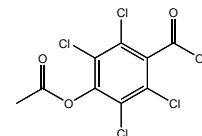
3-(4-Chlorophenyl)-1-methoxy-1-methylurea



**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  
**SG** 1.30 g/cm<sup>3</sup> **MP** 80-83 °C  
**SOL** M,A,H,CN,EA,T,W

Matrix	Cat. No.	Unit
NEAT	P-382N	10 mg
100 µg/mL in MeOH	P-382S	1 mL

## Monomethyltetrachloroterephthalate



*Dacthal monoacid, DCPA monoacid*

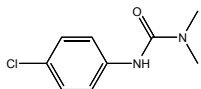
**CAS** 887-54-7 **MF** C<sub>9</sub>H<sub>4</sub>Cl<sub>4</sub>O<sub>4</sub> **MW** 317.94 **PS** S  
**SG** 1.69 g/cm<sup>3</sup> **MP** 174 **SOL** A,CN

Matrix	Cat. No.	Unit
NEAT	P-707N	10 mg
100 µg/mL in Acetone	P-707S-A	1 mL

# Pesticide Standards

## Monuron

3-(4-Chlorophenyl)-1,1-dimethylurea

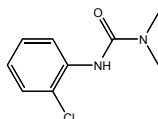


CAS 150-68-5 MF C<sub>9</sub>H<sub>11</sub>ClN<sub>2</sub>O MW 198.65 PS S  
SG 1.27 g/cm<sup>3</sup> MP 174 °C SOL M,A,CN

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

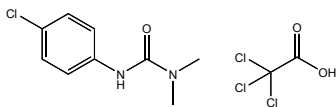


CAS 582-44-5 MF C<sub>9</sub>H<sub>11</sub>ClN<sub>2</sub>O MW 198.65 PS S  
MP 89-90 °C SOL M

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



Monuron trichloroacetate

CAS 140-41-0 MF C<sub>12</sub>HCl<sub>3</sub>O<sub>2</sub>C<sub>2</sub>H<sub>5</sub>N<sub>2</sub> MW 362.04 PS S  
MP 78-81 °C SOL M,CN

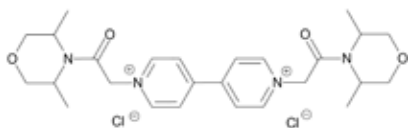
Matrix	Cat. No.	Unit
NEAT	P-034N	10 mg
100 µg/mL in MeOH	P-034S	1 mL

Monuron trichloroacetate, see Monuron TCA

Morestan, see Chinomethionate

## Morfamquat dichloride

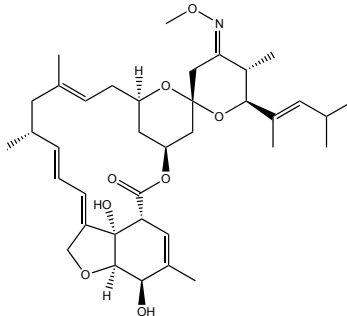
1,1'-bis[2-(3,5-Dimethyl-4-morpholinyl)-2-oxoethyl]-4,4'-bipyridinium dichloride



CAS 4636-83-3 MF C<sub>26</sub>H<sub>36</sub>Cl<sub>2</sub>N<sub>4</sub>O<sub>4</sub> MW 539.50  
MP 299-304 °C SOL M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1374S	1 mL

## Moxidectin



CAS 113507-06-5 MF C<sub>37</sub>H<sub>53</sub>NO<sub>8</sub> MW 639.82  
PS S SOL CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-961S-CN	1 mL

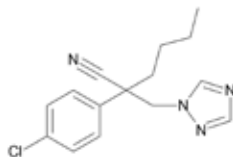
MPCPS, see Methylpentachlorophenyl sulfide

MSMA, see Bueno

MTMC, see Metolcarb

## Myclobutanil

alpha-Butyl-alpha-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile



Systhane

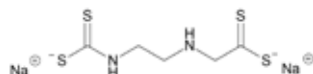
CAS 88671-89-0 MF C<sub>15</sub>H<sub>17</sub>ClN<sub>4</sub> MW 288.78 PS S  
SG 1.2 g/cm<sup>3</sup> MP 63-68 °C BP 202-208 °C(1mm Hg)  
FP >100 °C SOL M,A,H,T,CN,EA,W

Matrix	Cat. No.	Unit
NEAT	P-330N	10 mg
100 µg/mL in MeOH	P-330S	1 mL
1000 µg/mL in MeOH	P-330S-10X	1 mL

N-Serve, see Nitrapyrin

## Nabam

Ethylene bisdithiocarbamate, disodium



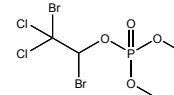
Namab

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  
SG 1.14 g/cm<sup>3</sup> MP Decom. SOL A,M,EA,W

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



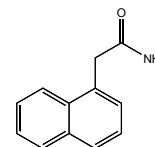
Dibrom

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 L SG 1.96 g/cm<sup>3</sup> BP 110 °C (0.5mm Hg)  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-159N	10 mg
100 µg/mL in MeOH	P-159S	1 mL
1000 µg/mL in Hexane	P-159S-H-10X	1 mL

Namab, see Nabam

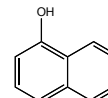
## 1-Naphthalene acetamide



CAS 86-86-2 MF C<sub>12</sub>H<sub>11</sub>NO MW 185.2 PS S  
MP 180-183 °C SOL M,A,IPA

Matrix	Cat. No.	Unit
NEAT	P-512N	10 mg
100 µg/mL in MeOH	P-512S	1 mL

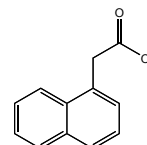
## 1-Naphthol



CAS 90-15-3 MF C<sub>10</sub>H<sub>8</sub>O MW 144.17 PS S  
SG 1.1 g/cm<sup>3</sup> MP 95-96 °C BP 278-280 °C  
FP 125 °C SOL M,A,D,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-1007N	10 mg
100 µg/mL in MeOH	P-1007S	1 mL

## 1-Naphthylacetic acid



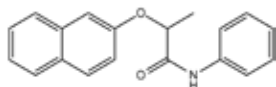
CAS 86-87-3 MF C<sub>12</sub>H<sub>10</sub>O<sub>2</sub> MW 186.21 PS S  
MP 134-135 °C SOL M,A,W

Matrix	Cat. No.	Unit
NEAT	P-461N	10 mg
100 µg/mL in MeOH	P-461S	1 mL

# Pesticide Standards

## Naproanilide

2-(2-Naphthoxy)-N-phenylpropionamide

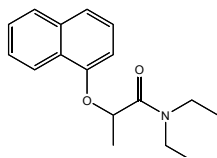


**CAS** 52570-16-8 **MF** C<sub>19</sub>H<sub>17</sub>NO<sub>2</sub> **MW** 291.34 **PS S**  
**SG** 1.26 g/cm<sup>3</sup> **MP** 128 °C **SOL** A,T,CN

Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-1343S-A	1 mL

## Napropamide

N,N-Diethyl-2-naphthoxypropanamid  
(unstated stereochemistry)



Devrinol

**CAS** 15299-99-7 **MF** C<sub>17</sub>H<sub>21</sub>NO<sub>2</sub> **MW** 271.35  
**PS S** **SG** 1.08 g/cm<sup>3</sup> **MP** 75-76 °C **BP** 317 °C  
**FP** >104 °C **SOL** M,A,D,H,CN,TP,EA

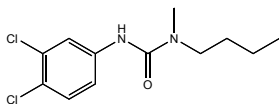
Matrix	Cat. No.	Unit
NEAT	P-179N	10 mg
100 µg/mL in MeOH	P-179S	1 mL

*Naptalam, see Alanap*

*Navadel, see Dioxathion*

## Neburon

1-Butyl-3-(3,4-Dichlorophenyl)-1-methylurea



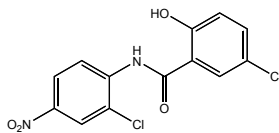
**CAS** 555-37-3 **MF** C<sub>12</sub>H<sub>16</sub>Cl<sub>2</sub>N<sub>2</sub>O **MW** 275.17 **PS S**  
**SG** 1.25 g/cm<sup>3</sup> **MP** 102-103 °C **SOL** M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-041N	10 mg
100 µg/mL in MeOH	P-041S	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## Nicosamide

2'-5-Dichloro-4'-nitrosalicylanilide



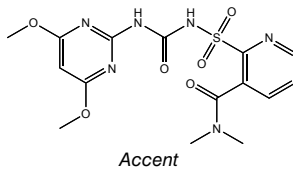
**CAS** 50-65-7 **MF** C<sub>13</sub>H<sub>8</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>4</sub> **MW** 327.12 **PS S**  
**SG** 1.6 g/cm<sup>3</sup> **MP** 230 °C **BP** 424 °C **FP** 210 °C  
**SOL** M

Matrix	Cat. No.	Unit
NEAT	P-160N	10 mg
100 µg/mL in MeOH	P-160S	1 mL

*Nicobifen, see Boscalid*

## Nicosulfuron

2-(4,6-Dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-N,N-dimethylnicotinamide



Accent

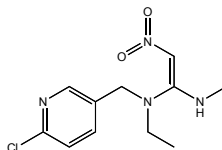
**CAS** 111991-09-4 **MF** C<sub>15</sub>H<sub>18</sub>N<sub>6</sub>O<sub>6</sub>S **MW** 410.41  
**PS S** **SG** 0.31 g/cm<sup>3</sup> **MP** 141-144 °C  
**SOL** A,D,M,EA,CN,T

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

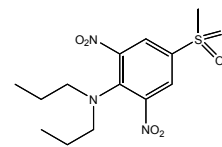


**CAS** 120738-89-8 **MF** C<sub>11</sub>H<sub>15</sub>ClN<sub>4</sub>O<sub>2</sub> **MW** 270.72  
**PS S** **SG** 1.26 g/cm<sup>3</sup> **MP** 82 °C **FP** >70 °C  
**SOL** M,A,CN,W,D,EA,T

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

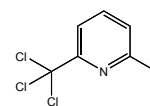


**CAS** 4726-14-1 **MF** C<sub>13</sub>H<sub>15</sub>N<sub>3</sub>O<sub>6</sub>S **MW** 345.37 **PS S**  
**SG** 1.39 g/cm<sup>3</sup> **MP** 151-152 °C **BP** Decomp. 225 °C  
**SOL** M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-583N	10 mg
100 µg/mL in MeOH	P-583S	1 mL

## Nitrapyrin

2-Chloro-6-(trichloromethyl)pyridine



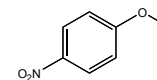
N-Serve

**CAS** 1929-82-4 **MF** C<sub>6</sub>H<sub>4</sub>Cl<sub>4</sub>N **MW** 230.91 **PS S**  
**SG** 1.58 g/cm<sup>3</sup> **MP** 62-63 °C  
**BP** 136-138 °C (11mm Hg) **SOL** M,D,T,CN,A

Matrix	Cat. No.	Unit
NEAT	P-489N	10 mg
100 µg/mL in MeOH	P-489S	1 mL

## 4-Nitroanisole

1-Methoxy-4-nitrobenzene



p-Methoxynitrobenzene

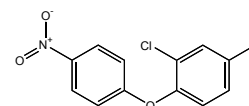
**CAS** 100-17-4 **MF** C<sub>7</sub>H<sub>7</sub>NO<sub>3</sub> **MW** 153.14 **PS S**  
**SG** 1.22 g/cm<sup>3</sup> **MP** 50-54 °C **BP** 260 °C  
**FP** 130 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-273N	10 mg
100 µg/mL in MeOH	P-273S	1 mL

*Nitrochloroform, see Chloropicrin*

## Nitrofen

2,4-Dichlorophenyl-4-nitrophenyl ether



Trizilin

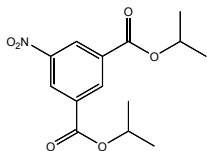
**CAS** 1836-75-5 **MF** C<sub>12</sub>H<sub>7</sub>Cl<sub>2</sub>NO<sub>3</sub> **MW** 284.09 **PS S**  
**SG** 1.3 g/cm<sup>3</sup> **MP** 70-71 °C **BP** 180-190 °C (0.25mm Hg)  
**FP** >200 °C **SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-363N	10 mg
100 µg/mL in MeOH	P-363S	1 mL

# Pesticide Standards

## Nitrothal-isopropyl

Diisopropyl 5-nitrosophthalate

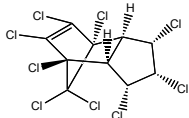


**CAS** 10552-74-6 **MF** C<sub>14</sub>H<sub>17</sub>NO<sub>3</sub> **MW** 295.29 **PS** S  
**SG** 1.21 g/cm<sup>3</sup> **MP** 65 °C **FP** >100 °C  
**SOL** M,A,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-695N	10 mg
100 µg/mL in MeOH	P-695S	1 mL

## cis-Nonachlor

(1α,2α,3α)-1,2,3,4,5,6,7,8-Nonachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene

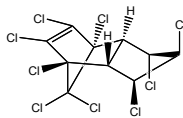


**CAS** 5103-73-1 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>9</sub> **MW** 444.22 **PS** S  
**SG** 1.59 g/cm<sup>3</sup> **MP** 219 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-297N	10 mg
100 µg/mL in MeOH	P-297S	1 mL
1000 µg/mL in MeOH	P-297S-10X	1 mL

## trans-Nonachlor

(1-α,2-β,3-α,3a-α,4-β,7-β,7a-α)-1,2,3,4,5,6,7,8-Nonachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene

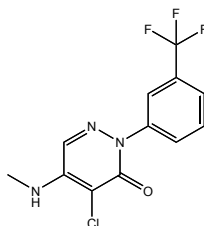


**CAS** 39765-80-5 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>9</sub> **MW** 444.22 **PS** S  
**SG** 1.86 g/cm<sup>3</sup> **MP** 127 °C **BP** 451 °C  
**FP** 229 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-184N	10 mg
100 µg/mL in MeOH	P-184S	1 mL

## Norflurazon

4-Chloro-5-methylamino-2-(α,α,α-trifluoro-m-tolyl)pyridazin-3(2H)-one

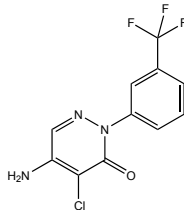


**CAS** 27314-13-2 **MF** C<sub>12</sub>H<sub>9</sub>ClF<sub>3</sub>N<sub>3</sub>O **MW** 303.67  
**PS** S **SG** 1.45 g/cm<sup>3</sup> **MP** 174-180 °C  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-217N	10 mg
100 µg/mL in MeOH	P-217S	1 mL

## Norflurazon-desmethyl

4-Chloro-5-amino-2-(α,α,α-trifluoro-m-tolyl)-3(2H)-pyridazinone

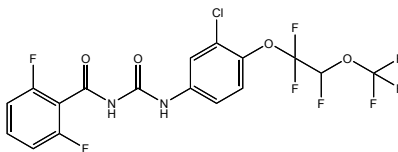


**CAS** 23576-24-1 **MF** C<sub>11</sub>H<sub>8</sub>ClF<sub>3</sub>N<sub>3</sub>O **MW** 289.64  
**PS** S **MP** 154 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1129S-CN	1 mL

## Novaluron

1-[3-Chloro-4-(1,1,2-trifluoro-2-trifluoromethoxyethoxy)phenyl]-3-(2,6-difluorobenzoyl)urea



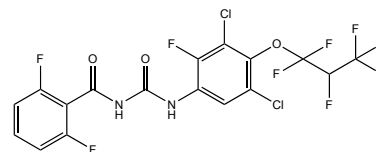
Rimon

**CAS** 116714-46-6 **MF** C<sub>17</sub>H<sub>13</sub>ClF<sub>5</sub>N<sub>2</sub>O<sub>4</sub> **MW** 492.7  
**SG** 1.56 g/cm<sup>3</sup> **MP** 177-178 °C **FP** 202 °C  
**SOL** M,A,CN,EA,D

Matrix	Cat. No.	Unit
NEAT	P-966N-5MG	5 mg
100 µg/mL in MeOH	P-966S	1 mL

## Noviflumuron

(RS)-1-[3,5-Dichloro-2-fluoro-4-(1,1,2,3,3,3-hexafluoropropoxy)phenyl]-3-(2,6-difluorobenzoyl)urea



**CAS** 121451-02-3 **MF** C<sub>17</sub>H<sub>7</sub>Cl<sub>2</sub>F<sub>5</sub>N<sub>2</sub>O<sub>3</sub> **MW** 529.14  
**PS** S **SG** 1.88 g/cm<sup>3</sup> **MP** 156-157 °C  
**BP** Decomp. 250 °C **SOL** A,EA,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-967S-CN	1 mL

*Nuarimol*, see *Trimidal*

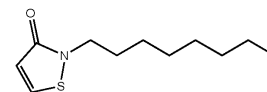
*Nunacton*, see *Monocrotophos*

*Octachlor*, see *Chlordane*

*Octalene*, see *Aldrin*

## Octhilonone

2-Octyl-1,2-thiazol-3(2H)-one



**CAS** 26530-20-1 **MF** C<sub>11</sub>H<sub>19</sub>NOS **MW** 213.34 **PS** L  
**SG** 1.05 g/cm<sup>3</sup> **BP** 120 °C (0.01mm Hg)  
**SOL** A,CN,M,T,EA,H

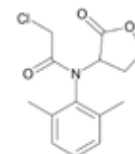
Matrix	Cat. No.	Unit
Neat	P-788N	1 mL

*Off*, see *Deet (Off)*

*Ofunack*, see *Pyridaphenthion*

## 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** 1.37 g/cm<sup>3</sup> **MP** 144-146 °C  
**SOL** A,CN,TP,EA,M

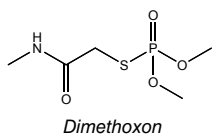
Matrix	Cat. No.	Unit
10 µg/mL in TP	P-653S-TP-0.1X	1 mL



# Pesticide Standards

## 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  
**SG** 1.32 g/cm<sup>3</sup> **BP** Decomp. 135 °C **FP** 100 °C  
**SOL** M,A,D,H,T,CN,TP,EA

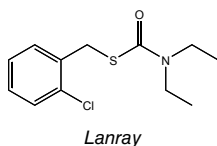
Matrix	Cat. No.	Unit
NEAT	P-121N	10 mg
100 µg/mL in MeOH	P-121S	1 mL
1000 µg/mL in MeOH	P-121S-10X	1 mL

**Omite**, see *Propargite*

**OMPA**, see *Schradan*

## Orbencarb

S-2-Chlorobenzyl diethylthiocarbamate



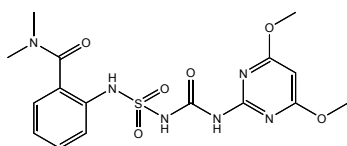
**CAS** 34622-58-7 **MF** C<sub>12</sub>H<sub>16</sub>ClNOS **MW** 257.78  
**PS** L **SG** 1.18 g/cm<sup>3</sup> **BP** 158 °C (1mm Hg)  
**SOL** M,D,A,H,T

Matrix	Cat. No.	Unit
NEAT	P-433N	10 mg
100 µg/mL in MeOH	P-433S	1 mL

**Orthene**, see *Acephate*

## Orthosulfamuron

1-(4,6-Dimethoxyypyrimidin-2-yl)-3-[2-(dimethylcarbamoyl)phenylsulfamoyl]urea

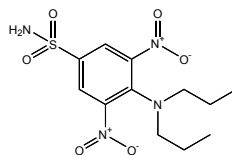


**CAS** 213464-77-8 **MF** C<sub>16</sub>H<sub>20</sub>N<sub>6</sub>O<sub>5</sub>S **MW** 424.43  
**PS** S **SG** 1.48 g/cm<sup>3</sup> **MP** 157 °C  
**BP** Decomp. 185 °C **SOL** A,EA,M,D,W

Matrix	Cat. No.	Unit
100 µg/mL in Acetone	P-1045S-A	1 mL

## Oryzalin

4-(Dipropylamino)-3,5-dinitrobenzenesulfonamide



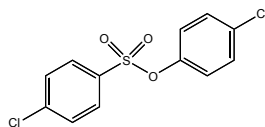
Surflan

**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** Decomp. 265 °C **SOL** M,A,CN,MC,D

Matrix	Cat. No.	Unit
NEAT	P-043N	10 mg
100 µg/mL in MeOH	P-043S	1 mL
1000 µg/mL in MeOH	P-043S-10X	1 mL

## Ovex

4-Chlorophenyl 4-chlorobenzenesulfonate



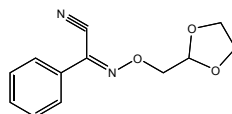
Chlorfenson

**CAS** 80-33-1 **MF** C<sub>12</sub>H<sub>8</sub>Cl<sub>2</sub>O<sub>2</sub>S **MW** 303.16 **PS** S  
**SG** 1.46 g/cm<sup>3</sup> **MP** 86 °C **SOL** M,A,D,CN

Matrix	Cat. No.	Unit
NEAT	P-425N	10 mg
100 µg/mL in MeOH	P-425S	1 mL

## Oxabetrinil

(Z)-1,3-Dioxolan-2-ylmethoxyimino(phenyl)acetone nitrile

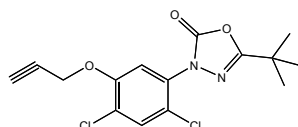


**CAS** 74782-23-3 **MF** C<sub>9</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub> **MW** 232.24 **PS** S  
**SG** 1.33 g/cm<sup>3</sup> **MP** 78 °C **SOL** A,T,M,H,D

Matrix	Cat. No.	Unit
NEAT	P-995N	10 mg
100 µg/mL in MeOH	P-995S	1 mL

## Oxadiargyl

3-[2,4-Dichloro-5-(2-propyn-1-yloxy)phenyl]-5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3H)-one

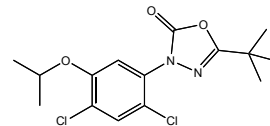


**CAS** 39807-15-3 **MF** C<sub>16</sub>H<sub>14</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub> **MW** 341.19  
**PS** S **SG** 1.41 g/cm<sup>3</sup> **MP** 131 °C **BP** Decomp.  
**SOL** A,EA,T,M,CN,D

Matrix	Cat. No.	Unit
NEAT	P-1031N	10 mg
100 µg/mL in AcCN	P-1031S-CN	1 mL

## Oxadiazon

2-tert-Butyl-3-(2,4-dichloro-5-isopropoxyphenyl)-1,3,4-oxadiazol-2(3H)-one

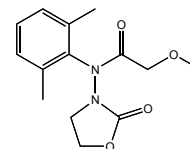


**CAS** 19666-30-9 **MF** C<sub>15</sub>H<sub>18</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub> **MW** 345.22  
**PS** S **SG** 1.31 g/cm<sup>3</sup> **MP** 87 °C **BP** 282 °C  
**FP** 206 °C **SOL** M,A,D,H,CN,TP,EA,T

Matrix	Cat. No.	Unit
NEAT	P-236N	10 mg
100 µg/mL in MeOH	P-236S	1 mL
1000 µg/mL in MeOH	P-236S-10X	1 mL

## Oxadixyl

2-Methoxy-N-(2-oxo-1,3-oxazolidin-3-yl)acet-2',6'-xylylidide

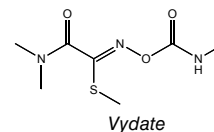


**CAS** 77732-09-3 **MF** C<sub>14</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub> **MW** 278.3 **PS** S  
**SG** 0.5 g/cm<sup>3</sup> **MP** 104 °C **FP** >100 °C  
**SOL** M,A,T,CN,EA,DMSO,W

Matrix	Cat. No.	Unit
NEAT	P-560N	10 mg
100 µg/mL in MeOH	P-560S	1 mL

## Oxamyl

S-Methyl N,N'-dimethyl-N-(methylcarbamoyloxy)-1-thio-oxamimidate

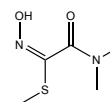


**CAS** 23135-22-0 **MF** C<sub>7</sub>H<sub>13</sub>N<sub>3</sub>O<sub>3</sub>S **MW** 219.26  
**PS** S **SG** 0.97 g/cm<sup>3</sup> **MP** 108-110 °C  
**SOL** M,A,D,H,CN,W,T

Matrix	Cat. No.	Unit
NEAT	P-161N	10 mg
100 µg/mL in MeOH	P-161S	1 mL

## Oxamyl oxime

Methyl 2-(dimethylamino)-N-hydroxy-2-oxo-ethaneimidothioate

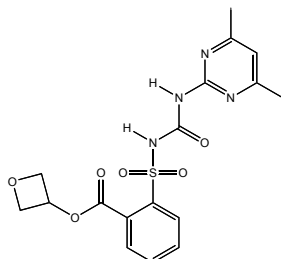


**CAS** 30558-43-1 **MF** C<sub>5</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 162.21  
**PS** S **SG** 1.20 g/cm<sup>3</sup> **MP** 174-179 °C **SOL** M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1138S-CN	1 mL

## Oxasulfuron

Oxetan-3-yl-2-[(4,6-dimethylpyrimidin-2-yl) carbamoylsulfamoyl]benzoate



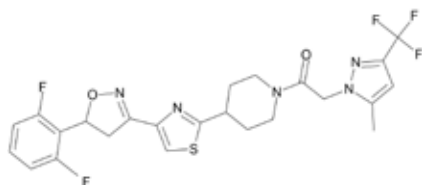
Dynam

**CAS** 144651-06-9 **MF** C<sub>17</sub>H<sub>18</sub>N<sub>4</sub>O<sub>5</sub>S **MW** 406.41  
**PS S SG** 1.49 g/cm<sup>3</sup> **MP** 158 °C  
**SOL** M,A,T,H,CN,EA,D

Matrix	Cat. No.	Unit
NEAT	P-859N	10 mg
100 µg/mL in AcCN	P-859S-CN	1 mL

## Oxathiapiprolin

1-(4-{4-[5-(2,6-Difluorophenyl)-4,5-dihydro-1,2-oxazol-3-yl]-1,3-thiazol-2-yl}piperidin-1-yl)-2-[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]ethenone



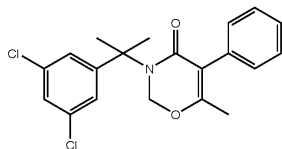
Zorvec

**CAS** 1003318-67-9 **MF** C<sub>24</sub>H<sub>22</sub>F<sub>5</sub>N<sub>5</sub>O<sub>2</sub>S **MW** 539.53  
**PS S MP** 143-145 °C **BP** Decomp. 290 °C  
**SOL** A,D,W,M

Matrix	Cat. No.	Unit
NEAT	P-1379N	10 mg
100 µg/mL in MeOH	P-1379S	1 mL

## Oxaziclomefone

3-[1-(3,5-Dichlorophenyl)-1-methylethyl]-3,4-dihydro-6-methyl-5-phenyl-2H-1,3-oxazin-4-one



**CAS** 153197-14-9 **MF** C<sub>20</sub>H<sub>19</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 376.28  
**PS S MP** 150 °C **FP** 267 °C **SOL** M,CN

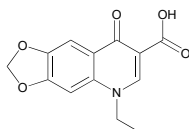
Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1066S	1 mL

**Oxazolidine**, see *Furilazole*

**2-Oxoimidazolidine**, see *2-Imidazolidone*

## Oxolinic acid

5,8-Dihydro-5-ethyl-8-oxo-1,3-dioxolo[4,5-g]quino-line-7-carboxylic acid

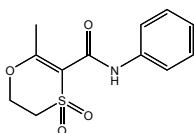


**CAS** 14698-29-4 **MF** C<sub>13</sub>H<sub>11</sub>NO<sub>5</sub> **MW** 261.23 **PS S**  
**SG** 1.55 g/cm<sup>3</sup> **MP** 314-316 °C **BP** 473 °C  
**FP** >110 °C **SOL** CN

Matrix	Cat. No.	Unit
NEAT	P-1204N	10 mg
100 µg/mL in AcCN	P-1204S-CN	1 mL

## Oxycarboxin

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



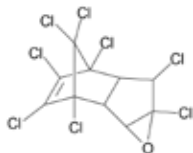
**CAS** 5259-88-1 **MF** C<sub>12</sub>H<sub>13</sub>NO<sub>2</sub>S **MW** 267.3 **PS S**  
**SG** 1.41 g/cm<sup>3</sup> **MP** 120-121 °C **FP** 219 °C  
**SOL** M,CN,A,H,W

Matrix	Cat. No.	Unit
NEAT	P-391N	10 mg
100 µg/mL in MeOH	P-391S	1 mL

**Oxychlordane**, see *Oxychlordane Isomer*

## Oxychlordane Isomer

1,2,4,5,6,7,8,8-Octachloro-2,3-epoxy-3a,4,7,7a-tetrahydro-4,7-methanoindan



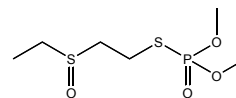
Oxychlordane

**CAS** 27304-13-8 **MF** C<sub>10</sub>H<sub>4</sub>Cl<sub>8</sub>O **MW** 423.74 **PS S**  
**MP** 144 °C **BP** 353 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
10 µg/mL in MeOH	P-331S-0.1X	1 mL
100 µg/mL in MeOH	P-331S	1 mL
100 µg/mL in Hexane	P-331S-H	1 mL

## Oxydemeton-methyl

S-2-Ethylsulfinyethyl O,O-dimethyl phosphorothioate



MetaSystox-R

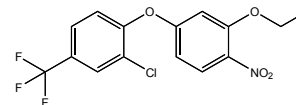
**CAS** 301-12-2 **MF** C<sub>6</sub>H<sub>15</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 246.3 **PS L**  
**SG** 1.28 g/cm<sup>3</sup> **BP** 106 °C (0.01mm Hg)  
**SOL** M,A,CN,H,T,W

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 SG** 1.35 g/cm<sup>3</sup> **MP** 85-90 °C  
**BP** 358 °C (decomp.) **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-277N	10 mg
100 µg/mL in MeOH	P-277S	1 mL

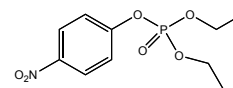
**Oxythioquinox**, see *Chinomethionate*

**Paclobotrazol**, see *Bonzi*

**Pano-ram**, see *Fenfuram*

## Paraoxon

O,O-Diethyl O-p-nitrophenyl phosphate



Paraoxon-ethyl, Parathion oxon

**CAS** 311-45-5 **MF** C<sub>10</sub>H<sub>14</sub>NO<sub>6</sub>P **MW** 275.2 **PS L**  
**SG** 1.27 g/cm<sup>3</sup> **BP** 169-170 °C (1mm Hg)  
**SOL** M A,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-453N	10 mg
100 µg/mL in MeOH	P-453S	1 mL
1000 µg/mL in MeOH	P-453S-10X	1 mL
100 µg/mL in Isooctane	P-453S-TP	1 mL

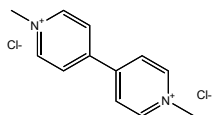
**Paraoxon-ethyl**, see *Paraoxon*

**Paraoxon-methyl**, see *Methyl paraoxon*

# Pesticide Standards

## Paraquat dichloride tetrahydrate

1,1'-Dimethyl-4,4'-bipyridinium dichloride tetrahydrate



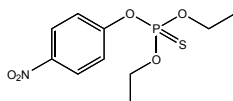
*Methyl viologen dichloride hydrate*

**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** >300 °C (decomp.) **SOL** A,T,EA,H,M,W

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



*Ethyl parathion, Thiophos*

**CAS** 56-38-2 **MF** C<sub>10</sub>H<sub>14</sub>NO<sub>3</sub>PS **MW** 291.26 **PS L**  
**SG** 1.26 g/cm<sup>3</sup> **BP** 150 °C (80Pa) **FP** 174 °C  
**SOL** M,A,D,H,T,CN,TP,EA IPA

Matrix	Cat. No.	Unit
NEAT	P-070N	10 mg
100 µg/mL in MeOH	P-070S	1 mL
1000 µg/mL in MeOH	P-070S-10X	1 mL
1000 µg/mL in Hexane	P-070S-H-10X	1 mL

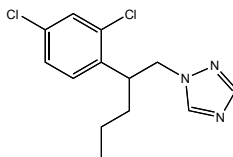
*Parathion oxon, see Paraoxon*

*PCA, see Pyrazon*

*Pebulate, see Tillam*

## Penconazole

1-[2-(2,4-Dichlorophenyl)pentyl]-1H-1,2,4-triazole

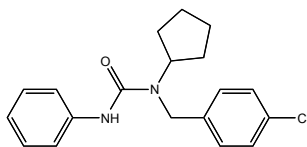


**CAS** 66246-88-6 **MF** C<sub>13</sub>H<sub>15</sub>Cl<sub>2</sub>N<sub>3</sub> **MW** 284.18 **PS S**  
**SG** 1.30 g/cm<sup>3</sup> **MP** 58-60 °C **BP** >360 °C  
**FP** 100 °C **SOL** M,A,H,T,CN,EA,D

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

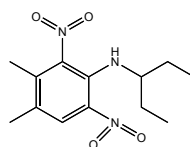


**CAS** 66063-05-6 **MF** C<sub>19</sub>H<sub>21</sub>ClN<sub>2</sub>O **MW** 328.84  
**PS S** **SG** 1.22 g/cm<sup>3</sup> **MP** 129 °C **BP** 286 °C  
**SOL** M,A,CN,EA,D

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



*Penoxalin, Prowl*

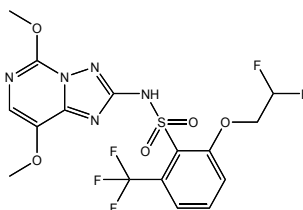
**CAS** 40487-42-1 **MF** C<sub>13</sub>H<sub>19</sub>N<sub>3</sub>O<sub>4</sub> **MW** 281.31 **PS S**  
**SG** 1.19 g/cm<sup>3</sup> **MP** 54-58 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-097N	10 mg
100 µg/mL in MeOH	P-097S	1 mL
1000 µg/mL in MeOH	P-097S-10X	1 mL

*Penoxalin, see Pendimethalin*

## Penoxsulam

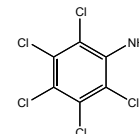
3-(2,2-Difluoroethoxy)-N-(5,8-dimethoxy[1,2,4]triazolo[1,5-c]pyrimidin-2-yl)-a,a-trifluorotoluene-2-sulfonamide



**CAS** 219714-96-2 **MF** C<sub>16</sub>H<sub>14</sub>F<sub>5</sub>N<sub>5</sub>O<sub>5</sub> **MW** 483.37  
**PS S** **SG** 1.61 g/cm<sup>3</sup> **MP** 212 °C  
**BP** Decomp. 214 °C **SOL** A,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1046S	1 mL

## Pentachloroaniline



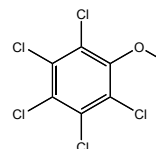
*2,3,4,5,6-Pentachlorobenzamine*

**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 **FP** >100 °C  
**SOL** M,A,D,H,T,CN

Matrix	Cat. No.	Unit
NEAT	P-875N	10 mg
100 µg/mL in AcCN	P-875S-CN	1 mL

## Pentachloroanisole

Pentachlorophenol methyl ether

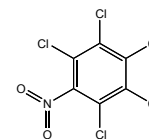


**CAS** 1825-21-4 **MF** C<sub>7</sub>H<sub>3</sub>Cl<sub>5</sub>O **MW** 280.36 **PS S**  
**SG** 1.62 g/cm<sup>3</sup> **MP** 102-104 °C  
**SOL** M,A,D,H,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-199N	10 mg
100 µg/mL in MeOH	P-199S	1 mL

*2,3,4,5,6-Pentachlorobenzamine, see Pentachloroaniline*

## Pentachloronitrobenzene



*Folosan, Quintozene*

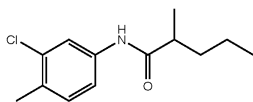
**CAS** 82-68-8 **MF** C<sub>6</sub>Cl<sub>5</sub>NO<sub>2</sub> **MW** 295.33 **PS S**  
**SG** 1.72 g/cm<sup>3</sup> **MP** 140-143 °C **BP** 328 °C  
**SOL** M,A,D,H,CN,EA,T

Matrix	Cat. No.	Unit
NEAT	P-113N	10 mg
100 µg/mL in MeOH	P-113S	1 mL

# Pesticide Standards

## Pentachlor

N-(3-Chloro-4-methylphenyl)-2-methylpentanamide



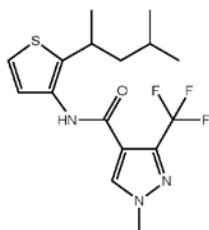
**CAS** 2307-68-8 **MF** C<sub>13</sub>H<sub>16</sub>ClNO **MW** 239.74 **PS** S  
**SG** 1.11 g/cm<sup>3</sup> **MP** 85-86 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1067N	10 mg
100 µg/mL in MeOH	P-1067S	1 mL

*Pentanoic acid, phenyl ester, see Phenyl Valerate*

## Penthiopyrad

N-[2-(1,3-Dimethylbutyl)-3-thienyl]-1-methyl-3-(trifluoromethyl)-1H-pyrazole-4-carboxamide

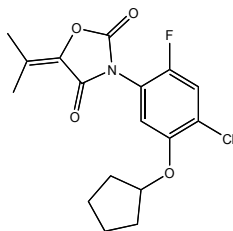


**CAS** 183675-82-3 **MF** C<sub>16</sub>H<sub>20</sub>F<sub>3</sub>N<sub>3</sub>SO **MW** 359.41  
**PS** S **MP** 108-109 °C **BP** Decomp. 314 °C  
**SOL** M,EA,T,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1131S-CN	1 mL

## Pentoxazone

3-(4-Chloro-5-cyclopentyloxy-2-fluorophenyl)-5-isopropylidene-1,3-oxazolidone-2,4-dione



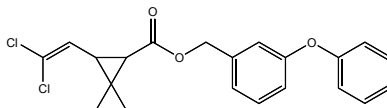
**CAS** 110956-75-7 **MF** C<sub>17</sub>H<sub>17</sub>ClFNO<sub>4</sub> **MW** 353.77  
**PS** S **SG** 1.42 g/cm<sup>3</sup> **MP** 104 °C **SOL** M,CN,H

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1051S-0.1X	1 mL

*Percolate, see Imidan*

## Permethrin

3-Phenoxybenzyl (1RS)-cis,trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

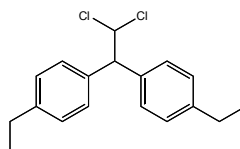


**CAS** 52645-53-1 **MF** C<sub>21</sub>H<sub>20</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 391.29  
**PS** L **SG** 1.19-1.27 g/cm<sup>3</sup> **BP** 200 °C (0.1mm Hg)  
**FP** >100 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-128N	10 mg
100 µg/mL in MeOH	P-128S	1 mL

## Pertthane

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



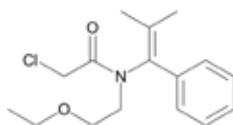
Ethylan

**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 **FP** >100 °C  
**SOL** M,A,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-162N	10 mg
100 µg/mL in MeOH	P-162S	1 mL

## Pethoxamid

2-Chloro-N-(2-ethoxyethyl)-N-(2-methyl-1-phenylprop-1-enyl)acetamide



**CAS** 106700-29-2 **MF** C<sub>16</sub>H<sub>20</sub>ClNO<sub>2</sub> **MW** 295.80  
**PS** S **SG** 1.19 g/cm<sup>3</sup> **MP** 37-38 °C **FP** 182 °C  
**SOL** H,M,EA,A,W

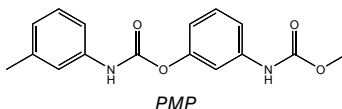
Matrix	Cat. No.	Unit
NEAT	P-1047N	10 mg
100 µg/mL in MeOH	P-1047S	1 mL

*Phenamiphos, see Fenamiphos*

*Phencapton, see Carbophenothion*

## Phenmedipham

Methyl 3-(3-methylcarbaniloyloxy)carbanilate

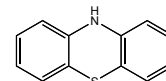


PMP

**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  
**SG** 0.54 g/cm<sup>3</sup> **MP** 143-144 °C  
**SOL** M,A,CN,EA,T,D,H

Matrix	Cat. No.	Unit
NEAT	P-392N	10 mg
100 µg/mL in MeOH	P-392S	1 mL

## Phenothiazine



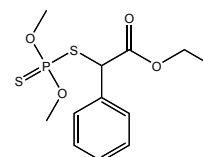
**CAS** 92-84-2 **MF** C<sub>12</sub>H<sub>9</sub>NS **MW** 199.27 **PS** S  
**SG** 1.34 g/cm<sup>3</sup> **MP** 182-187 °C **BP** 371 °C  
**FP** 202 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-579N	10 mg
100 µg/mL in MeOH	P-579S	1 mL

*d-Phenothrin, see Sumithrin*

## Penthoate

S-alpha-Ethoxycarbonylbenzyl O,O-dimethyl phosphorodithioate

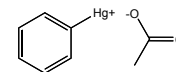


**CAS** 2597-03-7 **MF** C<sub>12</sub>H<sub>17</sub>O<sub>4</sub>PS<sub>2</sub> **MW** 320.37 **PS** L  
**SG** 1.23 g/cm<sup>3</sup> **FP** 165-170 °C  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-476N	10 mg
100 µg/mL in MeOH	P-476S	1 mL

## Phenyl mercury acetate

(Acetato-O)phenylmercury (9Cl)



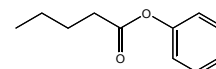
**CAS** 62-38-4 **MF** C<sub>8</sub>H<sub>8</sub>HgO<sub>2</sub> **MW** 336.74 **PS** S  
**MP** 148-151 °C **FP** 302 °C **SOL** M,A,W

Matrix	Cat. No.	Unit
NEAT	P-393N	10 mg
100 µg/mL in MeOH	P-393S	1 mL

*Phenyl pentanoate, see Phenyl Valerate*

## Phenyl valerate

Valeric acid, phenyl ester



*Pentanoic acid, phenyl ester, Phenyl pentanoate*

**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> **BP** 250 °C **FP** 95 °C **SOL** M

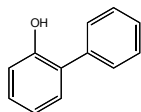
Matrix	Cat. No.	Unit
NEAT	P-734N	10 mg
100 µg/mL in MeOH	P-734S	1 mL

*2-Phenylphenol, see o-Phenylphenol*

# Pesticide Standards

## o-Phenylphenol

2-Hydroxybiphenyl



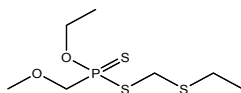
2-Phenylphenol

**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  
**SOL** M,A,D,H,T,CN, EA,W

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



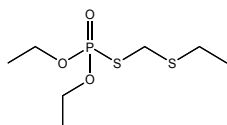
Thimet

**CAS** 298-02-2 **MF** C<sub>7</sub>H<sub>17</sub>O<sub>2</sub>PS<sub>3</sub> **MW** 260.38 **PS** L  
**SG** 1.17 g/cm<sup>3</sup> **BP** 118-120 °C (0.8mm Hg)  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-170N	10 mg
100 µg/mL in MeOH	P-170S	1 mL
1000 µg/mL in MeOH	P-170S-10X	1 mL

## Phorate-oxon

O,O-Diethyl S-[(ethylthio)methyl]phosphorothioate

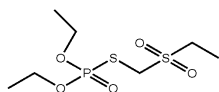


**CAS** 2600-69-3 **MF** C<sub>7</sub>H<sub>17</sub>O<sub>3</sub>PS<sub>2</sub> **MW** 244.31 **PS** L  
**SOL** T,CN,M

Matrix	Cat. No.	Unit
10 µg/mL in Toluene	P-1018S-T-0.1X	1 mL
100 µg/mL in AcCN	P-1018S-CN	1 mL

## Phorate-oxon sulfone

O,O-Diethyl S-[(ethylsulfonyl)methyl] phosphorothioate

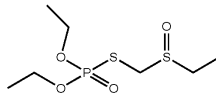


**CAS** 2588-06-9 **MF** C<sub>7</sub>H<sub>17</sub>O<sub>5</sub>PS<sub>2</sub> **MW** 276.31 **PS** L  
**SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1161S-CN	1 mL

## Phorate-oxon sulfoxide

O,O-Diethyl S-[(ethylsulfinyl)methyl] phosphorothioate

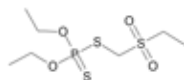


**CAS** 2588-05-8 **MF** C<sub>7</sub>H<sub>17</sub>O<sub>4</sub>PS<sub>2</sub> **MW** 260.31 **PS** L  
**SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1153S-CN	1 mL

## Phorate sulfone

O,O-Diethyl S-ethylsulfonylmethyl phosphorodithioate



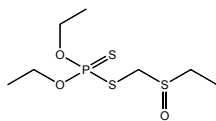
Thimet sulfone

**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  
**SOL** M,A,H,T,CN,TP

Matrix	Cat. No.	Unit
100 µg/mL in Hexane	P-655S-H	1 mL

## Phorate sulfoxide

O,O-Diethyl S-[(ethylsulfinyl)methyl] phosphorothioate

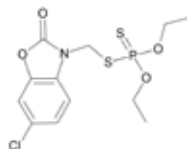


**CAS** 2588-03-6 **MF** C<sub>7</sub>H<sub>17</sub>O<sub>3</sub>PS<sub>3</sub> **MW** 276.38  
**SG** 1.30 g/cm<sup>3</sup> **SOL** M,T,CN

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



Zolone

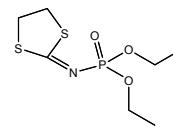
**CAS** 2310-17-0 **MF** C<sub>12</sub>H<sub>16</sub>ClNO<sub>3</sub>PS<sub>2</sub> **MW** 367.81  
**PS** S **SG** 1.34 g/cm<sup>3</sup> **MP** 42-48 °C **FP** 100 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-163N	10 mg
100 µg/mL in MeOH	P-163S	1 mL

*Phosdrin, see Mevinphos*

## Phosfolan

Diethyl 1,3-dithiolan-2-ylidene phosphoramidate



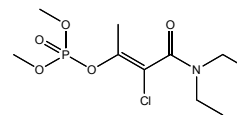
**CAS** 947-02-4 **MF** C<sub>7</sub>H<sub>14</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 255.3 **PS** S  
**MP** 37-45 °C **BP** 100-105 °C (0.001mm Hg)  
**SOL** M,A,D,H

Matrix	Cat. No.	Unit
NEAT	P-234N	10 mg
100 µg/mL in MeOH	P-234S	1 mL
1000 µg/mL in MeOH	P-234S-10X	1 mL
1000 µg/mL in Acetone	P-234S-A-10X	1 mL

*Phosmet, see Imidan*

## 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 **SG** 1.21 g/cm<sup>3</sup> **BP** 162 °C (1.5mm Hg)  
**SOL** M,A,D,H,T,CN,EA

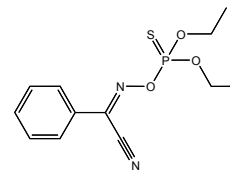
Matrix	Cat. No.	Unit
NEAT	P-075N	10 mg
100 µg/mL in MeOH	P-075S	1 mL

*Phosphothion, see Malathion*

*Phosvel, see Leptophos*

## 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 **SG** 1.21 g/cm<sup>3</sup> **BP** Decomp.  
**SOL** M,A,CN,D,DMSO

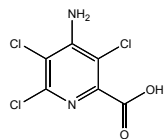
Matrix	Cat. No.	Unit
NEAT	P-357N	10 mg
100 µg/mL in MeOH	P-357S	1 mL

*Phthalide, see Isobenzofuranone*

# Pesticide Standards

## Picloram

4-Amino-3,5,6-trichloro-2-picolinic acid



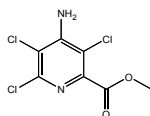
ATCP, Tordon

**CAS** 1918-02-1 **MF** C<sub>6</sub>H<sub>3</sub>Cl<sub>3</sub>N<sub>2</sub>O<sub>2</sub> **MW** 241.46 **PS** S  
**SG** 0.85 g/cm<sup>3</sup> **MP** Decomp. 215 °C  
**SOL** M,A,D,H,T,CN,W

Matrix	Cat. No.	Unit
NEAT	P-047N	10 mg
100 µg/mL in MeOH	P-047S ▲	1 mL
1000 µg/mL in MeOH	P-047S-10X▲	1 mL

## Picloram methyl ester

Methyl 4-amino-3,5,6-trichloro-2-picolinate

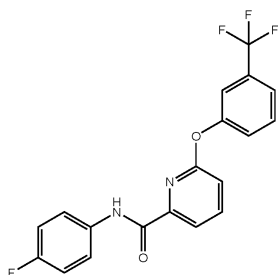


**CAS** 14143-55-6 **MF** C<sub>7</sub>H<sub>5</sub>Cl<sub>3</sub>N<sub>2</sub>O<sub>2</sub> **MW** 255.48  
**MP** 132-134 °C **SOL** M,A,D,H,TP

Matrix	Cat. No.	Unit
NEAT	P-198N	10 mg
100 µg/mL in MeOH	P-198S	1 mL

## Picolinafen

4'-Fluoro-6-(a,a,a-trifluoro-m-tolyloxy)pyridine-2-carboxanilide

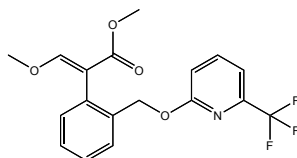


**CAS** 137641-05-5 **MF** C<sub>19</sub>H<sub>12</sub>F<sub>4</sub>N<sub>2</sub>O<sub>2</sub> **MW** 376.30  
**PS** S **SG** 1.45 g/cm<sup>3</sup> **MP** 107-108 °C  
**BP** Decomp. 230 °C **SOL** M,CN,A,EA,T,D

Matrix	Cat. No.	Unit
NEAT	P-1061N	10 mg
100 µg/mL in MeOH	P-1061S	1 mL

## Picoxystrobin

Methyl-(E)-3-methoxy-2-[2-[6-(trifluoromethyl)-2-pyridyloxymethyl]phenyl]acrylate



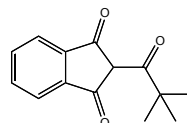
**CAS** 117428-22-5 **MF** C<sub>18</sub>H<sub>16</sub>F<sub>3</sub>NO<sub>4</sub> **MW** 367.32  
**PS** S **SG** 1.40 g/cm<sup>3</sup> **MP** 75 °C  
**BP** Decomp. 242 °C **SOL** A,T,CN,M,EA

Matrix	Cat. No.	Unit
NEAT	P-860N	10 mg
100 µg/mL in AcCN	P-860S-CN	1 mL

*Pimeton, see Simeton*

## Pindone

2-(2,2-Dimethylpropanoyl)-1H-indene-1,3(2H)-dione



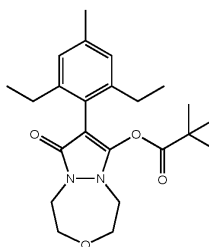
Pival

**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** 109-111 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-394N	10 mg
100 µg/mL in MeOH	P-394S	1 mL

## Pinoxaden

8-(2,6-Diethyl-p-tolyl)-1,2,4,5-tetrahydro-7-oxo-7H-pyrazolo[1,2-d][1,4,5]oxadiazepin-9-yl 2,2-dimethylpropionate



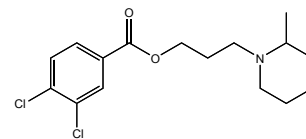
Axial

**CAS** 243973-20-8 **MF** C<sub>23</sub>H<sub>32</sub>N<sub>2</sub>O<sub>4</sub> **MW** 400.51  
**PS** S **SG** 1.16 g/cm<sup>3</sup> **MP** 120-122 °C  
**BP** Decomp. 335 °C **SOL** A,D,H,T,M,CN

Matrix	Cat. No.	Unit
NEAT	P-1154N	10 mg
100 µg/mL in AcCN	P-1154S-CN	1 mL

## Piperalin

3-(2-Methylpiperidino)propyl 3,4-dichlorobenzoate



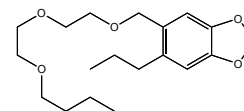
Pipron

**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> **BP** 156-157 °C (20mm Hg)  
**FP** 71 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-663N	10 mg
100 µg/mL in AcCN	P-663S-CN	1 mL

## Piperonyl butoxide

5-[2-(2-Butoxyethoxy)ethoxymethyl]-6-propyl-1,3-benzodioxole

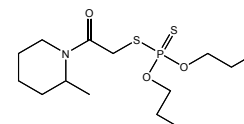


**CAS** 51-03-6 **MF** C<sub>19</sub>H<sub>30</sub>O<sub>5</sub> **MW** 338.44 **PS** L  
**SG** 1.06 g/cm<sup>3</sup> **BP** 180 °C (1mm Hg) **FP** 171 °C  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-348N	10 mg
100 µg/mL in MeOH	P-348S	1 mL

## Piperophos

S-2-Methylpiperidinocarbonylmethyl O,O-dipropyl phosphorothioate



Rilof

**CAS** 24151-93-7 **MF** C<sub>14</sub>H<sub>26</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 353.48  
**PS** L **SG** 1.15 g/cm<sup>3</sup> **BP** Decomp. 190 °C  
**FP** >100 °C **SOL** M,A,D,H

Matrix	Cat. No.	Unit
NEAT	P-656N	10 mg

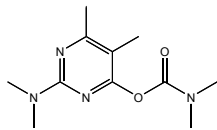
*Pipron, see Piperalin*

*Pirate, see Chlorfenapyr*

# Pesticide Standards

## Pirimicarb

2-Dimethylamino-5,6-dimethylpyrimidin-4-yl dimethylcarbamate



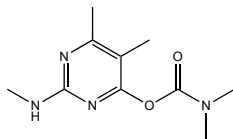
Pirimor

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  
SG 1.21 g/cm<sup>3</sup> MP 91 °C FP >100 °C  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-304N	10 mg
100 µg/mL in MeOH	P-304S	1 mL

## Pirimicarb-desmethyl

5,6-Dimethyl-2-(methylamino)-4-pyrimidinyl dimethylcarbamate

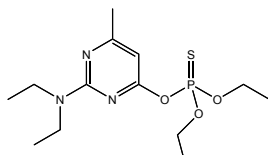


CAS 30614-22-3 MF C<sub>10</sub>H<sub>16</sub>N<sub>4</sub>O<sub>2</sub> MW 224.26 PS S  
SOL CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1139S-CN	1 mL

## Pirimiphos-ethyl

O-2-Diethylamino-6-methylpyrimidin-4-yl O,O-diethyl phosphorothioate

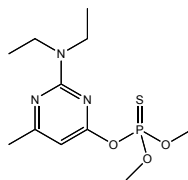


CAS 23505-41-1 MF C<sub>13</sub>H<sub>24</sub>N<sub>3</sub>O<sub>3</sub>PS MW 333.39  
PS L SG 1.14 g/cm<sup>3</sup> BP Decomp. 194 °C  
FP >60 °C SOL M,A,D,H,T,CN,TP,EA

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

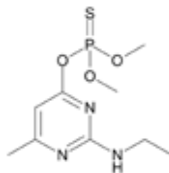


CAS 29232-93-7 MF C<sub>11</sub>H<sub>20</sub>N<sub>3</sub>O<sub>3</sub>PS MW 305.37  
PS L SG 1.17 g/cm<sup>3</sup> BP Decomp. FP >46 °C  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-305N	10 mg
100 µg/mL in MeOH	P-305S	1 mL

## Pirimiphos-methyl-N-desethyl

O-[2-(Ethylamino)-6-methyl-4-pyrimidinyl] dihydrogen phosphorothioate



CAS 67018-59-1 MF C<sub>9</sub>H<sub>16</sub>N<sub>3</sub>O<sub>3</sub>PS MW 277.28  
PS S SOL CN,TP,A,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1331S-CN	1 mL

*Pirimor*, see *Pirimicarb*

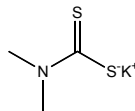
*Pival*, see *Pindone*

*Pledge*, see *Flumioxazin*

*PMP*, see *Phenmedipharm*

*Polytrin*, see *Cypermethrin*

## Potassium dimethyl dithiocarbamate

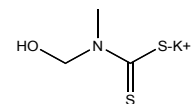


Busan 85

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> BP >100 °C SOL CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-714S-CN	1 mL

## Potassium n-hydroxymethyl-n-methyl dithiocarbamate



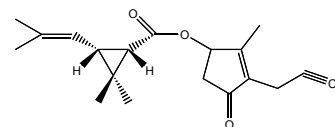
Busan 40

CAS 51026-28-9 MF C<sub>3</sub>H<sub>6</sub>KNOS<sub>2</sub> MW 175.32  
PS L SOL CN

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



Etoc

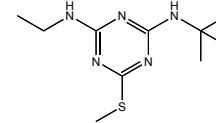
CAS 23031-36-9 MF C<sub>19</sub>H<sub>24</sub>O<sub>3</sub> MW 300.39 PS L  
SG 1.03 g/cm<sup>3</sup> BP >314 °C FP 168 °C  
SOL M,A,CN,H

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



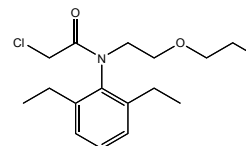
Igran, Terbutryne

CAS 886-50-0 MF C<sub>10</sub>H<sub>19</sub>N<sub>3</sub>S MW 241.36 PS S  
SG 1.12 g/cm<sup>3</sup> MP 105 °C  
BP 154-160 °C (0.06mm Hg)  
SOL M,A,D,T,CN,TP,EA,H

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

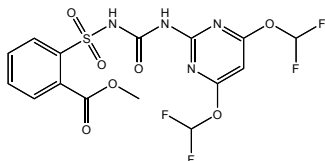


CAS 51218-49-6 MF C<sub>17</sub>H<sub>26</sub>ClNO<sub>2</sub> MW 311.85  
PS L SG 1.07 g/cm<sup>3</sup> BP 135 °C (0.001mg Hg)  
FP 129 °C SOL M,A,CN,H,D

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



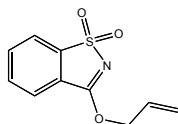
Beacon

**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** **SG** 1.61 g/cm<sup>3</sup> **MP** 170 °C (decomp.)  
**SOL** CN,A,T,H

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

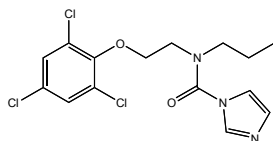


**CAS** 27605-76-1 **MF** C<sub>10</sub>H<sub>9</sub>N<sub>2</sub>O<sub>3</sub>S **MW** 223.25 **PS S**  
**SG** 1.33 g/cm<sup>3</sup> **MP** 138 °C **BP** 369 °C **FP** 177 °C  
**SOL** A,CN

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



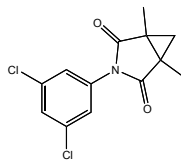
**CAS** 67747-09-5 **MF** C<sub>15</sub>H<sub>16</sub>Cl<sub>3</sub>N<sub>3</sub>O<sub>2</sub> **MW** 376.66  
**PS S** **SG** 1.42 g/cm<sup>3</sup> **MP** 46.5-49.3 °C  
**BP** Decomp. 200 °C **FP** 160 °C  
**SOL** M,A,D,H,T,CN,EA,DMSO,IPA

Matrix	Cat. No.	Unit
NEAT	P-549N	10 mg
100 µg/mL in MeOH	P-549S	1 mL

Proconazole, see Tilt

## Procymidone

N-(3,5-Dichlorophenyl)-1,2-dimethylcyclopropane-1,2-dicarboximide

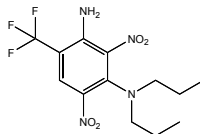


**CAS** 32809-16-8 **MF** C<sub>13</sub>H<sub>11</sub>Cl<sub>2</sub>NO<sub>2</sub> **MW** 284.14  
**PS S** **SG** 1.45 g/cm<sup>3</sup> **MP** 166-167 °C **FP** >100 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-430N	10 mg
100 µg/mL in MeOH	P-430S	1 mL

## Prodiamine

2-Dipropylamino-alpha,alpha,alpha-trifluoro-4,6-dinitro-o-toluidine

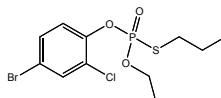


**CAS** 29091-21-2 **MF** C<sub>13</sub>H<sub>17</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub> **MW** 350.29  
**PS S** **SG** 1.47 g/cm<sup>3</sup> **MP** 123-124 °C  
**BP** Decomp. 240 °C **SOL** M,A,IPA

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

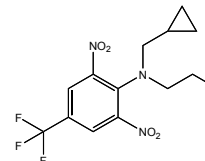


**CAS** 41198-08-7 **MF** C<sub>11</sub>H<sub>15</sub>BrClO<sub>3</sub>PS **MW** 373.63  
**PS L** **SG** 1.46 g/cm<sup>3</sup> **BP** 110 °C (1.80 Pa)  
**FP** 124 °C **SOL** M,A,D,H,T,CN,TP,EA

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



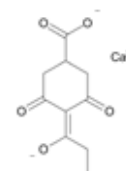
Tolban

**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** 1.38 g/cm<sup>3</sup> **MP** 32-33 °C  
**SOL** M,A,D,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-099N	10 mg
100 µg/mL in MeOH	P-099S	1 mL
1000 µg/mL in MeOH	P-099S-10X	1 mL

## Prohexadione-calcium

Calcium 3-oxido-5-oxo-4-propionylcyclohex-3-enecarboxylate

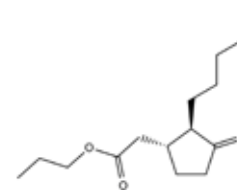


**CAS** 127277-53-6 **MF** C<sub>20</sub>H<sub>22</sub>CaO<sub>10</sub> **MW** 462.46  
**PS S** **SG** 1.46 g/cm<sup>3</sup> **MP** >360 °C **SOL** H,EA,M,A

Matrix	Cat. No.	Unit
NEAT	P-1068N	10 mg

## Prohydrojasmon

Propyl (1R,2R)-(3-oxo-2-pentylcyclopentyl)acetate



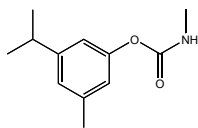
**CAS** 158474-72-7 **MF** C<sub>15</sub>H<sub>26</sub>O<sub>3</sub> **MW** 254.37 **PS L**  
**SG** 0.97 g/cm<sup>3</sup> **BP** 318 °C (100.7kPa) **FP** 165 °C  
**SOL** M,CN,TP,H,A,T

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1342S	1 mL



## Promecarb

3-Isopropyl-5-methylphenyl methylcarbamate



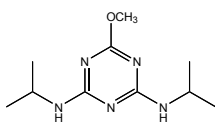
**CAS** 2631-37-0 **MF** C<sub>12</sub>H<sub>17</sub>NO<sub>2</sub> **MW** 207.27 **PS** S  
**SG** 1.02 g/cm<sup>3</sup> **MP** 87-88 °C **FP** 124 °C  
**BP** 117 °C (0.1mm Hg) **SOL** M,A,CN

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



*Pramitol*

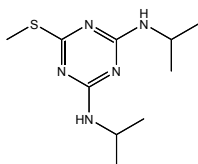
**CAS** 1610-18-0 **MF** C<sub>10</sub>H<sub>18</sub>N<sub>5</sub>O **MW** 225.34 **PS** S  
**SG** 1.09 g/cm<sup>3</sup> **MP** 91-92 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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



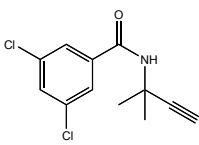
*Prometrin*

**CAS** 7287-19-6 **MF** C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>S **MW** 241.36 **PS** S  
**SG** 1.15 g/cm<sup>3</sup> **MP** 119 °C **BP** >300 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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



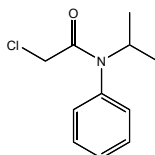
*Kerb, Propyzamide*

**CAS** 23950-58-5 **MF** C<sub>12</sub>H<sub>11</sub>Cl<sub>2</sub>NO **MW** 256.13  
**PS** S **SG** 1.33 g/cm<sup>3</sup> **MP** 155-156 °C **BP** Decomp.  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-164N	10 mg
100 µg/mL in MeOH	P-164S	1 mL

## Propachlor

2-Chloro-N-isopropylacetanilide



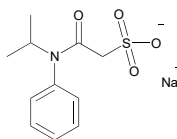
*Ramrod*

**CAS** 1918-16-7 **MF** C<sub>11</sub>H<sub>14</sub>ClNO **MW** 211.69  
**PS** S **SG** 1.24 g/cm<sup>3</sup> **BP** 110 °C (0.03mm Hg)  
**MP** 77 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-215N	10 mg
100 µg/mL in MeOH	P-215S	1 mL
1000 µg/mL in MeOH	P-215S-10X	1 mL

## Propachlor ESA sodium salt

Sodium 2-[(1-methylethyl)-phenylamino]-2-oxo-ethane-sulfonate

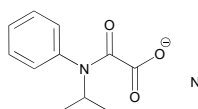


**CAS** 947601-88-9 **MF** C<sub>11</sub>H<sub>14</sub>NSO<sub>4</sub>Na **MW** 297 °C  
**PS** S **MP** 224-226 °C **SOL** A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-919S	1 mL

## Propachlor OA sodium salt

Sodium [(1-methylethyl)-phenylamino]-oxo-acetate

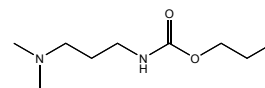


**CAS** N/A **MF** C<sub>11</sub>H<sub>12</sub>NNaO<sub>3</sub> **MW** 229 **PS** S  
**MP** 260-264 °C **SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-921S	1 mL

## Propamocarb

Propyl 3-(dimethylamino)propylcarbamate

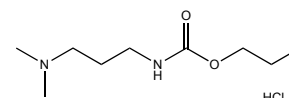


**CAS** 24579-73-5 **MF** C<sub>9</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub> **MW** 188.27 **PS** L  
**SG** 0.96 g/cm<sup>3</sup> **FP** 100 °C **SOL** M,A,D,T,CN,EA,H

Matrix	Cat. No.	Unit
NEAT	P-312N	10 mg
100 µg/mL in MeOH	P-312S	1 mL

## Propamocarb hydrochloride

Propyl 3-(dimethylamino)propylcarbamate hydrochloride

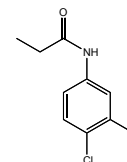


**CAS** 25606-41-1 **MF** C<sub>9</sub>H<sub>21</sub>ClN<sub>2</sub>O<sub>2</sub> **MW** 224.73  
**PS** S **SG** 1.16 g/cm<sup>3</sup> **MP** 64-65 °C  
**BP** Decomp. 150 °C **SOL** M,CN,A,D,EA,T,H

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1137S-CN	1 mL

## Propanil

3',4'-Dichloropropionanilide



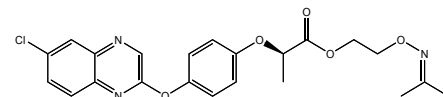
*3,4-DCPA*

**CAS** 709-98-8 **MF** C<sub>9</sub>H<sub>9</sub>Cl<sub>2</sub>NO **MW** 218.08 **PS** S  
**SG** 1.41 g/cm<sup>3</sup> **MP** 92-93 °C **BP** 351 °C  
**FP** >100 °C **SOL** M,A,D,H,CN,EA,T,IPA

Matrix	Cat. No.	Unit
NEAT	P-049N	10 mg
100 µg/mL in MeOH	P-049S	1 mL

## Propaquizafop

2-Isopropylideneaminoxyethyl (R)-2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy]propionate



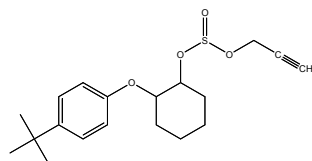
**CAS** 111479-05-1 **MF** C<sub>22</sub>H<sub>22</sub>ClN<sub>3</sub>O<sub>5</sub> **MW** 443.88 **PS** S  
**SG** 1.30 g/cm<sup>3</sup> **MP** 62-65 °C **BP** Decomp. 260 °C  
**FP** >100 °C **SOL** A,M,T,CN,D,EA,H

Matrix	Cat. No.	Unit
NEAT	P-908N	10 mg
100 µg/mL in MeOH	P-908S	1 mL

# Pesticide Standards

## Propargite

2-(4-tert-Butylphenoxy)cyclohexyl prop-2-ynyl sulfite



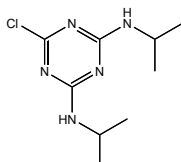
Omite

**CAS** 2312-35-8 **MF** C<sub>19</sub>H<sub>26</sub>O<sub>4</sub>S **MW** 350.47 **PS** L  
**SG** 1.11 g/cm<sup>3</sup> **BP** Decomp. 210 °C **FP** 71 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-251N	10 mg
100 µg/mL in MeOH	P-251S	1 mL

## Propazine

6-Chloro-N,N'-bis(1-methylethyl)-1,3,5-triazine-2,4-diamine



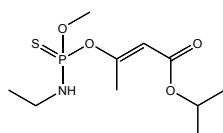
Prozinex

**CAS** 139-40-2 **MF** C<sub>9</sub>H<sub>16</sub>ClN<sub>5</sub> **MW** 229.71 **PS** S  
**SG** 1.16 g/cm<sup>3</sup> **MP** 224-225 °C  
**SOL** M,A,D,H,T,CN,TP,EA

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



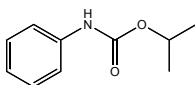
Safrotin

**CAS** 31218-83-4 **MF** C<sub>10</sub>H<sub>20</sub>NO<sub>5</sub>PS **MW** 281.31  
**PS** L **SG** 1.13 g/cm<sup>3</sup> **BP** 87-89 °C (0.005mm Hg)  
**SOL** M,A,D,H,T,CN,TP,EA,DMSO

Matrix	Cat. No.	Unit
NEAT	P-417N	10 mg
100 µg/mL in MeOH	P-417S	1 mL

## Propham

1-Methylethylphenyl carbamate



IPC

**CAS** 122-42-9 **MF** C<sub>10</sub>H<sub>13</sub>NO<sub>2</sub> **MW** 179.22 **PS** S  
**SG** 1.09 g/cm<sup>3</sup> **MP** 87-88 °C **BP** Decomp. 100 °C  
**SOL** M,A,H,CN,EA,W

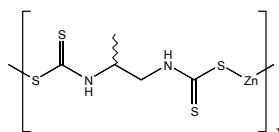
Matrix	Cat. No.	Unit
NEAT	P-052N	10 mg
100 µg/mL in MeOH	P-052S	1 mL

*Prophos*, see *Ethoprop*

*Propiconazole*, see *Tilt*

## Propineb

[[[(1-Methyl-1,2-ethanediy)bis(carbamodithioato)](2-)]zinc



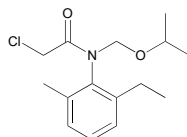
Zinc propylenebis(dithiocarbamate)

**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)<sub>x</sub>  
**PS** S **SG** 1.81 g/cm<sup>3</sup> **BP** Decomp. 150 °C  
**SOL** T,A,D,CN,DMSO

Matrix	Cat. No.	Unit
NEAT	P-608N	10 mg

## Propisochlor

2-Chloro-N-(2-ethyl-6-methylphenyl)-N-((1-methylethoxy)methyl)acetamide



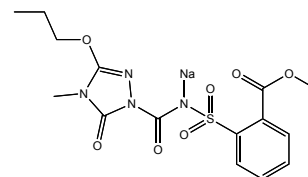
**CAS** 86763-47-5 **MF** C<sub>15</sub>H<sub>22</sub>ClNO<sub>2</sub> **MW** 283.8 **PS** L  
**SG** 1.09 g/cm<sup>3</sup> **MP** 22 °C **BP** decomp. 150 °C  
**SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1158S-CN	1 mL
1000 µg/mL in AcCN	P-1158S-CN-10X	1 mL

*Propoxur*, see *Baygon*

## Propoxycarbazone-sodium salt

2-[(4-Methyl-5-oxo-3-propoxy-1,2,4-triazolin-1-yl)carbamidosulfonyl]benzoic acid methyl ester sodium salt



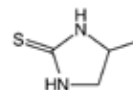
**CAS** 181274-15-7 **MF** C<sub>15</sub>H<sub>17</sub>N<sub>4</sub>NaO<sub>7</sub>S **MW** 420.37  
**PS** S **SG** 1.42 g/cm<sup>3</sup> **MP** 230 °C (decomp.)  
**SOL** A,D,M,W

Matrix	Cat. No.	Unit
NEAT	P-1014N	10 mg
50 µg/mL in Water	P-1014S-W-0.5X	1 mL

*Propylene thiourea*, see *Propylenethiourea (PTU)*

## Propylenethiourea (PTU)

4-Methylimidazolidine-2-thione



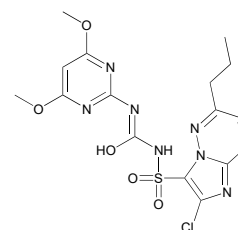
Propylene thiourea

**CAS** 2122-19-2 **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 **SOL** CN,EA

Matrix	Cat. No.	Unit
NEAT	P-861N	10 mg
100 µg/mL in AcCN	P-861S-CN	1 mL

## Propyrisulfuron

1-(2-Chloro-6-propylimidazo[1,2-b]pyridazin-3-ylsulfonyl)-3-(4,6-dimethoxy-pyrimidin-2-yl)urea



**CAS** 570415-88-2 **MF** C<sub>16</sub>H<sub>18</sub>ClN<sub>7</sub>O<sub>5</sub>S **MW** 455.87  
**PS** S **MP** 200 °C decomp. **SOL** CN

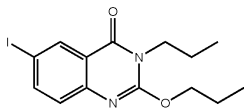
Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1166S-CN	1 mL
1000 µg/mL in AcCN	P-1166-CN-10X	1 mL

*Propyzamide*, see *Pronamide*

# Pesticide Standards

## Proquinazid

6-Iodo-2-propoxy-3-propyl-4(3H)quinazolinone

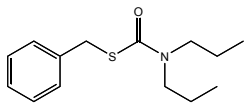


**CAS** 189278-12-4 **MF** C<sub>14</sub>H<sub>17</sub>IN<sub>2</sub>O<sub>2</sub> **MW** 372.20  
**PS S SG** 1.57 g/cm<sup>3</sup> **MP** 61-62 °C  
**BP** Decomp. 367 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1156S-CN	1 mL

## Prosulfocarb

S-Benzyl dipropylthiocarbamate

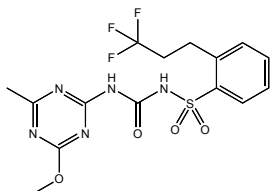


**CAS** 52888-80-9 **MF** C<sub>14</sub>H<sub>21</sub>NOS **MW** 251.39 **PS L SG** 1.05 g/cm<sup>3</sup> **BP** 129 °C (33Pa) **FP** >100 °C  
**SOL** A,EA,M,T,CN

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)]

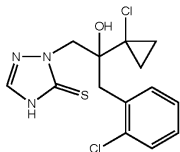


**CAS** 94125-34-5 **MF** C<sub>15</sub>H<sub>16</sub>F<sub>3</sub>N<sub>5</sub>O<sub>4</sub>S **MW** 419.38  
**PS S SG** 1.45 g/cm<sup>3</sup> **MP** 155 °C (decomp.)  
**SOL** A,T,EA,CN,M,H,D

Matrix	Cat. No.	Unit
NEAT	P-834N	10 mg
100 µg/mL in AcCN	P-834S-CN	1 mL

## Prothioconazole

2-[2-(1-Chlorocyclopropyl)-3-(2-chlorophenyl)-2-hydroxypropyl]-1,2-dihydro-3H-1,2,4-triazole-3-thione



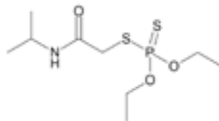
**CAS** 178928-70-6 **MF** C<sub>14</sub>H<sub>15</sub>Cl<sub>2</sub>N<sub>3</sub>OS **MW** 344.26  
**PS S SG** 1.36 g/cm<sup>3</sup> **MP** 139-145 °C **BP** 487 °C  
**SOL** A,EA,M,CN,DMSO,IPA

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-965S-CN	1 mL

## Prothiofos, see Tokuthion

## Prothoate

O,O-Diethyl S-[2-(isopropylamino)-2-oxoethyl] phosphorodithioate



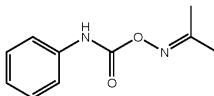
**CAS** 2275-18-5 **MF** C<sub>6</sub>H<sub>20</sub>NO<sub>3</sub>PS<sub>2</sub> **MW** 285.36  
**PS S SG** 1.15 g/cm<sup>3</sup> **MP** 29 °C **FP** 160 °C  
**SOL** W,H,M,CN,A,T

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-657S	1 mL

## Prowl, see Pendimethalin

## Proxiphram

2-Propanone,O-[(phenylamino)carbonyl]oxime



**CAS** 2828-42-4 **MF** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub> **MW** 192.21  
**PS S SG** 1.09 g/cm<sup>3</sup> **MP** 109-110 °C  
**SOL** M,A,T

Matrix	Cat. No.	Unit
NEAT	P-1081N	10 mg
100 µg/mL in MeOH	P-1081S	1 mL

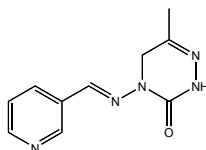
## Prozinex, see Propazine

## Pydrin, see Fenvalerate

## Pymetrozin, see Pymetrozine

## Pymetrozine

(E)-4,5-Dihydro-6-methyl-4-[(3-pyridinylmethylene)amino]-1,2,4-triazin-3(2H)-one



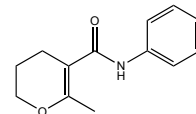
Pymetrozine

**CAS** 123312-89-0 **MF** C<sub>10</sub>H<sub>11</sub>N<sub>5</sub>O **MW** 217.23 **PS S SG** 1.36 g/cm<sup>3</sup> **MP** 217 °C **FP** >230 °C  
**SOL** H,T,A,EA,CN,W

Matrix	Cat. No.	Unit
NEAT	P-835N	10 mg
100 µg/mL in AcCN	P-835S-CN	1 mL

## Pyracarbolid

3,4-Dihydro-6-methyl-2H-pyran-5-carboxanilide

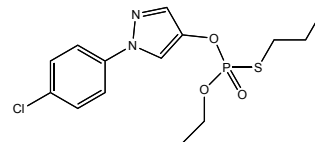


**CAS** 24691-76-7 **MF** C<sub>13</sub>H<sub>15</sub>NO<sub>2</sub> **MW** 217.26 **PS S SG** 1.17 g/cm<sup>3</sup> **MP** 111 °C **SOL** M,CN,EA

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-792S-CN	1 mL

## Pyraclafos

O-[1-(4-Chlorophenyl)-1H-pyrazol-4-yl] O-ethyl S-propyl phosphorothioate



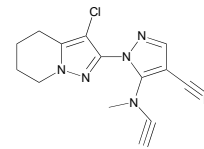
Boltage, Starlex, Voltage

**CAS** 77458-01-6 **MF** C<sub>14</sub>H<sub>16</sub>ClN<sub>2</sub>O<sub>3</sub>PS **MW** 360.8  
**PS L SG** 1.27 g/cm<sup>3</sup> **BP** 164 °C (0.01mm Hg)  
**SOL** M,A,T,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-716S	1 mL

## Pyraclonil

1-(3-Chloro-4,5,6,7-tetrahydropyrazolo[1,5-a]pyridin-2-yl)-5-[methyl(prop-2-ynyl)amino]pyrazole-4-carbonitrile

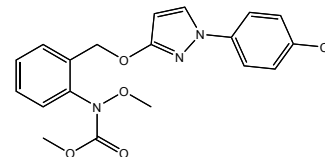


**CAS** 158353-15-2 **MF** C<sub>15</sub>H<sub>16</sub>CIN<sub>6</sub> **MW** 314.78  
**PS S SG** 1.325 g/cm<sup>3</sup> **MP** 93-95 °C **FP** 110 cc  
**SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1167S-CN	1 mL
1000 µg/mL in AcCN	P-1167S-CN-10X	1 mL

## Pyraclostrobin

Methyl-[2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxy]methyl]phenyl]methoxycarbamate



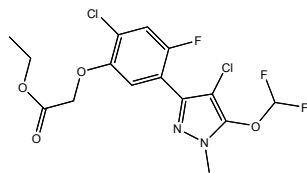
**CAS** 175013-18-0 **MF** C<sub>19</sub>H<sub>18</sub>CIN<sub>2</sub>O<sub>4</sub> **MW** 387.82  
**PS S SG** 1.37 g/cm<sup>3</sup> **MP** 64-65 °C  
**BP** Decomp. 200 °C **SOL** M,A,D,T,CN,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-863N	10 mg
100 µg/mL in AcCN	P-863S-CN	1 mL

# Pesticide Standards

## Pyraflufen-ethyl

Ethyl [2-chloro-5-(4-chloro-5-difluoromethoxy-1-methylpyrazol-3-yl)-4-fluorophenoxy]acetate



**CAS** 129630-19-9 **MF** C<sub>15</sub>H<sub>13</sub>Cl<sub>2</sub>F<sub>3</sub>N<sub>2</sub>O<sub>4</sub> **MW** 413.18  
**PS S** **SG** 1.57 g/cm<sup>3</sup> **MP** 126-127 °C  
**BP** Decomp. 240 °C **SOL** M,A,EA,CN,H,D

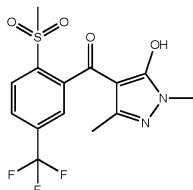
Matrix	Cat. No.	Unit
NEAT	P-1015N	10 mg
100 µg/mL in Acetone	P-1015S-A	1 mL

*Pyramite, see Pyridaben*

*Pyranica, see Tebufenpyrad*

## Pyrasulfotole

(5-Hydroxy-1,3-dimethyl-1H-pyrazol-4-yl)[2-(methylsulfonyl)-4-(trifluoromethyl)phenyl]methanone

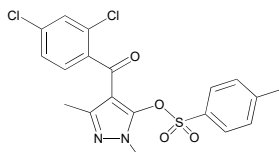


**CAS** 365400-11-9 **MF** C<sub>14</sub>H<sub>13</sub>F<sub>3</sub>N<sub>2</sub>O<sub>4</sub>S **MW** 362.32  
**PS S** **SG** 1.50 g/cm<sup>3</sup> **MP** 201 °C  
**BP** Decomp. >245 °C **SOL** T,EA,A,CN,W,DMSO

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1144S-CN	1 mL

## Pyrazolate

(2,4-Dichlorophenyl)[1,3-dimethyl-5-[(4-methylphenyl)sulfonyl]oxy]-1H-pyrazol-4-yl]methanone

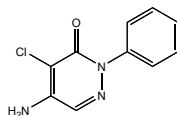


**CAS** 58011-68-0 **MF** C<sub>19</sub>H<sub>16</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>4</sub>S **MW** 439.31  
**PS S** **SG** 1.47 g/cm<sup>3</sup> **MP** 118 °C **SOL** CN,M,T

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1209S-CN	1 mL
1000 µg/mL in AcCN	P-1209S-CN-10X	1 mL

## Pyrazon

5-Amino-4-chloro-2-phenylpyridazin-3(2H)-one



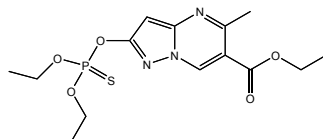
Chloridazon, PCA

**CAS** 1698-60-8 **MF** C<sub>10</sub>H<sub>8</sub>ClN<sub>2</sub>O **MW** 221.64 **PS S**  
**SG** 1.54 g/cm<sup>3</sup> **MP** 203-206 °C **BP** Decomp. 360 °C  
**SOL** M,A,T,CN,EA,D

Matrix	Cat. No.	Unit
NEAT	P-395N	10 mg
100 µg/mL in MeOH	P-395S	1 mL
1000 µg/mL in MeOH	P-395S-10X	1 mL

## Pyrazophos

Ethyl 2-diethoxyphosphinothioxy-5-methylpyrazolo[1,5-a]pyrimidine-6-carboxylate

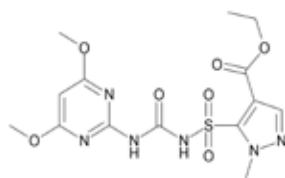


**CAS** 13457-18-6 **MF** C<sub>14</sub>H<sub>20</sub>N<sub>4</sub>O<sub>5</sub>PS **MW** 373.37  
**PS S** **SG** 1.38 g/cm<sup>3</sup> **MP** 51-52 °C  
**BP** Decomp. 160 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-359N	10 mg
100 µg/mL in MeOH	P-359S	1 mL

## Pyrazosulfuron-ethyl

Ethyl 5-[(4,6-dimethoxypyrimidin-2-ylcarbamoyl)sulfonyl]-1-methylpyrazole-4-carboxylate

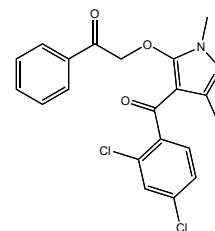


**CAS** 93697-74-6 **MF** C<sub>11</sub>H<sub>18</sub>N<sub>4</sub>O<sub>6</sub>S **MW** 414.4  
**PS S** **SG** 1.46 g/cm<sup>3</sup> **MP** 178-180 °C **FP** >170 °C  
**SOL** A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1332S	1 mL

## Pyrazoxyfen

2-(4-(2,4-Dichlorobenzoyl)-1,3-dimethylpyrazol-5-yloxy)acetophenone

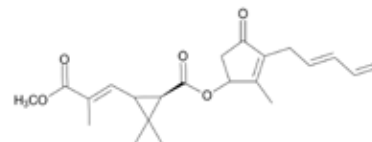


**CAS** 71561-11-0 **MF** C<sub>20</sub>H<sub>16</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub> **MW** 403.26  
**PS S** **SG** 1.33 g/cm<sup>3</sup> **MP** 111-112 °C  
**SOL** M,A,H

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-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate

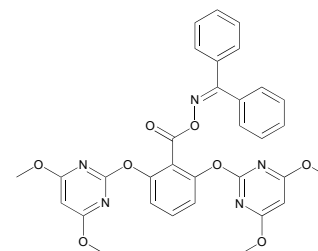


**CAS** 8003-34-7 **PS L** **SG** 0.85 g/cm<sup>3</sup> **FP** 75 °C  
**BP** 170 °C (0.097 mm Hg) **SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-187N	10 mg
100 µg/mL in MeOH	P-187S	1 mL

## Pyribenzoxim

Benzophenone O-[2,6-bis(4,6-dimethoxypyrimidin-2-yloxy)benzoyl]oxime



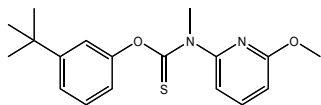
**CAS** 168088-61-7 **MF** C<sub>32</sub>H<sub>22</sub>N<sub>4</sub>O<sub>8</sub> **MW** 609.6 **PS S**  
**SG** 1.3 g/cm<sup>3</sup> **MP** 129 °C **BP** 811 °C **FP** 444 °C  
**SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1116S-CN	1 mL
1000 µg/mL in AcCN	P-1116S-CN-10X	1 mL

# Pesticide Standards

## Pyributicarb

O-3-tert-Butylphenyl (6-methoxy-2-pyridyl)(methyl) thiocarbamate

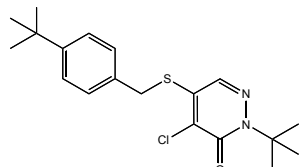


**CAS** 88678-67-5 **MF** C<sub>18</sub>H<sub>22</sub>N<sub>2</sub>O<sub>2</sub>S **MW** 330.45  
**PS S SG** 1.16 g/cm<sup>3</sup> **MP** 86 °C **SOL** M,A,EA,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-987S	1 mL

## Pyridaben

2-tert-Butyl-5-(4-tert-butylbenzylthio)-4-chloropyridazin-3(2H)-one



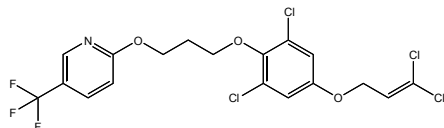
Pyramite

**CAS** 96489-71-3 **MF** C<sub>19</sub>H<sub>25</sub>ClN<sub>2</sub>OS **MW** 364.93  
**PS S SG** 1.2 g/cm<sup>3</sup> **MP** 111-112 °C  
**BP** Decomp. 200 °C **SOL** M,A,D,T,CN,EA,H

Matrix	Cat. No.	Unit
NEAT	P-693N	10 mg
100 µg/mL in MeOH	P-693S	1 mL

## Pyridalyl

2-[3-[2,6-Dichloro-4-[(3,3-dichloro-2-propenyl)oxy]phenoxy]propoxy]-5-(trifluoromethyl)pyridine

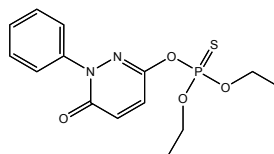


**CAS** 179101-81-6 **MF** C<sub>18</sub>H<sub>14</sub>Cl<sub>2</sub>F<sub>3</sub>NO<sub>3</sub> **MW** 491.11  
**PS L SG** 1.45 g/cm<sup>3</sup> **BP** 227 °C (decomp.)  
**SOL** M,A,CN,H,EA

Matrix	Cat. No.	Unit
NEAT	P-990N	10 mg
100 µg/mL in MeOH	P-990S	1 mL

## Pyridaphenthion

O-(1,6-Dihydro-6-oxo-1-phenylpyridazin-3-yl) O,O-diethyl phosphorothioate



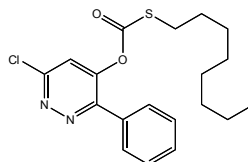
Ofunack

**CAS** 119-12-0 **MF** C<sub>14</sub>H<sub>17</sub>N<sub>2</sub>O<sub>4</sub>S **MW** 340.34  
**PS S SG** 1.30 g/cm<sup>3</sup> **MP** 54-56 °C  
**BP** Decomp. 180 °C **SOL** M,A,CN,EA,H,T,D

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-610S	1 mL

## Pyridate

6-Chloro-3-phenylpyridazin-4-yl S-octyl thiocarbonate



Lentagran

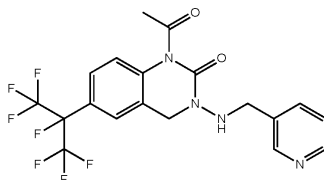
**CAS** 55512-33-9 **MF** C<sub>9</sub>H<sub>7</sub>ClN<sub>2</sub>O<sub>2</sub>S **MW** 378.92  
**PS S SG** 1.16 g/cm<sup>3</sup> **MP** 27 °C  
**BP** 220 °C (0.1mm Hg) **SOL** M,A,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-404N	10 mg
100 µg/mL in AcCN	P-404S-CN	1 mL

*PyrifenoX, see Pyriphenox*

## Pyrifluquinazon

1-Acetyl-1,2,3,4-tetrahydro-3-[(3-pyridylmethyl) amino]-6-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl] quinazolin-2-one

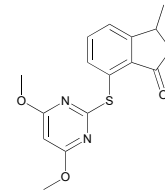


**CAS** 337458-27-2 **MF** C<sub>19</sub>H<sub>15</sub>F<sub>7</sub>N<sub>4</sub>O<sub>2</sub> **MW** 464.34  
**PS S MP** 138-139 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1093S-CN	1 mL

## Pyrifitalid

7-(4,6-Dimethoxypyrimidin-2-ylthio)-3-methylisobenzofuran-1(3H)-one

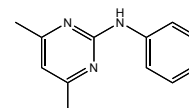


**CAS** 135186-78-6 **MF** C<sub>15</sub>H<sub>14</sub>N<sub>2</sub>O<sub>4</sub>S **MW** 318.35  
**PS S SG** 1.44 g/cm<sup>3</sup> **MP** 163 °C **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1212S-CN	1 mL
1000 µg/mL in AcCN	P-1212S-CN-10X	1 mL

## Pyrimethanil

N-(4,6-Dimethylpyrimidin-2-yl)aniline



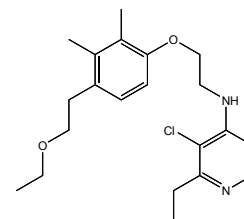
2-Anilino-4,6-dimethylpyrimidine

**CAS** 53112-28-0 **MF** C<sub>12</sub>H<sub>13</sub>N<sub>3</sub> **MW** 199.25 **PS S**  
**SG** 1.15 g/cm<sup>3</sup> **MP** 96.3 °C **BP** Decomp. 190 °C  
**SOL** M,A,D,H,T,CN,EA,W

Matrix	Cat. No.	Unit
NEAT	P-723N	10 mg
100 µg/mL in MeOH	P-723S	1 mL

## Pyrimidifen

5-Chloro-N-[2-[4-(2-ethoxyethyl)-2,3-dimethylphenoxy]ethyl]-6-ethyl-4-pyrimidinamine



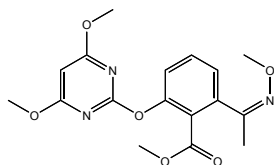
**CAS** 105779-78-0 **MF** C<sub>20</sub>H<sub>28</sub>ClN<sub>3</sub>O<sub>2</sub> **MW** 377.91  
**PS S SG** 1.45 g/cm<sup>3</sup> **MP** 70 °C **SOL** M,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-989S	1 mL

# Pesticide Standards

## (E)-Pyriminobac-methyl

Methyl (E)-2-[(4,6-dimethoxypyrimidin-2-yl)oxy]-6-(1-(N-methoxyimino)ethyl)benzoate



Pyriminobac-methyl(E)

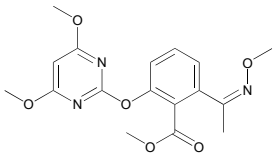
CAS 147411-69-6 MF C<sub>17</sub>H<sub>19</sub>N<sub>3</sub>O<sub>6</sub> MW 361.35  
PS S SG 1.33 g/cm<sup>3</sup> MP 105 °C SOL A,EA,H,M

Matrix	Cat. No.	Unit
50 µg/mL in MeOH	P-1030S-0.5X	1 mL

Pyriminobac-methyl(E), see (E)-Pyriminobac-methyl

## (Z)-Pyriminobac-methyl

Methyl (Z)-2-[(4,6-dimethoxypyrimidin-2-yl)oxy]-6-[1-(N-methoxyimino)ethyl]benzoate

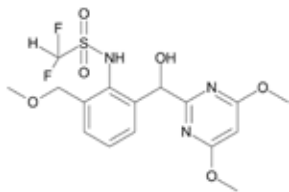


CAS 147411-70-9 MF C<sub>17</sub>H<sub>19</sub>N<sub>3</sub>O<sub>6</sub> MW 361.35  
PS S MP 68-74 °C SOL A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1111S	1 mL
1000 µg/mL in MeOH	P-1111S-10X	1 mL

## Pyrimisulfan

N-[2-[(4,6-Dimethoxy-2-pyrimidinyl)(hydroxy)methyl]-6-(methoxymethyl)phenyl]-1,1-difluoromethanesulfonamide



CAS 221205-90-9 MF C<sub>16</sub>H<sub>19</sub>F<sub>2</sub>N<sub>3</sub>O<sub>8</sub>S MW 419.40  
PS S MP 99 °C BP 551 °C FP 287 °C SOL CN

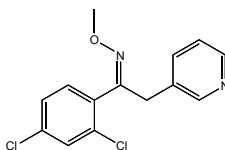
Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1203S-CN	1 mL

Pyriminuron, see Vacor

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## Pyriphenox

1-(2,4-Dichlorophenyl)-N-methoxy-2-(3-pyridinyl)ethanimine



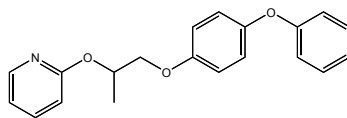
Pyriphenox

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 SG 1.25 g/cm<sup>3</sup> BP 212 °C FP 106 °C  
SOL M,A,CN,T,H

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-668S	1 mL

## Pyriproxyfen

4-Phenoxyphenyl (RS)-2-(2-pyridyloxy)propyl ether



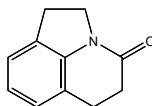
Admiral

CAS 95737-68-1 MF C<sub>20</sub>H<sub>19</sub>NO<sub>3</sub> MW 321.37 PS S  
SG 1.23 g/cm<sup>3</sup> MP 45-47 °C BP Decomp. 318 °C  
SOL M,A,D,CN,H

Matrix	Cat. No.	Unit
NEAT	P-795N	10 mg
100 µg/mL in AcCN	P-795S-CN	1 mL

## Pyroquilon

1,2,5,6-Tetrahydropyrrolo[3,2,1-ij]quinolin-4-one

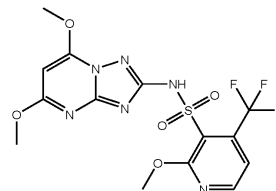


CAS 57369-32-1 MF C<sub>11</sub>H<sub>11</sub>NO MW 173.21 PS S  
SG 1.25 g/cm<sup>3</sup> MP 112 °C BP Decomp. 320 °C  
SOL M,CN,A,D,W,IPA

Matrix	Cat. No.	Unit
NEAT	P-696N	10 mg
100 µg/mL in MeOH	P-696S	1 mL

## Pyroxsulam

N-(5,7-Dimethoxy[1,2,4]triazolo[1,5-a]pyrimidin-2-yl)-2-methoxy-4-(trifluoromethyl)pyridine-3-sulfonamide



CAS 422556-08-9 MF C<sub>14</sub>H<sub>13</sub>F<sub>3</sub>N<sub>6</sub>O<sub>5</sub>S MW 434.35  
PS S SG 1.62 g/cm<sup>3</sup> MP 208 °C  
BP Decomp. 213 °C SOL A,CN,EA,M,W

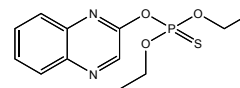
Matrix	Cat. No.	Unit
NEAT	P-1060N	10 mg
100 µg/mL in MeOH	P-1060S	1 mL

Pyroxystrobin, see Azoxystrobin

Pyroldiazole, see 1,2,4-Triazole

## Quinalphos

O,O-Diethyl O-quinoxalin-2-yl phosphorothioate



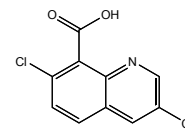
Diethquinalphione

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 S SG 1.24 g/cm<sup>3</sup> MP 31-32 °C FP >100 °C  
BP 142 °C (0.0003 mm Hg, decomp.)  
SOL M,A,D,H,T,CN

Matrix	Cat. No.	Unit
NEAT	P-462N	10 mg
100 µg/mL in MeOH	P-462S	1 mL

## Quinlorac

3,7-Dichloro-8-quinolinecarboxylic acid



Facet

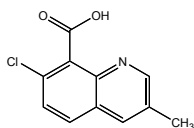
CAS 84087-01-4 MF C<sub>10</sub>H<sub>5</sub>Cl<sub>2</sub>NO<sub>2</sub> MW 242.06  
PS S SG 1.75 g/cm<sup>3</sup> MP 274 °C FP 100 °C  
SOL M,CN,A

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

# Pesticide Standards

## Quinmerac

7-Chloro-3-methylquinoline-8-carboxylic acid

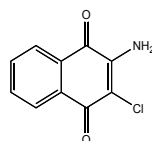


CAS 90717-03-6 MF  $C_{11}H_9ClNO_2$  MW 221.64  
PS S SG 1.49 g/cm<sup>3</sup> MP 244 °C  
BP Decomp. 260 °C SOL M,A,CN,T,D,W,H,EA

Matrix	Cat. No.	Unit
NEAT	P-836N	10 mg
100 µg/mL in AcCN	P-836S-CN	1 mL

## Quinoclamine

2-Amino-3-chloro-1,4-naphthalenedione

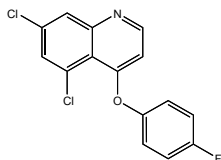


CAS 2797-51-5 MF  $C_{10}H_6ClNO_2$  MW 207.61 PS S  
SG 1.66 g/cm<sup>3</sup> MP 198-200 °C  
BP 348 °C (decomp.) SOL M,A,CN,EA,T,D

Matrix	Cat. No.	Unit
NEAT	P-985N	10 mg
100 µg/mL in MeOH	P-985S	1 mL

## Quinoxifen

5,7-Dichloro-4-(4-fluorophenoxy)quinoline



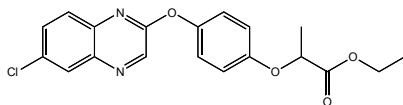
CAS 124495-18-7 MF  $C_{19}H_{12}Cl_2FNO$  MW 308.13  
SG 1.56 g/cm<sup>3</sup> MP 103 °C FP >100 °C  
SOL M,A,CN,H,T,D,EA

Matrix	Cat. No.	Unit
NEAT	P-882N-5MG	5 mg
100 µg/mL in MeOH	P-882S	1 mL

Quintozene, see Pentachloronitrobenzene

## Quizalofop ethyl

Ethyl 2-[4-[(6-chloro-2-quinoxalinyloxy)phenoxy]propanoate



CAS 76578-14-8 MF  $C_{19}H_{17}ClN_2O_4$  MW 372.8  
PS S SG 1.35 g/cm<sup>3</sup> MP 91 °C FP 100 °C  
BP 220 °C (0.2mm Hg) SOL M,A,CN,TP,EA,H

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

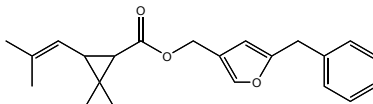
Randbox, see Allidochlor

Raptor, see Imazamox

Reldan, see Chlorpyrifos-methyl

## Resmethrin

5-Benzyl-3-furylmethyl (±)-cis-trans-chrysanthemate



CAS 10453-86-8 MF  $C_{22}H_{26}O_3$  MW 338.44 PS S  
SG 0.96 g/cm<sup>3</sup> MP 56 °C BP Decomp. 180 °C  
FP 129 °C SOL M,A,D,H,CN,TP,EA,T

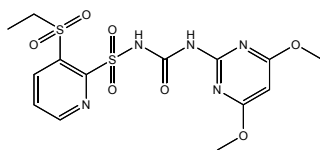
Matrix	Cat. No.	Unit
NEAT	P-325N	10 mg
100 µg/mL in MeOH	P-325S	1 mL

Rilof, see Piperophos

Rimon, see Novaluron

## Rimsulfuron

1-(4,6-Dimethoxyypyrimidin-2-yl)-3-(3-ethylsulfonyl-2-pyridylsulfonyl)urea



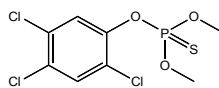
CAS 122931-48-0 MF  $C_{14}H_{17}N_5O_7S_2$  MW 431.45  
PS S SG 0.78 g/cm<sup>3</sup> MP 176 °C FP >200 °C  
SOL M,CN,A,D,EA

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



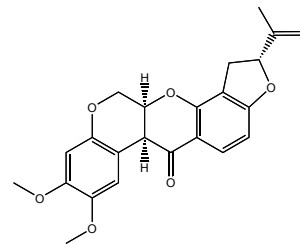
Fenchlorphos

CAS 299-84-3 MF  $C_8H_8Cl_3O_3PS$  MW 321.55 PS S  
SG 1.49 g/cm<sup>3</sup> MP 38-40 °C BP Decomp.  
SOL M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-080N	10 mg
100 µg/mL in MeOH	P-080S	1 mL
1000 µg/mL in Hexane	P-080S-H-10X	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  $C_{23}H_{22}O_5$  MW 394.42 PS S  
SG 1.27 g/cm<sup>3</sup> MP 163 °C  
BP 210-220 °C (0.5mm Hg) SOL M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-056N	10 mg
100 µg/mL in MeOH	P-056S	1 mL

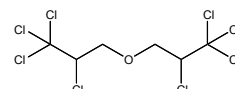
Roundup, see Glyphosate

Rozol, see Chlorophacinone

RU 15525, see Kadethrin

## S421

1,1'-Oxybis(2,3,3,3-tetrachloropropane)



bis(2,3,3,3-Tetrachloropropyl) ether

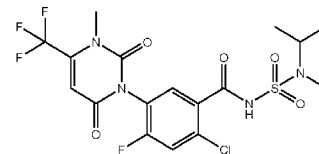
CAS 127-90-2 MF  $C_6H_6Cl_4O$  MW 377.73 PS L  
SG 1.67 g/cm<sup>3</sup> BP 144-150 °C (1 mm Hg)  
FP 177 °C SOL M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-749N	10 mg
100 µg/mL in MeOH	P-749S	1 mL

SADH, see Alar (SADH)

## Saflufenacil

N'-(2-Chloro-4-fluoro-5-[1,2,3,6-tetrahydro-3-methyl-2,6-dioxo-4-(trifluoromethyl)pyrimidin-1-yl]benzoyl)-N-isopropyl-N-methylsulfamide



CAS 372137-35-4 MF  $C_{17}H_{17}ClF_4N_4O_5S$  PS S  
MW 500.85 PS S SG 1.60 g/cm<sup>3</sup> MP 189-190 °C  
SOL M,CN,A,T,EA,W

Matrix	Cat. No.	Unit
NEAT	P-1078N	10 mg
100 µg/mL in MeOH	P-1078S	1 mL

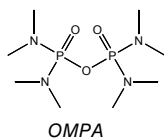
Safrotin, see Propetamphos

# Pesticide Standards

*Sancap, see Dipropetryn*

## Schradan

Octamethylpyrophosphoramidate

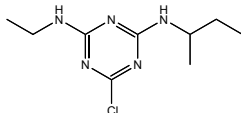


**CAS** 152-16-9 **MF** C<sub>8</sub>H<sub>24</sub>N<sub>4</sub>O<sub>3</sub>P<sub>2</sub> **MW** 286.25 **PS** S  
**SG** 1.17 g/cm<sup>3</sup> **BP** 120-125 °C (0.5mm Hg)  
**SOL** M,D

Matrix	Cat. No.	Unit
NEAT	P-418N	10 mg
100 µg/mL in MeOH	P-418S	1 mL

## Sebuthylazin

N-sec-Butyl-6-chloro-N'-ethyl-1,3,5-triazine-2,4-diamine

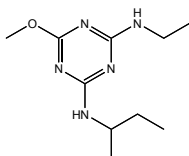


**CAS** 7286-69-3 **MF** C<sub>9</sub>H<sub>16</sub>ClN<sub>5</sub> **MW** 229.71 **PS** S  
**SG** 1.17 g/cm<sup>3</sup> **MP** 158-159 °C **SOL** M,A,D,CN

Matrix	Cat. No.	Unit
NEAT	P-432N	10 mg
100 µg/mL in MeOH	P-432S	1 mL

## Secbumeton

N-sec-Butyl-N'-ethyl-6-methoxy-1,3,5-triazine-2,4-diamine

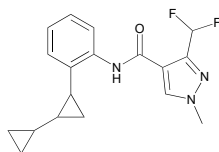


**CAS** 26259-45-0 **MF** C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>O **MW** 225.29 **PS** S  
**SG** 1.14 g/cm<sup>3</sup> **MP** 82-83 °C **SOL** D,M,A

Matrix	Cat. No.	Unit
NEAT	P-165N	10 mg
100 µg/mL in MeOH	P-165S	1 mL

## Sedaxane

N-(2-(1,1'-Bicyclopropyl)-2-ylphenyl)-3-(difluoromethyl)-1-methyl-1H-pyrazole-4-carboxamide



**CAS** 874967-67-6 **MF** C<sub>18</sub>H<sub>19</sub>F<sub>2</sub>N<sub>3</sub>O **MW** 331.4  
**PS** S **MP** 121 °C **BP** decomp. 270 °C **SOL** M

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1312S	1 mL

*Select, see Clethodim*

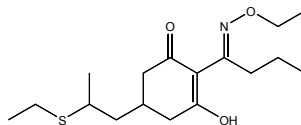
*Semeron, see Desmetryn*

*Sencor, see Metribuzin*

*Sesone, see Disul, sodium salt*

## 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> **MW** 327.48 **PS** L  
**SG** 1.04 g/cm<sup>3</sup> **BP** >90 °C (0.00003mm Hg)  
**SOL** M,A,CN,W,EA,H

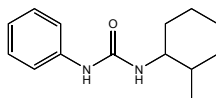
Matrix	Cat. No.	Unit
NEAT	P-306N	10 mg
100 µg/mL in AcCN	P-306S-CN	1 mL

*Sevin, see Carbaryl*

*Sibutol, see Bitertanol*

## Siduron

1-(2-Methylcyclohexyl)-3-phenylurea

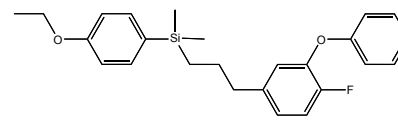


**CAS** 1982-49-6 **MF** C<sub>14</sub>H<sub>21</sub>N<sub>2</sub>O **MW** 232.32 **PS** S  
**SG** 1.08 g/cm<sup>3</sup> **MP** 133-138 °C **SOL** M,A,H,CN,D

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



*Silaneophan*

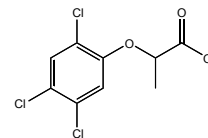
**CAS** 105024-66-6 **MF** C<sub>25</sub>H<sub>29</sub>FO<sub>2</sub>Si **MW** 408.58  
**PS** L **SG** 1.08 g/cm<sup>3</sup> **BP** Decomp. 170 °C  
**FP** >100 °C **SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-717N	10 mg
100 µg/mL in MeOH	P-717S	1 mL

*Silaneophan, see Silafluofen*

## Silvex

2-(2,4,5-Trichlorophenoxy)propanoic acid



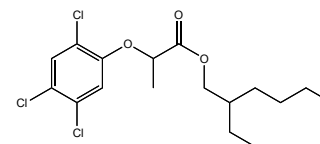
*Fenoprop, 2,4,5-TP*

**CAS** 93-72-1 **MF** C<sub>8</sub>H<sub>7</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 269.51 **PS** S  
**SG** 1.21 g/cm<sup>3</sup> **MP** 177-178 °C **SOL** M,A,D,H,CN

Matrix	Cat. No.	Unit
NEAT	P-084N	10 mg
100 µg/mL in MeOH	P-084S ▲	1 mL
1000 µg/mL in MeOH	P-084S-10X ▲	1 mL
5000 µg/mL in MeOH	P-084S-50X ▲	1 mL
100 µg/mL in AcCN	P-084S-CN	1 mL

## Silvex 2-ethylhexyl ester

2-Ethylhexyl 2-(2,4,5-trichlorophenoxy)propanoate



*Fenoprop 2-ethylhexyl ester*

**CAS** 53404-76-5 **MF** C<sub>17</sub>H<sub>23</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 381.72 **PS** S  
**SOL** M

Matrix	Cat. No.	Unit
NEAT	P-728N	10 mg
100 µg/mL in MeOH	P-728S	1 mL

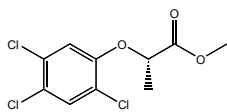
▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.



# Pesticide Standards

## Silvex methyl ester

Methyl 2-(2,4,5-trichlorophenoxy)propionate



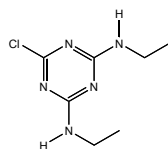
*Fenoprop methyl ester, 2,4,5-TP methyl ester*

**CAS** 4841-20-7 **MF** C<sub>10</sub>H<sub>9</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 283.53 **PS** S  
**SG** 1.40 g/cm<sup>3</sup> **MP** 83 °C **SOL** M,A,D,H,T,TP

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



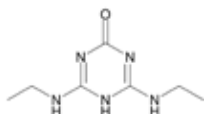
*Gesatop*

**CAS** 122-34-9 **MF** C<sub>7</sub>H<sub>12</sub>ClN<sub>3</sub> **MW** 201.66 **PS** S  
**SG** 1.30 g/cm<sup>3</sup> **MP** 227-229 °C **FP** 100 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-085N	10 mg
100 µg/mL in MeOH	P-085S	1 mL
1000 µg/mL in MeOH	P-085S-10X	1 mL
1000 µg/mL in Acetone	P-085S-A-10X	1 mL

## Simazine-2-hydroxy

2,6-bis(Ethylamino)-1H-1,3,5-triazin-4-one

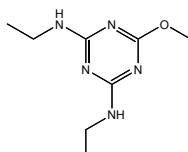


**CAS** 2599-11-3 **MF** C<sub>7</sub>H<sub>13</sub>N<sub>5</sub>O **MW** 183.21  
**SOL** M,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1191S	1 mL

## Simeton

N,N'-Diethyl-6-methoxy-1,3,5-triazine-2,4-diamine



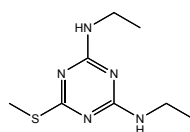
*Pimeton*

**CAS** 673-04-1 **MF** C<sub>8</sub>H<sub>15</sub>N<sub>5</sub>O **MW** 197.24 **PS** S  
**MP** 89-90 °C **SOL** M

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



*Cymetryn*

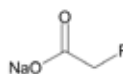
**CAS** 1014-70-6 **MF** C<sub>8</sub>H<sub>15</sub>N<sub>5</sub>S **MW** 213.3 **PS** S  
**SG** 1.02 g/cm<sup>3</sup> **MP** 82-83 °C  
**SOL** M,A,D,CN,EA,T,H,W

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 fluoroacetate

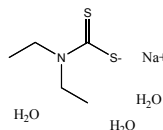


**CAS** 62-74-8 **MF** C<sub>2</sub>H<sub>3</sub>FO<sub>2</sub>Na **MW** 100.2 **PS** S  
**MP** 200-202 °C (decomp.) **SOL** W,CN

Matrix	Cat. No.	Unit
NEAT	P-1328N	10 mg

## 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 **SOL** W

Matrix	Cat. No.	Unit
NEAT	P-505N	10 mg
100 µg/mL in Water	P-505S-W	1 mL

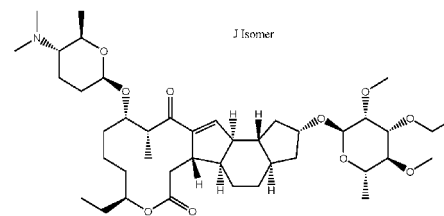
*Sonalan, see Ethalfluralin*

*Sonar, see Fluridone*

*Spectracide®, see Diazinon*

## Spinetoram

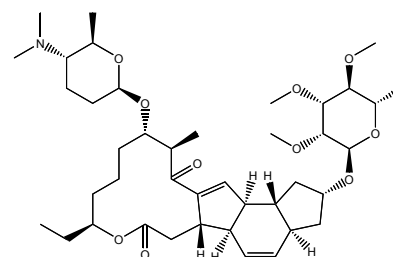
Mix of Isomers J & L



**CAS** 187166-40-1/187166-15-0 **MF** C<sub>42</sub>H<sub>69</sub>NO<sub>10</sub> / C<sub>43</sub>H<sub>69</sub>NO<sub>10</sub> **MW** 748.00/760.03 **PS** S **SOL** A,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1083S-CN	1 mL

## Spinosad



*Spinosad technical*

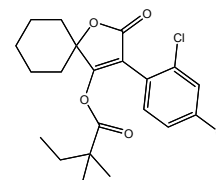
**CAS** 168316-95-8 **MF** C<sub>41</sub>H<sub>65</sub>NO<sub>10</sub> / C<sub>42</sub>H<sub>67</sub>NO<sub>10</sub>  
**MW** 731.96/745.98 **PS** S **SG** 1.16 g/cm<sup>3</sup>  
**MP** 144-145 °C **SOL** M,D,CN,A,EA, H,W,T

Matrix	Cat. No.	Unit
NEAT	P-864N	10 mg
100 µg/mL in AcCN	P-864S-CN	1 mL

*Spinosad technical, see Spinosad*

## Spirodiclofen

3-(2,4-Dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2,2-dimethylbutanoate



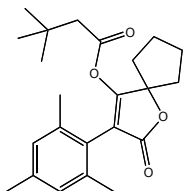
**CAS** 148477-71-8 **MF** C<sub>21</sub>H<sub>24</sub>Cl<sub>2</sub>O<sub>3</sub> **MW** 411.32  
**PS** S **SG** 1.29 g/cm<sup>3</sup> **MP** 94-95 °C **BP** Decomp.  
**SOL** M,A,CN,EA,D,IPA,DMSO

Matrix	Cat. No.	Unit
NEAT	P-938N	10 mg
100 µg/mL in MeOH	P-938S	1 mL

# Pesticide Standards

## Spiromesifen

3-Mesityl-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl 3,3-dimethylbutyrate

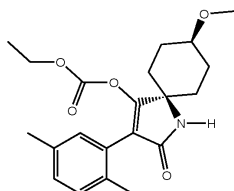


CAS 283594-90-1 MF C<sub>23</sub>H<sub>30</sub>O<sub>4</sub> MW 370.48 PS S  
SG 1.13 g/cm<sup>3</sup> MP 98 °C BP Decomp. 375 °C  
SOL W,IPA,D,A,EA,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-960S-CN	1 mL

## Spirotetramat

cis-3-(2,5-Dimethylphenyl)-8-methoxy-2-oxo-1-azaspiro[4.5]dec-3-en-4-yl ethyl carbonate

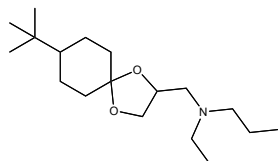


CAS 203313-25-1 MF C<sub>21</sub>H<sub>27</sub>NO<sub>5</sub> MW 373.44 PS S  
SG 1.22 g/cm<sup>3</sup> MP 142 °C BP Decomp. 235 °C  
SOL M,CN,H,D,T,EA,DMSO,A

Matrix	Cat. No.	Unit
NEAT	P-1077N	10 mg
100 µg/mL in AcCN	P-1077S-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  
SG 0.94 g/cm<sup>3</sup> BP 128-131 °C (5.25mm Hg)  
FP 147 °C SOL M,A,CN,H,T,D,IPA

Matrix	Cat. No.	Unit
NEAT	P-869N	10 mg
100 µg/mL in AcCN	P-869S-CN	1 mL

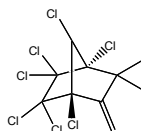
Spotless™, see Diniconazole

Starlex, see Pyraclofos

Stirophos, see Tetrachlorvinphos

## Strobane

(1S,4R)-1,2,2,3,3,4,7-Heptachloro-5,5-dimethyl-6-methylenebicyclo[2.2.1]heptane



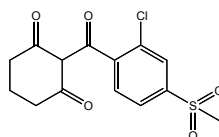
CAS 8001-50-1 MF C<sub>10</sub>H<sub>9</sub>Cl<sub>7</sub> MW 377.35 PS L  
SOL M

Matrix	Cat. No.	Unit
NEAT	P-339N	10 mg
100 µg/mL in MeOH	P-339S	1 mL

Suffix, see Benzoylprop-ethyl

## Sulcotrione

2-(2-Chloro-4-(methylsulfonyl)benzoyl)-1,3-cyclohexanedione



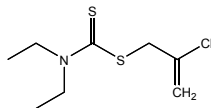
Chlormesulon

CAS 99105-77-8 MF C<sub>14</sub>H<sub>13</sub>ClO<sub>5</sub>S MW 328.77 PS S  
MP 139 °C BP Decomp. 170 °C SOL M,CN,D,A,W

Matrix	Cat. No.	Unit
NEAT	P-951N	10 mg
100 µg/mL in MeOH	P-951S	1 mL

## Sulfallate

2-Chloro-2-propen-1-yl diethylcarbamodithioate



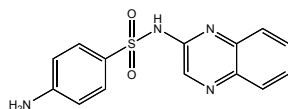
Vegadex

CAS 95-06-7 MF C<sub>8</sub>H<sub>14</sub>ClNS<sub>2</sub> MW 223.79 PS L  
SG 1.09 g/cm<sup>3</sup> BP 128-130 °C FP 100 °C  
SOL M,D,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-327N	10 mg
100 µg/mL in MeOH	P-327S	1 mL

## Sulfaquinoxaline

4-Amino-N-(2-quinoxaliny)benzenesulfonamide



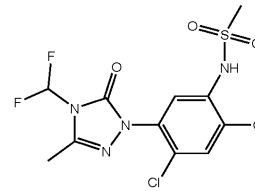
Sulfoquinoxaline

CAS 59-40-5 MF C<sub>14</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>S MW 300.34  
MP 247-248 °C SOL M,A

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-681S	1 mL

## Sulfentrazone

2',4'-Dichloro-5'-(4-difluoromethyl-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methanesulfonamide



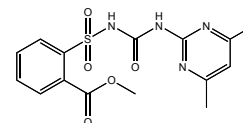
CAS 122836-35-5 MF C<sub>11</sub>H<sub>10</sub>Cl<sub>2</sub>F<sub>2</sub>N<sub>4</sub>O<sub>3</sub>S  
MW 387.19 PS S SG 1.21 g/cm<sup>3</sup> MP 122 °C  
SOL A,CN,T,H,W

Matrix	Cat. No.	Unit
NEAT	P-798N	10 mg
100 µg/mL in AcCN	P-798S-CN	1 mL

Sulfometuron methyl, see Sulfometuron methyl ester

## Sulfometuron methyl ester

Methyl 2-[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfamoyl]benzoate



Sulfometuron methyl

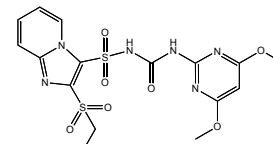
CAS 74222-97-2 MF C<sub>15</sub>H<sub>16</sub>N<sub>4</sub>O<sub>5</sub>S MW 364.38  
PS S SG 1.48 g/cm<sup>3</sup> MP 203-205 °C  
SOL M,A,EA,T,D,W,EA,CN,DMSO

Matrix	Cat. No.	Unit
NEAT	P-336N	10 mg

Sulfoquinoxaline, see Sulfaquinoxaline

## Sulfosulfuron

N-[[[(4,6-Dimethoxy-2-pyrimidinyl)amino]carbonyl]-2-(ethylsulfonyl)imidazo[1,2-a]pyridine-3-sulfonamide



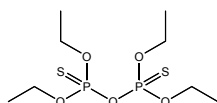
CAS 141776-32-1 MF C<sub>16</sub>H<sub>18</sub>N<sub>6</sub>O<sub>7</sub>S<sub>2</sub> MW 470.48  
PS S SG 1.52 g/cm<sup>3</sup> MP 201-202 °C  
SOL M,CN,A,EA,W,D

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-865S-CN-0.1X	1 mL

# Pesticide Standards

## Sulfotep

Tetraethyl dithiopyrophosphate



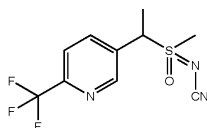
TEPP

**CAS** 3689-24-5 **MF** C<sub>8</sub>H<sub>20</sub>O<sub>6</sub>P<sub>2</sub>S<sub>2</sub> **MW** 322.32 **PS** L  
**SG** 1.20 g/cm<sup>3</sup> **BP** 136-139 °C (2mm Hg)  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-167N	10 mg
100 µg/mL in MeOH	P-167S	1 mL

## Sulfoxaflor

N-[Methyloxodio][1-(6-trifluoromethyl)-3-pyridyl]ethyl]-y4-sulfanylidene]cyanamide

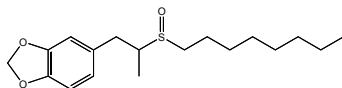


**CAS** 946578-00-3 **MF** C<sub>10</sub>H<sub>10</sub>F<sub>3</sub>N<sub>3</sub>OS **MW** 277.27  
**PS** S **SG** 1.52 g/cm<sup>3</sup> **MP** 112-113 °C  
**BP** Decomp. 167 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1133N	10 mg
100 µg/mL in MeOH	P-1133S	1 mL

## Sulfoxide

2-(1,3-Benzodioxol-5-yl)ethyl octyl sulfoxide



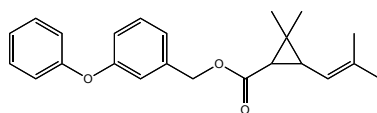
**CAS** 120-62-7 **MF** C<sub>18</sub>H<sub>26</sub>O<sub>3</sub>S **MW** 324.48 **PS** L  
**SG** 1.06 g/cm<sup>3</sup> **SOL** M,A,D

Matrix	Cat. No.	Unit
NEAT	P-396N	10 mg
100 µg/mL in MeOH	P-396S	1 mL

*Sulprofos, see Bolstar*

## Sumithrin

3-Phenoxybenzyl 2,2-dimethyl-3-(2-methyl-1-propen-1-yl)cyclopropanecarboxylate



d-Phenothrin

**CAS** 26002-80-2 **MF** C<sub>23</sub>H<sub>26</sub>O<sub>3</sub> **MW** 350.45 **PS** L  
**SG** 1.06 g/cm<sup>3</sup> **BP** 290 °C **FP** 107 °C  
**SOL** M,A,D,H,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-050N	10 mg
100 µg/mL in MeOH	P-050S	1 mL

*Supona, see Chlorfenvinphos*

*Suprathion, see Methidathion*

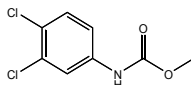
*Surflan, see Oryzalin*

*Sutan, see Butylate*

*Swat, see Bomyl*

## 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  
**MP** 113 °C **SOL** M,H,CN

Matrix	Cat. No.	Unit
NEAT	P-061N	10 mg
100 µg/mL in MeOH	P-061S	1 mL

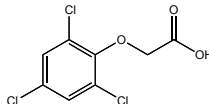
*Sythane, see Myclobutanil*

*Systox, see Demeton (mixed isomers)*

*2,4,5-T, see 2,4,5-T acid*

## 2,4,6-T

2,4,6-Trichlorophenoxyacetic acid

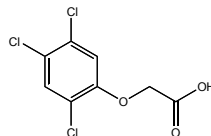


**CAS** 575-89-3 **MF** C<sub>7</sub>H<sub>2</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 255.48 **PS** S  
**MP** 185 °C **SOL** M,A,D,CN

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

2,4,5-Trichlorophenoxyacetic acid



2,4,5-T

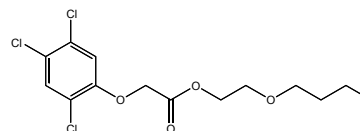
**CAS** 93-76-5 **MF** C<sub>7</sub>H<sub>2</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 255.48 **PS** S  
**SG** 1.80 g/cm<sup>3</sup> **MP** 153-156 °C **BP** Decomp.  
**SOL** M,A,D,H,CN

Matrix	Cat. No.	Unit
NEAT	P-168N	10 mg
100 µg/mL in MeOH	P-168S ▲	1 mL
1000 µg/mL in MeOH	P-168S-10X ▲	1 mL
100 µg/mL in AcCN	P-168S-CN	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

## 2,4,5-T butoxyethyl ester

2-Butoxyethyl (2,4,5-trichlorophenoxy)acetate

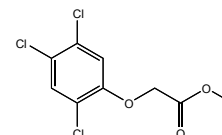


**CAS** 2545-59-7 **MF** C<sub>14</sub>H<sub>17</sub>Cl<sub>3</sub>O<sub>4</sub> **MW** 355.64 **PS** L  
**SOL** CN

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



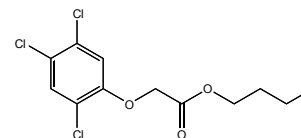
Methyl (2,4,5-trichlorophenoxy)acetate

**CAS** 1928-37-6 **MF** C<sub>8</sub>H<sub>5</sub>Cl<sub>3</sub>O<sub>3</sub> **MW** 269.51 **PS** S  
**MP** 159 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-067N	10 mg
100 µg/mL in MeOH	P-067S	1 mL

## 2,4,5-T n-butyl ester

2-Butoxyethyl (2,4,5-trichlorophenoxy)acetate



**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** S  
**MP** 46 °C **BP** 337 °C **SOL** CN

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*

*TBZ, see Thiabendazole*

*TCA, see Trichloroacetic acid*

*TCMTB, see Busan*

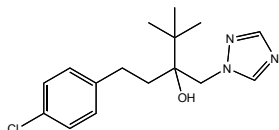
*TCNB, see 2,3,5,6-Tetrachloronitrobenzene*

*TDE, see p,p'-DDD*

# Pesticide Standards

## Tebuconazol

(RS)-1-p-Chlorophenyl-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)pentan-3-ol



Folicur

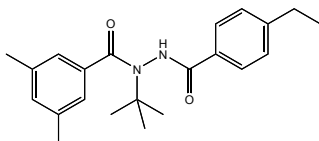
**CAS** 107534-96-3 **MF** C<sub>16</sub>H<sub>22</sub>ClN<sub>3</sub>O **MW** 307.82  
**PS** S **SG** 1.25 g/cm<sup>3</sup> **MP** 105 °C **BP** Decomp. 350 °C  
**FP** >100 °C **SOL** M,A,D,H,T,CN,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-451N	10 mg
100 µg/mL in MeOH	P-451S	1 mL
1000 µg/mL in MeOH	P-451S-10X	1 mL

*Tebufenocide, see Tebufenozide*

## Tebufenozide

N-tert-Butyl-N'-(4-ethylbenzoyl)-3,5-dimethylbenzohydrazide



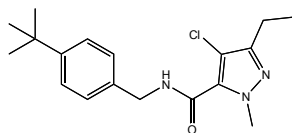
Tebufenocide

**CAS** 112410-23-8 **MF** C<sub>22</sub>H<sub>26</sub>N<sub>2</sub>O<sub>2</sub> **MW** 352.47  
**PS** S **SG** 1.03 g/cm<sup>3</sup> **MP** 191 °C  
**SOL** M,A,D,CN,EA,T

Matrix	Cat. No.	Unit
NEAT	P-726N	10 mg
100 µg/mL in MeOH	P-726S	1 mL

## Tebufenpyrad

4-Chloro-N-[[4-(1,1-dimethylethyl)phenyl]methyl]-3-ethyl-1-methyl-1H-pyrazole-5-carboxamide



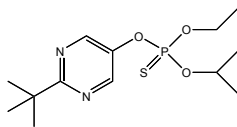
Pyranica

**CAS** 119168-77-3 **MF** C<sub>18</sub>H<sub>24</sub>ClN<sub>3</sub>O **MW** 333.86 **PS** S  
**SG** 1.02 g/cm<sup>3</sup> **MP** 65 °C **BP** Decomp. 250 °C  
**SOL** M,A,H,T,CN,D

Matrix	Cat. No.	Unit
NEAT	P-877N	10 mg
100 µg/mL in MeOH	P-877S	1 mL

## TEBUPIRIMFOS

O-Ethyl O-isopropyl O-[2-(2-methyl-2-propanyl)-5-pyrimidinyl] phosphorothioate

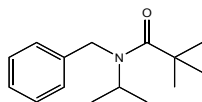


**CAS** 96182-53-5 **MF** C<sub>13</sub>H<sub>23</sub>N<sub>2</sub>O<sub>3</sub>PS **MW** 318.37  
**PS** L **SG** 1.09 g/cm<sup>3</sup> **BP** 152 °C **FP** 93 °C  
**SOL** M,A,H

Matrix	Cat. No.	Unit
NEAT	P-727N	10 mg
100 µg/mL in MeOH	P-727S	1 mL

## Tebutam

N-Benzyl-N-isopropylpivalamide



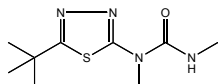
Butam

**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> **BP** 98 °C (0.075mm Hg) **FP** 80 °C  
**SOL** M,A,CN,T

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  
**SG** 1.19 g/cm<sup>3</sup> **MP** 161-164 °C (decomp.)  
**SOL** M,A,D,CN,EA,H,W

Matrix	Cat. No.	Unit
NEAT	P-188N	10 mg
100 µg/mL in MeOH	P-188S	1 mL

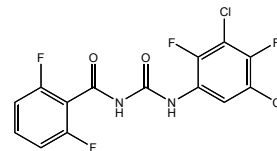
*Tecnazene, see 2,3,5,6-Tetrachloronitrobenzene*

*Tedion V-18, see Tetradiion*

*TEDP, see Sulfotep*

## Teflubenzuron

1-(2,5-Dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea

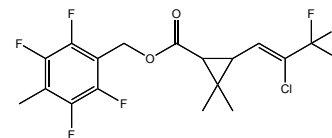


**CAS** 83121-18-0 **MF** C<sub>14</sub>H<sub>6</sub>Cl<sub>2</sub>F<sub>4</sub>N<sub>2</sub>O<sub>2</sub> **MW** 381.11  
**PS** S **SG** 1.65 g/cm<sup>3</sup> **MP** 222-223 °C (decomp.)  
**SOL** A,DMSO,D,H,T,M,CN

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-(1RS,3RS)-3-[(Z)-2-chloro-3,3,3-trifluoroprop-1-enyl]-2,2-dimethylcyclopropanecarboxylate



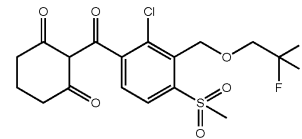
**CAS** 79538-32-2 **MF** C<sub>17</sub>H<sub>14</sub>ClF<sub>7</sub>O<sub>2</sub> **MW** 418.73  
**PS** S **SG** 1.48 g/cm<sup>3</sup> **MP** 45 °C **FP** 124 °C  
**BP** 153 °C (1mm Hg) **SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-568S	1 mL

*Telodrin, see Isobenzan*

## Tembotrione

2-[2-Chloro-4-mesyl-3-[(2,2,2-trifluoroethoxy)methyl]benzoyl]cyclohexane-1,3-dione



**CAS** 335104-84-2 **MF** C<sub>17</sub>H<sub>16</sub>ClF<sub>3</sub>O<sub>6</sub>S **MW** 440.82  
**PS** S **SG** 1.56 g/cm<sup>3</sup> **BP** Decomp. 150 °C  
**MP** 123 °C **SOL** W,D,DMSO,A,EA,T,H,CN

Matrix	Cat. No.	Unit
NEAT	P-1109N	10 mg
100 µg/mL in AcCN	P-1109S-CN	1 mL

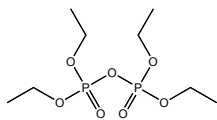
*Temephos, see Abate*

*Temik, see Aldicarb*

# Pesticide Standards

## TEPP

Tetraethylpyrophosphate



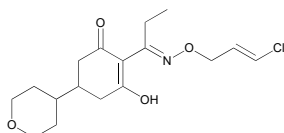
Tetron

**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> **BP** 82 °C (0.05mm Hg) **FP**>100 °C  
**SOL** D,H,CN,A,M

Matrix	Cat. No.	Unit
NEAT	P-207N	10 mg
1000 µg/mL in Hexane	P-207S-H-10X	1 mL

## Tepraloxymid

(5RS)-2-((EZ)-1-[(2E)-3-Chloroallyloxyimino]propyl)-3-hydroxy-5-perhydropropen-4-ylcyclohex-2-en-1-one

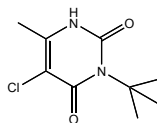


**CAS** 149979-41-9 **MF** C<sub>17</sub>H<sub>24</sub>ClNO<sub>4</sub> **MW** 341.83  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 74 °C **BP** >185 °C  
**SOL** A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1011S-CN	1 mL
1000 µg/mL in AcCN	P-1011S-CN-10X	1 mL

## Terbacil

3-tert-Butyl-5-chloro-6-methyluracil



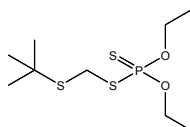
**CAS** 5902-51-2 **MF** C<sub>9</sub>H<sub>13</sub>ClN<sub>2</sub>O<sub>2</sub> **MW** 216.69 **PS** S  
**SG** 1.34 g/cm<sup>3</sup> **MP** 175-177 °C  
**SOL** M,A,D,H,CN,EA,W

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



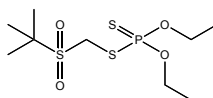
Counter

**CAS** 13071-79-9 **MF** C<sub>8</sub>H<sub>20</sub>O<sub>2</sub>PS<sub>3</sub> **MW** 288.43 **PS** L  
**SG** 1.10 g/cm<sup>3</sup> **BP** 69 °C (0.01mm Hg)  
**FP** 88 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-208N	10 mg
100 µg/mL in MeOH	P-208S	1 mL
1000 µg/mL in Hexane	P-208S-H-10X	1 mL

## Terbufos sulfone

O,O-Diethyl S-(((2-methyl-2-propenyl)sulfonyl)methyl) phosphorodithioate

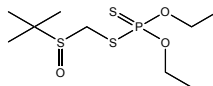


**CAS** 56070-16-7 **MF** C<sub>9</sub>H<sub>21</sub>O<sub>4</sub>PS<sub>3</sub> **MW** 320.43  
**PS** S **SOL** M,A,CN,TP,EA

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-729S	1 mL

## Terbufos-sulfoxide

O,O-Diethyl S-(((2-methyl-2-propenyl)sulfonyl)methyl) phosphorodithioate

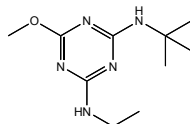


**CAS** 10548-10-4 **MF** C<sub>9</sub>H<sub>21</sub>O<sub>3</sub>PS<sub>3</sub> **MW** 304.43  
**PS** L **SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-730N	10 mg
100 µg/mL in MeOH	P-730S	1 mL

## Terbumeton

N-Ethyl-6-methoxy-N'-(2-methyl-2-propenyl)-1,3,5-triazine-2,4-diamine

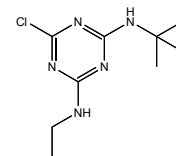


**CAS** 33693-04-8 **MF** C<sub>10</sub>H<sub>19</sub>N<sub>5</sub>O **MW** 225.29 **PS** S  
**SG** 1.08 g/cm<sup>3</sup> **MP** 118-120 °C **SOL** W,A,T,M,D,CN

Matrix	Cat. No.	Unit
NEAT	P-504N	10 mg
100 µg/mL in MeOH	P-504S	1 mL

## Terbuthylazine

6-Chloro-N-ethyl-N'-(2-methyl-2-propenyl)-1,3,5-triazine-2,4-diamine



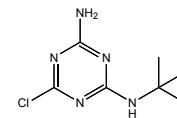
Gardoprim

**CAS** 5915-41-3 **MF** C<sub>9</sub>H<sub>16</sub>ClN<sub>5</sub> **MW** 229.71 **PS** S  
**SG** 1.19 g/cm<sup>3</sup> **MP** 178 °C **FP** >150 °C  
**SOL** M,A,D,H,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-169N	10 mg
100 µg/mL in MeOH	P-169S	1 mL

## Terbuthylazine desethyl

6-Chloro-N-(2-methyl-2-propenyl)-1,3,5-triazine-2,4-diamine



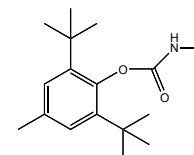
Desethylterbuthylazine

**CAS** 30125-63-4 **MF** C<sub>7</sub>H<sub>12</sub>ClN<sub>5</sub> **MW** 201.66 **PS** S  
**FP** >100 °C **SOL** M,A,CN,EA

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



Terbucarb

**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 **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-464N	10 mg
100 µg/mL in MeOH	P-464S	1 mL

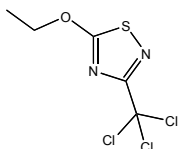
**Terbutryne**, see *Prebane*

**Terraneb**, see *Chloroneb*

# Pesticide Standards

## Terrazole

Ethyl 3-trichloromethyl-1,2,4-thiadiazol-5-yl ether

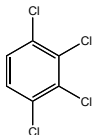


Etridiazole

**CAS** 2593-15-9 **MF** C<sub>8</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> **BP** 95 °C (1mm Hg) **FP** 154 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-190N	10 mg
100 µg/mL in MeOH	P-190S	1 mL

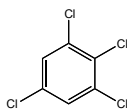
## 1,2,3,4-Tetrachlorobenzene



**CAS** 634-66-2 **MF** C<sub>6</sub>H<sub>2</sub>Cl<sub>4</sub> **MW** 215.89 **PS** S  
**SG** 1.7 g/cm<sup>3</sup> **MP** 42-47 °C **BP** 254 °C **FP** 113 °C  
**SOL** M,A,D,H,T,TP

Matrix	Cat. No.	Unit
NEAT	P-999N	10 mg
100 µg/mL in MeOH	P-999S	1 mL

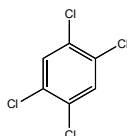
## 1,2,3,5-Tetrachlorobenzene



**CAS** 634-90-2 **MF** C<sub>6</sub>H<sub>2</sub>Cl<sub>4</sub> **MW** 215.89 **PS** S  
**SG** 1.57 g/cm<sup>3</sup> **MP** 50-51 °C **BP** 246 °C **FP** 113 °C  
**SOL** M,A,D,H,T,TP

Matrix	Cat. No.	Unit
NEAT	P-1001N	10 mg
100 µg/mL in Isooctane	P-1001S-TP	1 mL

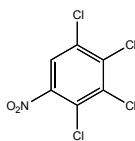
## 1,2,4,5-Tetrachlorobenzene



**CAS** 95-94-3 **MF** C<sub>6</sub>H<sub>2</sub>Cl<sub>4</sub> **MW** 215.89 **PS** S  
**SG** 1.86 g/cm<sup>3</sup> **MP** 138-140 °C **BP** 240-246 °C  
**FP** 160 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-1003N	10 mg
100 µg/mL in MeOH	P-1003S	1 mL

## 1,2,3,4-Tetrachloro-5-nitrobenzene

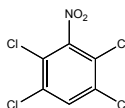


**CAS** 879-39-0 **MF** C<sub>6</sub>HCl<sub>4</sub>NO<sub>2</sub> **MW** 260.89 **PS** S  
**MP** 65 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1000N	10 mg
100 µg/mL in MeOH	P-1000S	1 mL

## 2,3,5,6-Tetrachloronitrobenzene

1,2,4,5-Tetrachloro-3-nitrobenzene



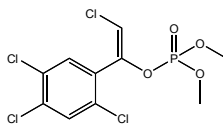
TCNB, Tecnazene

**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  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-467N	10 mg
100 µg/mL in MeOH	P-467S	1 mL

## Tetrachlorvinphos

(Z)-2-Chloro-1-(2,4,5-trichlorophenyl)vinyl dimethyl phosphate



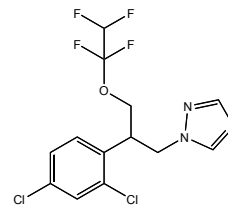
Stirophos

**CAS** 22248-79-9 **MF** C<sub>10</sub>H<sub>9</sub>Cl<sub>4</sub>O<sub>4</sub>P **MW** 365.96  
**PS** S **SG** 1.52 g/cm<sup>3</sup> **MP** 94-97 °C  
**BP** Decom. 100 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-125N	10 mg
100 µg/mL in MeOH	P-125S	1 mL
1000 µg/mL in Hexane	P-125S-H-10X	1 mL

## Tetraconazole

(RS)-2-(2,4-Dichlorophenyl)-3-(1H-1,2,4-triazol-1-yl)propyl-1,1,2,2-tetrafluoroethyl ether

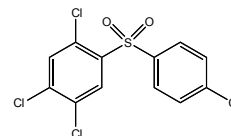


**CAS** 112281-77-3 **MF** C<sub>13</sub>H<sub>11</sub>Cl<sub>2</sub>F<sub>4</sub>N<sub>3</sub>O **MW** 372.15  
**PS** L **SG** 1.43 g/cm<sup>3</sup> **BP** Decom. 240 °C  
**FP** 219 °C **SOL** M,A,T,CN,EA,W,CN,H

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

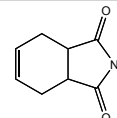


Tedion V-18

**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  
**SG** 1.52 g/cm<sup>3</sup> **MP** 146 °C  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-261N	10 mg
100 µg/mL in MeOH	P-261S	1 mL

## 1,2,3,6-Tetrahydrophthalimide

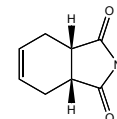


**CAS** 85-40-5 **MF** C<sub>8</sub>H<sub>7</sub>NO<sub>2</sub> **MW** 151.18 **PS** S  
**SG** 1.23 g/cm<sup>3</sup> **MP** 137 °C **BP** 337 °C  
**FP** 165 °C **SOL** M,A

Matrix	Cat. No.	Unit
NEAT	P-621N	10 mg
100 µg/mL in MeOH	P-621S	1 mL

## cis-1,2,3,6-Tetrahydrophthalimide

cis-delta4-Tetrahydrophthalimide



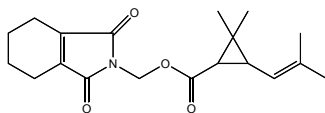
**CAS** 1469-48-3 **MF** C<sub>8</sub>H<sub>7</sub>NO<sub>2</sub> **MW** 151.18 **PS** S  
**MP** 129-133 °C **BP** 324 °C **FP** 178 °C **SOL** M,A,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-116S	1 mL
1000 µg/mL in MeOH	P-116S-10X	1 mL

# Pesticide Standards

## Tetramethrin

(1,3,4,5,6,7-Hexahydro-1,3-dioxo-2H-isoindol-2-yl)methyl -2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropane carboxylate



**CAS** 7696-12-0 **MF** C<sub>19</sub>H<sub>25</sub>NO<sub>4</sub> **MW** 331.41 **PS** S  
**SG** 1.11 g/cm<sup>3</sup> **MP** 60-80 °C  
**BP** 185-190 °C (0.1mm Hg) **SOL** M,A,D,H,T,CN,TP

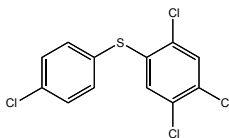
Matrix	Cat. No.	Unit
NEAT	P-406N	10 mg
100 µg/mL in MeOH	P-406S	1 mL

*Tetramethylphosphorodiamidic fluoride (I), see Dimetox*

*Tetramethylthiuram disulfide, see Thiram*

## Tetrasul

4-Chlorophenyl 2,4,5-trichlorophenyl sulfide



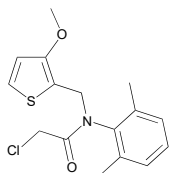
**CAS** 2227-13-6 **MF** C<sub>12</sub>H<sub>6</sub>Cl<sub>4</sub>S **MW** 324.05 **PS** S  
**MP** 88 °C **BP** 200 °C (1mm Hg) **SOL** A,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-552N	10 mg
100 µg/mL in MeOH	P-552S	1 mL

*Tetron, see TEPP*

## Thenylchlor

2-Chloro-N-(3-methoxy-2-thenyl)-2',6'-dimethylacetanilide

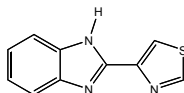


**CAS** 96491-05-3 **MF** C<sub>16</sub>H<sub>18</sub>ClNO<sub>2</sub>S **MW** 323.84  
**PS** S **SG** 1.19 g/cm<sup>3</sup> **MP** 73 °C **BP** 174 °C  
**FP** 224 °C **SOL** A,CN,H,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1194S-CN	1 mL
1000 µg/mL in AcCN	P-1194S-CN-10X	1 mL

## Thiabendazole

2-(4-Thiazolyl)benzimidazole



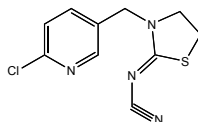
*TBZ*

**CAS** 148-79-8 **MF** C<sub>10</sub>H<sub>7</sub>N<sub>3</sub>S **MW** 201.25 **PS** S  
**SG** 1.34 g/cm<sup>3</sup> **MP** 304-305 °C  
**BP** Sublimes >310 °C **SOL** M,A,D,H,T,CN,TP,EA

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



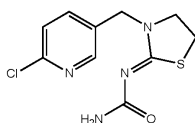
*Calypso*

**CAS** 111988-49-9 **MF** C<sub>10</sub>H<sub>7</sub>ClN<sub>3</sub>S **MW** 252.72 **PS** S  
**SG** 1.46 g/cm<sup>3</sup> **MP** 136 °C **BP** Decomp. 270 °C  
**SOL** W,H,D,A,EA,CN,DMSO,M

Matrix	Cat. No.	Unit
NEAT	P-838N	10 mg
100 µg/mL in AcCN	P-838S-CN	1 mL

## Thiacloprid-amide

[3-(6-Chloro-3-pyridylmethyl)thiazolidin-2-ylidene]urea

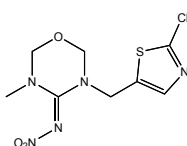


**CAS** 676228-91-4 **MF** C<sub>10</sub>H<sub>7</sub>ClN<sub>4</sub>OS **MW** 270.74  
**PS** S **MP** 171 °C **SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-1223N	10 mg
100 µg/mL in AcCN	P-1223S	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>3</sub>O<sub>3</sub>S **MW** 291.72  
**PS** S **SG** 1.57 g/cm<sup>3</sup> **MP** 140 °C  
**BP** Decomp. 147 °C **SOL** W,A,EA,D,T,M,H,CN

Matrix	Cat. No.	Unit
NEAT	P-866N	10 mg
100 µg/mL in AcCN	P-866S-CN	1 mL

*Thiazophyr, see Thiazopyr*

## Thiazopyr

Methyl 2-difluoromethyl-5-(4,5-dihydro-1,3-thiazol-2-yl)-4-isobutyl-6-trifluoromethylnicotinate



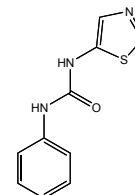
*Thiazophyr*

**CAS** 117718-60-2 **MF** C<sub>16</sub>H<sub>17</sub>F<sub>5</sub>N<sub>3</sub>O<sub>2</sub>S **MW** 396.38  
**PS** S **SG** 1.37 g/cm<sup>3</sup> **MP** 77-78 °C **SOL** M,H,A

Matrix	Cat. No.	Unit
NEAT	P-808N	10 mg
100 µg/mL in MeOH	P-808S	1 mL

## Thidiazuron

1-Phenyl-3-(1,2,3-thiadiazol-5-yl)urea

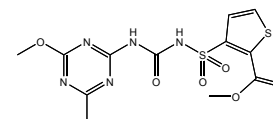


**CAS** 51707-55-2 **MF** C<sub>9</sub>H<sub>8</sub>N<sub>4</sub>OS **MW** 220.25 **PS** S  
**SG** 1.51 g/cm<sup>3</sup> **MP** 211-213 °C (decomp.)  
**SOL** M,T,A,EA,H,D,CN

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



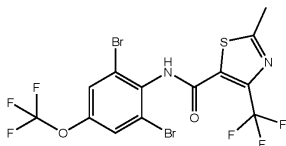
*Harmony*

**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 **SG** 1.49 g/cm<sup>3</sup> **MP** 176 °C  
**SOL** W,EA,M,CN,H,A,D

Matrix	Cat. No.	Unit
NEAT	P-468N	10 mg
100 µg/mL in MeOH	P-468S	1 mL

## Thifluzamide

2',6'-Dibromo-2-methyl-4'-trifluoromethoxy-4-trifluoro-methyl-1,3-thiazole-5-carboxanilide



CAS 130000-40-7 MF C<sub>13</sub>H<sub>16</sub>Br<sub>2</sub>F<sub>6</sub>N<sub>2</sub>O<sub>2</sub>S  
MW 528.06 PS S SG 2.0 g/cm<sup>3</sup> MP 178-179 °C  
BP Decomp. FP 177 °C SOL M,A,CN

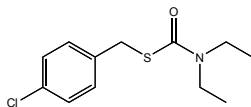
Matrix	Cat. No.	Unit
NEAT	P-1055N	10 mg
100 µg/mL in MeOH	P-1055S	1 mL

*Thimet, see Phorate*

*Thimet sulfone, see Phorate sulfone*

## Thiobencarb

S-4-Chlorbenzyl diethylthiocarbamate



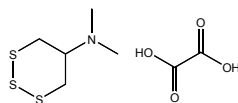
*Benthiocarb*

CAS 28249-77-6 MF C<sub>12</sub>H<sub>16</sub>ClNOS MW 257.78  
PS L SG 1.18 g/cm<sup>3</sup> BP 126-129 °C (0.008mm Hg)  
SOL M,A,D,H,CN,TP,EA,T

Matrix	Cat. No.	Unit
NEAT	P-180N	10 mg
100 µg/mL in MeOH	P-180S	1 mL
1000 µg/mL in MeOH	P-180S-10X	1 mL

## Thiocyclam hydrogen oxalate

N,N-Dimethyl-1,2,3-trithian-5-amine hydrogen oxalate



CAS 31895-22-4 MF C<sub>8</sub>H<sub>13</sub>NO<sub>3</sub>S<sub>3</sub> MW 271.38  
PS S SG 0.60 g/cm<sup>3</sup> MP 125-128 °C (decomp.)  
FP >130 °C SOL DMSO,M,CN,A,EA,H

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-688S	1 mL

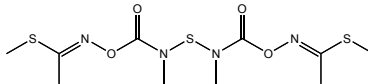
*alpha-Thiodan, see Endosulfan I*

*Thiodan II, see Endosulfan II*

*Thiodemeton, see Disulfoton*

## Thiodicarb

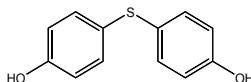
Dimethyl N,N'-[thiobis((methylimino)carbonyloxy)] bis[ethanimidothioate]



CAS 59669-26-0 MF C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>S<sub>3</sub> MW 354.47  
PS S SG 1.44 g/cm<sup>3</sup> MP 173-174 °C  
BP Decomp. 185 °C SOL D,A,T,M,H,CN

Matrix	Cat. No.	Unit
NEAT	P-477N	10 mg
100 µg/mL in MeOH	P-477S	1 mL

## 4,4'-Thiodiphenol

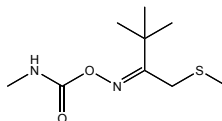


CAS 2664-63-3 MF C<sub>12</sub>H<sub>10</sub>O<sub>2</sub>S MW 218.27 PS S  
MP 154-156 °C SOL M

Matrix	Cat. No.	Unit
NEAT	P-117N	10 mg
100 µg/mL in MeOH	P-117S	1 mL
1000 µg/mL in MeOH	P-117S-10X	1 mL

## Thiofanox

3,3-Dimethyl-1-methylthiobutanone O-methylcarbamoyloxime

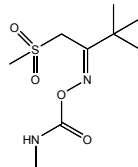


CAS 39196-18-4 MF C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>S MW 218.32  
PS S SG 1.05 g/cm<sup>3</sup> MP 57-58 °C FP >100 °C  
SOL CN,M,W

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

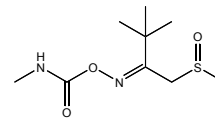


CAS 39184-59-3 MF C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S MW 250.32  
SG 1.18 g/cm<sup>3</sup> SOL CN

Matrix	Cat. No.	Unit
10 µg/mL in AcCN	P-839S-CN-0.1X	1 mL

## Thiofanox sulfoxide

3,3-Dimethyl-1-(methylsulfinyl)-2-butanone O-((methylamino)carbonyl)oxime

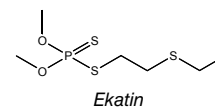


CAS 39184-27-5 MF C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>S MW 234.32  
PS S SG 1.16 g/cm<sup>3</sup> MP 88-89 °C SOL M,CN

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



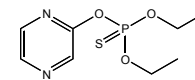
*Ekatim*

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> BP 110 °C (0.1mm Hg)  
SOL W,M,A,H,T,CN

Matrix	Cat. No.	Unit
NEAT	P-486N	10 mg
100 µg/mL in MeOH	P-486S	1 mL

## Thionazin

O,O-Diethyl O-2-pyrazinyl phosphorothioate



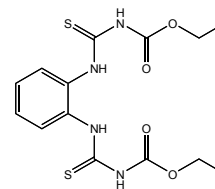
*Zinophos*

CAS 297-97-2 MF C<sub>8</sub>H<sub>13</sub>N<sub>2</sub>O<sub>3</sub>PS MW 248.24 PS L  
SG 1.21 g/cm<sup>3</sup> BP 80 °C SOL M,A,D,H,T,CN

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-171S	1 mL

## Thiophanate

Diethyl 4,4'-(o-phenylene)bis(3-thioallophanate)



CAS 23564-06-9 MF C<sub>14</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 370.45  
PS S MP 195 °C (decomp.) SOL M,CN

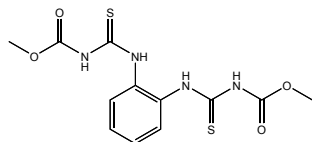
Matrix	Cat. No.	Unit
NEAT	P-321N	10 mg
100 µg/mL in MeOH	P-321S	1 mL
100 µg/mL in AcCN	P-321S-CN	1 mL



# Pesticide Standards

## Thiophanate-methyl

Dimethyl [(1,2-phenylene)bis(iminocarbonothionyl)] bis[carbamate]



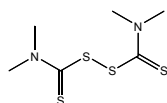
**CAS** 23564-05-8 **MF** C<sub>12</sub>H<sub>14</sub>N<sub>4</sub>O<sub>4</sub>S<sub>2</sub> **MW** 342.4  
**PS S SG** 1.50 g/cm<sup>3</sup> **MP** 172 °C (decomp.)  
**SOL** W,A,M,CN,EA,H,T,D

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



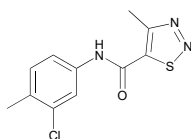
*Tetramethylthiuram disulfide*

**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**  
**SG** 1.29 g/cm<sup>3</sup> **MP** 156 °C **FP** 150 °C **BP** Decomp.  
**SOL** W,H,M,D,A,EA,CN

Matrix	Cat. No.	Unit
NEAT	P-118N	10 mg
100 µg/mL in MeOH	P-118S	1 mL
1000 µg/mL in MeOH	P-118S-10X	1 mL

## Tiadinil

N-(3-Chloro-4-methylphenyl)-4-methyl-1,2,3-thiadiazole-5-carboxamide

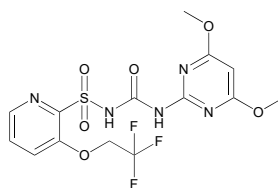


**CAS** 223580-51-6 **MF** C<sub>11</sub>H<sub>10</sub>ClN<sub>3</sub>OS **MW** 267.73  
**PS S MP** 112 °C **SOL** CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1112S-CN	1 mL
1000 µg/mL in AcCN	P-1112S-CN-10X	1 mL

## Trifloxysulfuron

1-(4,6-Dimethoxypyrimidin-2-yl)-3-[3-(2,2,2-trifluoroethoxy)-2-pyridylsulfonyl]urea

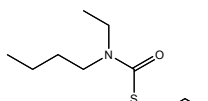


**CAS** 145099-21-4 **MF** C<sub>14</sub>H<sub>14</sub>F<sub>3</sub>N<sub>5</sub>O<sub>5</sub>S **MW** 437.35  
**PS S MP** 137 °C decomp. **SOL** CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1169S-CN	1 mL
1000 µg/mL in AcCN	P-1169S-CN-10X	1 mL

## Tillam

S-Propyl butyl(ethyl)thiocarbamate



*Pebulate*

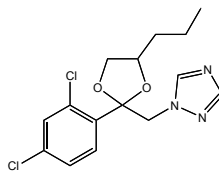
**CAS** 1114-71-2 **MF** C<sub>10</sub>H<sub>21</sub>NOS **MW** 203.35 **PS L**  
**SG** 0.96 g/cm<sup>3</sup> **BP** 142 °C (21mm Hg) **FP** 124 °C  
**SOL** M,A,D,H,CN,TP,EA,T

Matrix	Cat. No.	Unit
NEAT	P-105N	10 mg
100 µg/mL in MeOH	P-105S	1 mL
1000 µg/mL in MeOH	P-105S-10X	1 mL

*Tillox, see Benazolin*

## Tilt

1-(2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl)-1H-1,2,4-triazole



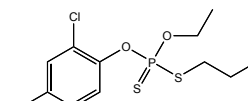
*Proconazole, Propiconazole*

**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** 1.29 g/cm<sup>3</sup> **BP** 180 °C (0.1mm Hg)  
**SOL** M,A,D,H,T,CN,EA,W

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



*Prothiotos*

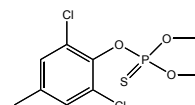
**CAS** 34643-46-4 **MF** C<sub>11</sub>H<sub>15</sub>Cl<sub>2</sub>O<sub>2</sub>PS<sub>2</sub> **MW** 345.25  
**PS L SG** 1.31 g/cm<sup>3</sup> **BP** 125-128 °C (13Pa)  
**FP** 110 °C **SOL** M,A,D,H,T,CN,TP,EA,IPA

Matrix	Cat. No.	Unit
NEAT	P-126N	10 mg
100 µg/mL in MeOH	P-126S	1 mL
1000 µg/mL in Hexane	P-126S-H-10X	1 mL

*Tolban, see Profthuralin*

## Tolclofos-methyl

O-(2,6-Dichloro-p-tolyl) O,O-dimethyl phosphorothioate

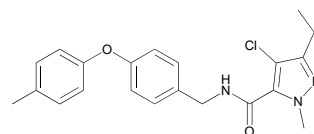


**CAS** 57018-04-9 **MF** C<sub>9</sub>H<sub>11</sub>Cl<sub>2</sub>O<sub>3</sub>PS **MW** 301.13  
**PS S SG** 1.52 g/cm<sup>3</sup> **MP** 78-80 °C **FP** >100 °C  
**BP** Decomp. 120 °C **SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-557N	10 mg
100 µg/mL in MeOH	P-557S	1 mL

## Tolfenpyrad

4-Chloro-3-ethyl-1-methyl-N-[4-(p-tolxyloxy)benzyl]pyrazole-5-carboxamide



**CAS** 129558-76-5 **MF** C<sub>21</sub>H<sub>22</sub>ClN<sub>3</sub>O<sub>2</sub> **MW** 383.88  
**PS S MP** 87-89 °C **SOL** A,CN,M

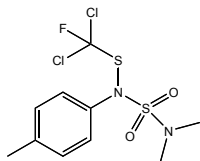
Matrix	Cat. No.	Unit
NEAT	P-1097N	10 mg
100 µg/mL in AcCN	P-1097S-CN-10X	1 mL

*Tolyfluand metabolite, see DMST*

# Pesticide Standards

## Tolyfluamide

N-Dichlorofluoromethylthio-N',N'-dimethyl-N-p-tolylsulfamide



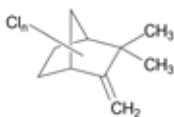
**CAS** 731-27-1 **MF** C<sub>10</sub>H<sub>13</sub>Cl<sub>2</sub>FN<sub>2</sub>O<sub>2</sub>S<sub>2</sub> **MW** 347.26  
**PS S SG** 1.52 g/cm<sup>3</sup> **MP** 93 °C **BP** Decomp. 200 °C  
**FP** >150 °C **SOL** M,A,D,T,CN,TP,IPA,EA

Matrix	Cat. No.	Unit
NEAT	P-553N	10 mg
100 µg/mL in MeOH	P-553S	1 mL

**Torak**, see *Dialifos*

**Tordon**, see *Picloram*

## Toxaphene



*Campechlor*

**CAS** 8001-35-2 **MF** C<sub>10</sub>H<sub>16</sub>Cl<sub>8</sub> **MW** 413.81 **PS S**  
**SG** 1.65 g/cm<sup>3</sup> **MP** 65-90 °C **BP** Decomp.  
**FP** 135 °C **SOL** M,A,D,H,T,CN,TP,EA

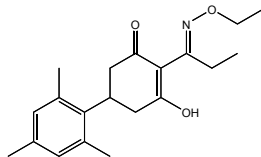
Matrix	Cat. No.	Unit
NEAT	P-093N	10 mg
100 µg/mL in MeOH	P-093S	1 mL
1000 µg/mL in MeOH	P-093S-10X	1 mL
40,000 µg/mL in MeOH	P-093S-40X	1 mL
50,000 µg/mL in MeOH	P-093S-50X	1 mL
1000 µg/mL in Hexane	P-093S-H-10X	1 mL

**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

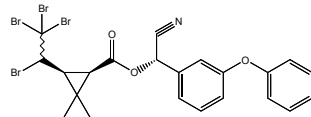


**CAS** 87820-88-0 **MF** C<sub>20</sub>H<sub>27</sub>NO<sub>3</sub> **MW** 329.43 **PS S**  
**SG** 1.16 g/cm<sup>3</sup> **MP** 106 °C **BP** Decomp. 129 °C  
**FP** >100 °C **SOL** H,M,A,EA,T,D

Matrix	Cat. No.	Unit
NEAT	P-405N	10 mg
100 µg/mL in MeOH	P-405S	1 mL

## Tralomehrin

Cyano(3-phenoxyphenyl)methyl 2,2-dimethyl-3-[1,2,2,2-tetrabromoethyl]cyclopropanecarboxylate

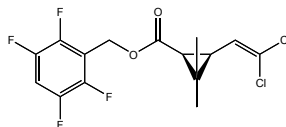


**CAS** 66841-25-6 **MF** C<sub>22</sub>H<sub>19</sub>Br<sub>4</sub>NO<sub>3</sub> **MW** 665.01  
**PS S SG** 1.70 g/cm<sup>3</sup> **MP** 138-148 °C **FP** 26 °C  
**SOL** A,D,T,DMSO,H,CN

Matrix	Cat. No.	Unit
NEAT	P-478N	10 mg
100 µg/mL in MeOH	P-478S	1 mL

## Transfluthrin

2,3,5,6-Tetrafluorobenzyl (1R,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate



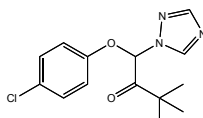
**CAS** 118712-89-3 **MF** C<sub>15</sub>H<sub>12</sub>Cl<sub>2</sub>F<sub>4</sub>O<sub>2</sub> **MW** 371.15  
**PS S SG** 1.51 g/cm<sup>3</sup> **BP** 135 °C (0.07mm Hg)  
**MP** 32 °C **FP** >35 °C **SOL** M,CN,T,H,D

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



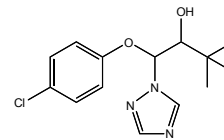
*Bayleton*

**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 SG** 1.22 g/cm<sup>3</sup> **MP** 82 °C **FP** 72 °C  
**SOL** M,A,D,H,T,CN,TP,EA,IPA

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

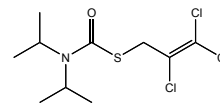


**CAS** 55219-65-3 **MF** C<sub>14</sub>H<sub>18</sub>ClN<sub>3</sub>O<sub>2</sub> **MW** 295.76  
**PS S SG** 1.24 g/cm<sup>3</sup> **MP** 110 °C  
**BP** Decomp. 270 °C **SOL** M,A,T,CN,D,IPA,H

Matrix	Cat. No.	Unit
NEAT	P-361N	10 mg
100 µg/mL in MeOH	P-361S	1 mL

## Triallate

S-2,3,3-Trichloroallyl diisopropyl(thiocarbamate)



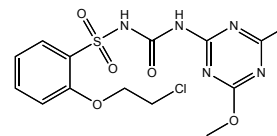
*Far-Go*

**CAS** 2303-17-5 **MF** C<sub>10</sub>H<sub>16</sub>Cl<sub>3</sub>NOS **MW** 304.66  
**PS S SG** 1.27g/cm<sup>3</sup> **MP** 29 °C **BP** 117 °C (40mPa)  
**FP** 90 °C **SOL** M,A,D,H,T,CN,TP,EA

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)carbamoyl]benzenesulfonamide



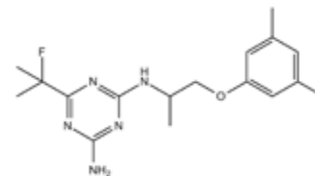
*Amber*

**CAS** 82097-50-5 **MF** C<sub>14</sub>H<sub>16</sub>ClN<sub>3</sub>O<sub>3</sub>S **MW** 401.83  
**PS S SG** 1.5 g/cm<sup>3</sup> **MP** 178.1 °C (Decomp.)  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-592N	10 mg
100 µg/mL in AcCN	P-592S-CN	1 mL

## Triaziflam

N-[1-(3,5-Dimethylphenoxy)-2-propanyl]-6-(2-fluoro-2-propanyl)-1,3,5-triazine-2,4-diamine



**CAS** 131475-57-5 **MF** C<sub>17</sub>H<sub>24</sub>FN<sub>3</sub>O **MW** 333.4  
**PS S MP** 100-105 °C **SOL** M,A

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-1346S	1 mL

# Pesticide Standards

## 1,2,4-Triazole



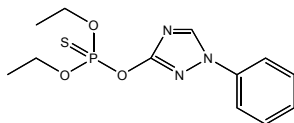
Pyrrrodiazole

**CAS** 288-88-0 **MF** C<sub>2</sub>H<sub>3</sub>N<sub>3</sub> **MW** 69.07 **PS** S  
**SG** 1.39 g/cm<sup>3</sup> **BP** 260 °C (Decomp.)  
**MP** 119-121 °C **FP** 170 °C **SOL** M

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

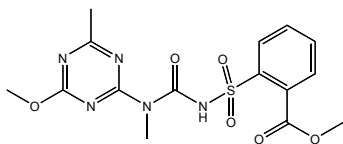


**CAS** 24017-47-8 **MF** C<sub>12</sub>H<sub>16</sub>N<sub>3</sub>O<sub>3</sub>PS **MW** 313.31  
**PS** L **SG** 1.25 g/cm<sup>3</sup> **BP** Decomp. 140 °C  
**FP** 193 °C **SOL** A,D,M,IPA,EA,H,T,CN,TP

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



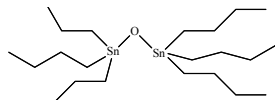
**CAS** 101200-48-0 **MF** C<sub>15</sub>H<sub>17</sub>N<sub>5</sub>O<sub>6</sub>S **MW** 395.39  
**PS** S **SG** 1.54 g/cm<sup>3</sup> **BP** Decomp. 175 °C  
**MP** 141 °C **SOL** W,A,CN,EA,M,D

Matrix	Cat. No.	Unit
NEAT	P-666N	10 mg
100 µg/mL in AcCN	P-666S-CN	1 mL

*Tribufos, see DEF 6*

## bis(Tributyltin)oxide

Tributyltin oxide



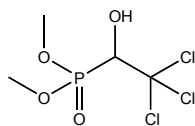
Hexabutyldistannoxane

**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> **BP** 180 °C (2mm Hg) **FP** 190 °C  
**SOL** M,A,D,H,CN,TP,EA,W

Matrix	Cat. No.	Unit
NEAT	P-455N	10 mg
100 µg/mL in MeOH	P-455S	1 mL
1000 µg/mL in MeOH	P-455S-10X	1 mL

## Trichlorfon

Dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate

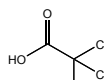


Chlorophos, Tugon

**CAS** 52-68-6 **MF** C<sub>4</sub>H<sub>7</sub>Cl<sub>3</sub>O<sub>2</sub>P **MW** 257.44 **PS** S  
**SG** 1.73 g/cm<sup>3</sup> **MP** 73 °C **BP** Decomp. 100 °C  
**SOL** M,A,D,H,T,CN,TP,EA,W,IPA

Matrix	Cat. No.	Unit
NEAT	P-044N	10 mg
100 µg/mL in MeOH	P-044S	1 mL

## Trichloroacetic acid

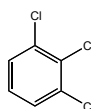


TCA

**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** 55-58 °C **BP** 196-197 °C  
**SOL** M,CN

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

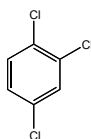
## 1,2,3-Trichlorobenzene



**CAS** 87-61-6 **MF** C<sub>6</sub>H<sub>3</sub>Cl<sub>3</sub> **MW** 181.45 **PS** S  
**SG** 1.69 g/cm<sup>3</sup> **MP** 51-54 °C **BP** 218-219 °C  
**FP** 126 °C **SOL** M,A,D,H,T,TP

Matrix	Cat. No.	Unit
NEAT	P-1002N	10 mg
100 µg/mL in Isooctane	P-1002S-TP	1 mL

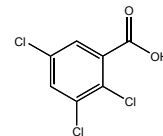
## 1,2,4-Trichlorobenzene



**CAS** 120-82-1 **MF** C<sub>6</sub>H<sub>3</sub>Cl<sub>3</sub> **MW** 181.45 **PS** L  
**SG** 1.45 g/cm<sup>3</sup> **BP** 213 °C **FP** 110 °C  
**SOL** M,A,D,H,T,TP

Matrix	Cat. No.	Unit
NEAT	P-1004N	10 mg
100 µg/mL in MeOH	P-1004S	1 mL

## 2,3,5-Trichlorobenzoic acid

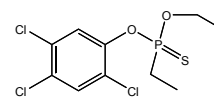


**CAS** 50-73-7 **MF** C<sub>7</sub>H<sub>3</sub>Cl<sub>3</sub>O<sub>2</sub> **MW** 225.46 **PS** S  
**SG** 1.64 g/cm<sup>3</sup> **MP** 166-167 °C **SOL** M,CN

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

## Trichloronate

O-Ethyl O-2,4,5-trichlorophenyl ethylphosphonothioate

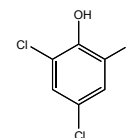


Agritox

**CAS** 327-98-0 **MF** C<sub>10</sub>H<sub>5</sub>Cl<sub>3</sub>O<sub>2</sub>PS **MW** 333.6 **PS** L  
**SG** 1.36 g/cm<sup>3</sup> **BP** 108 °C (0.01mm Hg)  
**SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-127N	10 mg
100 µg/mL in MeOH	P-127S	1 mL

## 2,4,6-Trichlorophenol

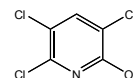


**CAS** 88-06-2 **MF** C<sub>6</sub>H<sub>3</sub>Cl<sub>3</sub>O **MW** 197.45 **PS** S  
**SG** 1.49 g/cm<sup>3</sup> **MP** 70 °C **BP** 246 °C **FP** 99 °C  
**SOL** M,A,D,T,CN,EA

Matrix	Cat. No.	Unit
NEAT	P-1006N	10 mg
100 µg/mL in MeOH	P-1006S	1 mL

## 3,5,6-Trichloro-2-pyridinol

2,3,5-Trichloro-6-hydroxypyridine



**CAS** 6515-38-4 **MF** C<sub>5</sub>H<sub>2</sub>Cl<sub>3</sub>NO **MW** 198.43 **PS** S  
**SG** 1.67 g/cm<sup>3</sup> **MP** 175-177 °C **SOL** M

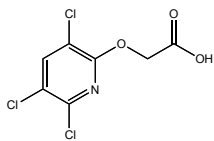
Matrix	Cat. No.	Unit
NEAT	P-626N	10 mg
100 µg/mL in MeOH	P-626S	1 mL

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## Triclopyr

3,5,6-Trichloro-2-pyridyloxyacetic acid



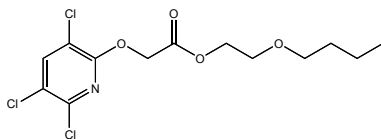
Garlon

**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** 151 °C  
**BP** Decomp. 208 °C **SOL** W,A,CN,H,T,D,M,EA

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-2-butoxy ethyl ester

2-Butoxyethyl 3,5,6-Trichloro-2-pyridyloxyacetate

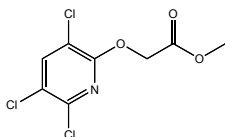


**CAS** 64700-56-7 **MF** C<sub>13</sub>H<sub>16</sub>Cl<sub>3</sub>NO<sub>4</sub> **MW** 356.63  
**PS** L **SG** 1.33 g/cm<sup>3</sup> **BP** 370 °C **SOL** CN

Matrix	Cat. No.	Unit
NEAT	P-703N	10 mg
100 µg/mL in AcCN	P-703S-CN	1 mL

## Triclopyr methyl ester

Methyl 3,5,6-Trichloro-2-pyridyloxyacetate



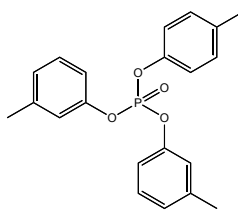
3,5,6-Trichloro-2-pyridyloxyacetic acid methyl ester

**CAS** 60825-26-5 **MF** C<sub>8</sub>H<sub>6</sub>Cl<sub>3</sub>NO<sub>3</sub> **MW** 270.5 **PS** S  
**SG** 1.51 g/cm<sup>3</sup> **MP** 105-106 °C **SOL** M,A,D,H

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	P-291S	1 mL

## Tricresyl phosphate

Tritolyl phosphate



Tricresylphosphate

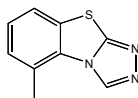
**CAS** 1330-78-5 **MF** C<sub>21</sub>H<sub>20</sub>O<sub>4</sub>P **MW** 368.36  
**PS** L **SG** 1.17 g/cm<sup>3</sup> **BP** 265 °C (10mm Hg)  
**FP** >250 °C **SOL** M,H,T,CN

Matrix	Cat. No.	Unit
NEAT	P-209N	10 mg
100 µg/mL in MeOH	P-209S	1 mL

*Tricresylphosphate, see Tricresyl phosphate*

## Tricyclazole

5-Methyl-1,3,4-triazolo[3,4-b][1,3]benzothiazole



Beam

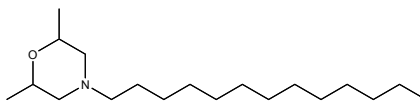
**CAS** 41814-78-2 **MF** C<sub>8</sub>H<sub>7</sub>N<sub>3</sub>S **MW** 189.24 **PS** S  
**SG** 1.40 g/cm<sup>3</sup> **MP** 187-188 °C **BP** 275 °C  
**SOL** M,A,D,H,W,EA

Matrix	Cat. No.	Unit
NEAT	P-090N	10 mg
100 µg/mL in MeOH	P-090S	1 mL

*Tricyclohexyltin hydroxide, see Cyhexatin*

## Tridemorph

2,6-Dimethyl-4-tridecylmorpholine

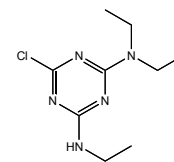


**CAS** 24602-86-6 **MF** C<sub>19</sub>H<sub>39</sub>NO **MW** 297.52 **PS** L  
**SG** 0.86 g/cm<sup>3</sup> **BP** 134 °C (0.5mm Hg) **SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-307N	10 mg
100 µg/mL in MeOH	P-307S	1 mL

## Trietazine

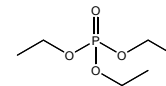
6-Chloro-N,N,N'-triethyl-1,3,5-triazine-2,4-diamine



**CAS** 1912-26-1 **MF** C<sub>9</sub>H<sub>16</sub>ClN<sub>3</sub> **MW** 229.71 **PS** S  
**SG** 1.22 g/cm<sup>3</sup> **MP** 102-103 °C **SOL** M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-492N	10 mg
100 µg/mL in MeOH	P-492S	1 mL

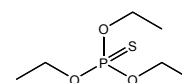
## Triethylphosphate



**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> **BP** 215 °C **FP** 116 °C  
**SOL** M,D,H,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-335N	10 mg
100 µg/mL in MeOH	P-335S	1 mL

## O,O,O-Triethylphosphorothioate

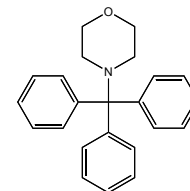


**CAS** 126-68-1 **MF** C<sub>6</sub>H<sub>15</sub>O<sub>3</sub>PS **MW** 198.22 **PS** L  
**SG** 1.08 g/cm<sup>3</sup> **BP** 220 °C **FP** 75 °C  
**SOL** M,A,D,H,CN

Matrix	Cat. No.	Unit
NEAT	P-172N	10 mg
100 µg/mL in MeOH	P-172S	1 mL
1000 µg/mL in Hexane	P-172S-H-10X	1 mL

## Trifenmorph

4-(Triphenylmethyl)morpholine



4-Tritylmorpholine

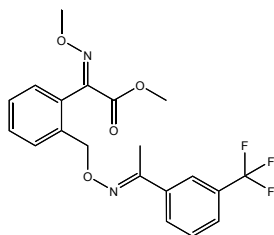
**CAS** 1420-06-0 **MF** C<sub>23</sub>H<sub>23</sub>NO **MW** 329.43 **PS** S  
**MP** 174-176 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-300N	10 mg
100 µg/mL in MeOH	P-300S	1 mL

# Pesticide Standards

## Trifloxystrobin

Methyl (E)-methoxyimino-((E)--a-[1-(a,a,a-trifluoro-m-tolyl)ethylideneaminoxy]-o-tolyl)acetate

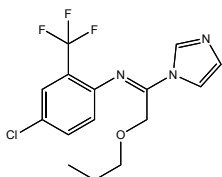


**CAS** 141517-21-7 **MF** C<sub>20</sub>H<sub>19</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub> **MW** 408.37  
**PS S SG** 1.36 g/cm<sup>3</sup> **MP** 73 °C **FP** >70 °C  
**BP** Decomp. 285 °C **SOL** M,A,D,T,CN,H,EA

Matrix	Cat. No.	Unit
NEAT	P-867N	10 mg
100 µg/mL in AcCN	P-867S-CN	1 mL

## Triflumizole

1-(1-((4-Chloro-2-(trifluoromethyl)phenyl)imino)-2-propoxyethyl)-1H-imidazole

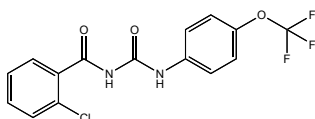


**CAS** 68694-11-1 **MF** C<sub>15</sub>H<sub>15</sub>ClF<sub>3</sub>N<sub>3</sub>O **MW** 345.75  
**PS S SG** 1.38 g/cm<sup>3</sup> **MP** 64 °C **SOL** W,H,A,M,CN

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-479S-CN	1 mL

## Triflumuron

2-Chloro-N-[[[4-(trifluoromethoxy)phenyl]amino]carbonyl]benzamide

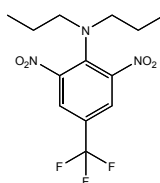


**CAS** 64628-44-0 **MF** C<sub>15</sub>H<sub>10</sub>ClF<sub>3</sub>N<sub>2</sub>O<sub>3</sub> **MW** 358.7  
**PS S SG** 1.55 g/cm<sup>3</sup> **MP** 195 °C  
**BP** Decomp. 360 °C **SOL** D,IPA,T,M,A,EA,CN

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



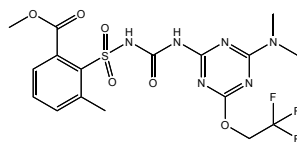
Triflan

**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 SG** 1.36 g/cm<sup>3</sup> **MP** 49 °C **BP** 139-140 °C  
(4.2mm Hg) **FP** 151 °C **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-197N	10 mg
100 µg/mL in MeOH	P-197S	1 mL
1000 µg/mL in MeOH	P-197S-10X	1 mL

## Triflusulfuron-methyl

Methyl 2-[4-(dimethylamino)-6-(2,2,2-trifluoroethoxy)-1,3,5-triazin-2-ylaminocarbonylamino-sulfonyl]-3-methylbenzoate

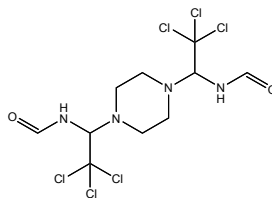


**CAS** 126535-15-7 **MF** C<sub>17</sub>H<sub>19</sub>F<sub>3</sub>N<sub>6</sub>O<sub>6</sub>S **MW** 492.43  
**PS S SG** 1.45 g/cm<sup>3</sup> **MP** 160-163 °C **FP** >150 °C  
**SOL** W,D,A,M,T,CN,EA,H

Matrix	Cat. No.	Unit
NEAT	P-840N	10 mg
100 µg/mL in AcCN	P-840S-CN	1 mL

## Triforine

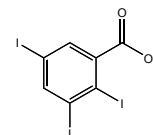
N,N'-[Piperazine-1,4-diylbis(trichloromethyl)methylene]diforamide



**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 SG** 1.55 g/cm<sup>3</sup> **BP** 155 °C (decomp.)  
**MP** 155 °C **SOL** DMSO,A,D,M,CN

Matrix	Cat. No.	Unit
NEAT	P-308N	10 mg
100 µg/mL in MeOH	P-308S	1 mL

## 2,3,5-Triiodobenzoic acid

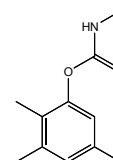


**CAS** 88-82-4 **MF** C<sub>7</sub>H<sub>3</sub>I<sub>3</sub>O<sub>2</sub> **MW** 499.81 **PS S**  
**MP** 224-226 °C **SOL** M,CN

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

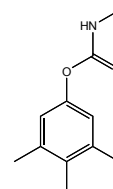


**CAS** 2655-15-4 **MF** C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub> **MW** 193.24 **PS S**  
**MP** 122-123 °C **BP** 288 °C **FP** 100 °C **SOL** M,A

Matrix	Cat. No.	Unit
NEAT	P-515N	10 mg
100 µg/mL in MeOH	P-515S	1 mL

## 3,4,5-Trimethacarb

3,4,5-Trimethylphenyl methylcarbamate



3,4,5-Trimethylphenyl methylcarbamic acid ester

**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** 118-119 °C **SOL** M,A,CN

Matrix	Cat. No.	Unit
NEAT	P-516N	10 mg
100 µg/mL in MeOH	P-516S	1 mL

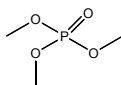
3,4,5-Trimethylphenyl methylcarbamic acid ester, see 3,4,5-Trimethacarb

▲ Pesticides containing a carboxyl group may autoesterify in Methanol. These standards are intended for use after making the methyl derivative. For analysis of the parent compound we suggest a non-hydroxylic solvent such as Acetonitrile.

# Pesticide Standards

## Trimethyl phosphate

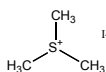
Phosphoric acid, trimethyl ester



**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> **BP** 197 °C **FP** 150 °C  
**SOL** M,D,H,EA

Matrix	Cat. No.	Unit
NEAT	P-210N	10 mg
100 µg/mL in MeOH	P-210S	1 mL

## Trimethylsulfonium iodide

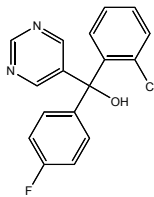


**CAS** 2181-42-2 **MF** C<sub>3</sub>H<sub>9</sub>IS **MW** 204.07 **PS** S  
**MP** 215-220 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1016N	10 mg
100 µg/mL in MeOH	P-1016S	1 mL

## Trimidal

a-(2-Chlorophenyl)-a-(4-fluorophenyl)-5-pyrimidine-methanol

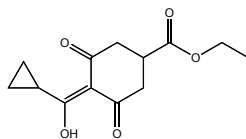


Nuarimol

**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 **SOL** A,M,CN

Matrix	Cat. No.	Unit
NEAT	P-422N	10 mg
100 µg/mL in MeOH	P-422S	1 mL

## Trinexapac-ethyl

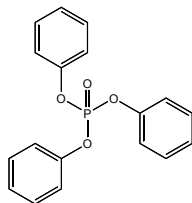


**CAS** 95266-40-3 **MF** C<sub>18</sub>H<sub>16</sub>O<sub>5</sub> **MW** 252.26 **PS** S  
**SG** 1.22 g/cm<sup>3</sup> **MP** 36 °C **BP** >270 °C **FP** 133 °C  
**SOL** W,A,T,H,M,CN

Matrix	Cat. No.	Unit
NEAT	P-1034N	10 mg
100 µg/mL in MeOH	P-1034S	1 mL

## Triphenylphosphate

Phosphoric acid, triphenyl ester

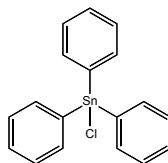


**CAS** 115-86-6 **MF** C<sub>18</sub>H<sub>15</sub>O<sub>4</sub>P **MW** 326.28 **PS** S  
**SG** 1.27 g/cm<sup>3</sup> **MP** 50 °C **BP** 244 °C (10mm Hg)  
**FP** 220 °C **SOL** M,A,D,H,T,CN,TP

Matrix	Cat. No.	Unit
NEAT	P-192N	10 mg
100 µg/mL in MeOH	P-192S	1 mL

## Triphenyltin chloride

Chlorotriphenylstannane



Fentin chloride

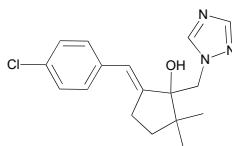
**CAS** 639-58-7 **MF** C<sub>18</sub>H<sub>15</sub>Cl<sub>2</sub>Sn **MW** 385.47 **PS** S  
**MP** 103-106 °C **BP** 240 °C (135mm Hg)  
**FP** >110 °C **SOL** M,D

Matrix	Cat. No.	Unit
NEAT	P-526N	10 mg
100 µg/mL in MeOH	P-526S	1 mL

*Trithion, see Carbophenothion*

## Triticonazole

(RS)-(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** 317.82  
**PS** S **SG** 1.326 g/cm<sup>3</sup> **MP** 139-141 °C  
**SOL** A,CN,EA,M,TP

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-868S-CN	1 mL
1000 µg/mL in AcCN	P-868S-CN-10X	1 mL

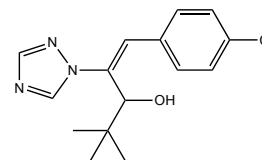
*4-Tritylmorpholine, see Trifenmorph*

*Trizilin, see Nitrofen*

*Tugon, see Trichlorfon*

## Uniconazole

1H-1,2,4-Triazole-1-ethanol, b-[(4-chlorophenyl)methylene]-a-(1,1-dimethylethyl)-



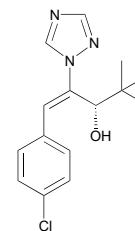
**CAS** 83657-22-1 **MF** C<sub>15</sub>H<sub>18</sub>ClN<sub>3</sub>O **MW** 291.78  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 147-164 °C **SOL** M,CN,H

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1092S-CN	1 mL

*Urethane, see Ethyl carbamate*

## Uniconazole-P

(1E,3S)-1-(4-Chlorophenyl)-4,4-dimethyl-2-(1H-1,2,4-triazol-1-yl)-1-penten-3-ol

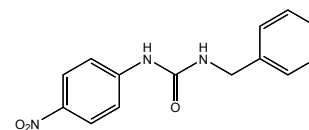


**CAS** 83657-17-4 **MF** C<sub>15</sub>H<sub>18</sub>ClN<sub>3</sub>O **MW** 291.78  
**PS** S **SG** 1.28 g/cm<sup>3</sup> **MP** 152-156 °C **BP** 475 °C  
**FP** 195 °C **SOL** A,CN,M

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-1113S-CN	1 mL
1000 µg/mL in AcCN	P-1113S-CN-10X	1 mL

## Vacor

1-(3-Pyridylmethyl)-3-(4-nitrophenyl)urea



Pyrinuron

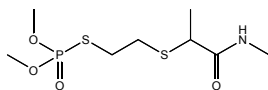
**CAS** 53558-25-1 **MF** C<sub>13</sub>H<sub>12</sub>N<sub>4</sub>O<sub>3</sub> **MW** 272.26 **PS** S  
**SG** 1.38 g/cm<sup>3</sup> **MP** 223-225 °C (decomp.)  
**SOL** M,CN

Matrix	Cat. No.	Unit
NEAT	P-240N	10 mg
100 µg/mL in MeOH	P-240S	1 mL

# Pesticide Standards

## Vamidothion

O,O-Dimethyl S-2-(1-methylcarbamoylethylthio) ethyl phosphorothioate



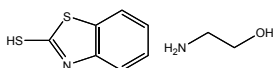
*Kilval*

**CAS** 2275-23-2 **MF** C<sub>8</sub>H<sub>16</sub>NO<sub>2</sub>PS<sub>2</sub> **MW** 287.34  
**PS** S **MP** 43 °C **SOL** T,EA,CN,D,W,M,A

Matrix	Cat. No.	Unit
NEAT	P-350N	10 mg
100 µg/mL in MeOH	P-350S	1 mL

## Vanicide-20S

Phorate sulfonate



**CAS** N/A **MF** C<sub>7</sub>H<sub>5</sub>NS<sub>2</sub>•C<sub>2</sub>H<sub>7</sub>NO **MW** 228.34 **PS** S  
**SOL** M,A,T

Matrix	Cat. No.	Unit
NEAT	P-073N	10 mg
100 µg/mL in MeOH	P-073S	1 mL

*Vapona*, see *Dichlorvos*

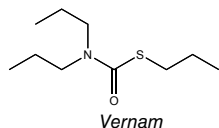
*Vegadex*, see *Sulfallate*

*Vendex*, see *Fenbutatin oxide*

*Vernam*, see *Vernolate*

## Vernolate

S-Propyl dipropylthiocarbamate



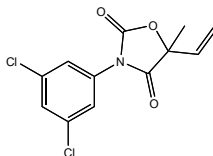
*Vernam*

**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> **BP** 150 °C (30mm Hg) **FP** 121 °C  
**SOL** M,A,H,CN,EA

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 **SG** 1.51 g/cm<sup>3</sup> **MP** 107-110 °C  
**BP** 131 °C (0.005mm Hg) **SOL** M,A,D,H,T,CN,TP,EA

Matrix	Cat. No.	Unit
NEAT	P-122N	10 mg
100 µg/mL in MeOH	P-122S	1 mL
1000 µg/mL in MeOH	P-122S-10X	1 mL

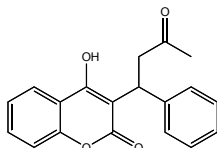
*Voltage*, see *Pyraclufos*

*Vulcan*, see *Flumioxazin*

*Vydate*, see *Oxamyl*

## Warfarin

(RS)-4-Hydroxy-3-(3-oxo-1-phenylbutyl)coumarin

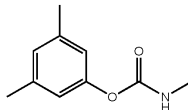


**CAS** 81-81-2 **MF** C<sub>19</sub>H<sub>16</sub>O<sub>4</sub> **MW** 308.33 **PS** S  
**SG** 1.31 g/cm<sup>3</sup> **MP** 161-162 °C **BP** Decomp.  
**SOL** A,M,EA

Matrix	Cat. No.	Unit
NEAT	P-076N	10 mg
100 µg/mL in MeOH	P-076S	1 mL

## XMC

3,5-Xylyl methylcarbamate



**CAS** 2655-14-3 **MF** C<sub>10</sub>H<sub>13</sub>NO<sub>2</sub> **MW** 179.22 **PS** S  
**SG** 0.54 g/cm<sup>3</sup> **MP** 99 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-1085N	10 mg
100 µg/mL in MeOH	P-1085S	1 mL

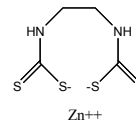
*Zectran*, see *Mexacarbate*

*Zinc bis(dimethyldithiocarbamate)*, see *Ziram*

*Zinc propylenebis(dithiocarbamate)*, see *Propineb*

## Zineb

Zinc ethylenebis(dithiocarbamate)



Zn<sup>++</sup>

*1,2-Ethanediyldithiocarbamate acid, zinc complex, Lonacol*

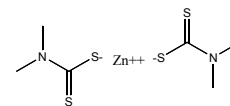
**CAS** 12122-67-7 **MF** C<sub>4</sub>H<sub>4</sub>N<sub>2</sub>S<sub>4</sub>•Zn **MW** 275.76  
**PS** S **SG** 1.74 g/cm<sup>3</sup> **MP** 157 °C (decomp.)  
**FP** 90 °C **SOL** M

Matrix	Cat. No.	Unit
NEAT	P-098N	10 mg

*Zinophos*, see *Thionazin*

## Ziram

Zinc dimethyldithiocarbamate



*Zinc bis(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  
**SG** 1.66 g/cm<sup>3</sup> **MP** 251-253 °C **SOL** A,M,T,H,EA

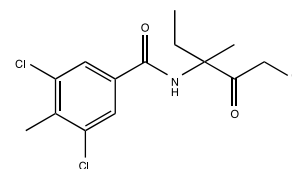
Matrix	Cat. No.	Unit
NEAT	P-324N	10 mg
100 µg/mL in MeOH	P-324S	1 mL

*Zolone*, see *Phosalone*

*Zorvec*, see *Oxathiapiprolin*

## Zoxamide

3,5-Dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-p-toluamide



**CAS** 156052-68-5 **MF** C<sub>14</sub>H<sub>16</sub>Cl<sub>3</sub>NO<sub>2</sub> **MW** 336.64  
**PS** S **SG** 1.38 g/cm<sup>3</sup> **MP** 159-162 °C  
**SOL** A,CN,EA

Matrix	Cat. No.	Unit
100 µg/mL in AcCN	P-970S-CN	1 mL

*Zymoxanil*, see *Cymoxanil*





<b>Additional Pesticides</b>	
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# Cannabis Analysis

## California Cannabis Residual Pesticides

### California Category I Residual Pesticide Mix

CP-CA-01 **1 mL**  
100 µg/mL each in Acetonitrile 20 comps.

Alar	Dichlorvos	Methiocarb
Aldicarb	Dimethoate	Mevinphos
Baygon	Ethoprop	Paclbutrazol
Carbofuran	Etofenprox	Parathion-methyl
Chlorfenapyr	Fenoxycarb	Spiroxamine
Coumaphos	Fipronil	Thiacloprid
Dursban	Imazalil	

### California Category II Residual Pesticide (Single) (Chlordane tech)

CP-CA-02 **1 mL**  
100 µg/mL in Methanol  
Chlordane (tech)

### California Category III Residual Pesticide Mix

CP-CA-03 **1 mL**  
100 µg/mL each in Acetonitrile 29 comps.

Acetamiprid	Fenpyroximate	Oxamyl
Azoxystrobin	Fonicamid	Pyridaben
Bifenazate	Fludioxonil	Spinetoram
Boscalid	Etoazole	Spinosad
Captan	Hexythiazox	Spirotetramat
Carbaryl	Imidacloprid	Tebuconazol
Chlorantraniliprole	Kresoxim-methyl	Thiamethoxam
Clofentezine	Metalaxyl	Tilt
Dimethomorph	Methomyl	Trifloxystrobin
Fenhexamid	Myclobutanil	

### California Category IV Residual Pesticide Mix

CP-CA-04 **1 mL**  
100 µg/mL each in Acetonitrile 16 comps.

Abamectin	Diazinon	Permethrin
Acequinocyl	Imidan	Piperonyl butoxide
Acephate	Malathion	Prallethrin
Bifenthrin	Naled	Pyrethrins
Cyfluthrin	Pentachloro-nitrobenzene	Spiromesifen
Cypermethrin		

## Colorado Cannabis Residual Pesticides

### Colorado Cannabis Residual Pesticide Mix

CP-CO-01 **1 mL**  
100 µg/mL each in Acetonitrile 13 comps.

Abamectin	Imidacloprid	Spinosad
Azoxystrobin	Malathion	Spiromesifen
Bifenazate	Myclobutanil	Spirotetramat
Etoazole	Permethrin	Tebuconazol
Imazalil		

## Massachusetts Cannabis Residual Pesticides

### Massachusetts Cannabis Residual Pesticide Mix

CP-MA-01 **1 mL**  
100 µg/mL each in Acetonitrile 9 comps.

Bifenazate	Etoazole	Myclobutanil
Bifenthrin	Imazalil	Spiromesifen
Cyfluthrin	Imidacloprid	Trifloxystrobin

## Nevada Cannabis Residual Pesticides

### Nevada Cannabis Residual Pesticide Mix

CP-NV-PEST **1 mL**  
100 µg/mL each in Acetonitrile 25 comps.

Abamectin	Etoazole	Pyrethrins
Acequinocyl	Fenhexamid	Quintozene
Alar	Fonicamid	Spinetoram
Bifenazate	Fludioxonil	Spinosad
Bifenthrin	Imazalil	Spirotetramat
Captan	Imidacloprid	Thiamethoxam
Cyfluthrin	Myclobutanil	Thiophanate-methyl
Cypermethrin	Piperonyl butoxide	Trifloxystrobin
Dimethomorph		

## Oregon Cannabis Residual Pesticides

The Oregon Health Association (OHA) has classified and submitted three prioritized groupings of residue cannabis pesticides:

- Fungicides
- Pyrethroids
- Organophosphates

In June of 2015, a white paper titled "Pesticide Use on Cannabis" published by the Cannabis Safety Institute originally contained 188 active compounds.

From the targeted 188 active compounds, a working group with the OHA had numerous analytical laboratories study the toxicological effects and the historical natural application of each of the compounds for crop and human ingestion. The results reduced the original number of targeted compounds to 59 pesticides. These pesticides remain on the State of Oregon list.

### Oregon Cannabis Residual Pesticide Set

CP-ORE-SET **3 x 1 mL**  
CP-ORE-01, CP-ORE-02, CP-ORE-03

### Oregon Cannabis Residual Pesticide Mix 1

CP-ORE-01 **1 mL**  
100 µg/mL each in Acetonitrile 20 comps.

Abamectin	Daminozide	Methomyl
Acequinocyl	(E)-Fenpyroximate	Oxamyl
Aldicarb	Fenoxycarb	Propoxur
Carbaryl	Fonicamid	Spinosad
Carbofuran	Hexythiazox	Spirotetramat
Chlorantraniliprole	Imidacloprid	Thiamethoxam
Clofentezine	Methiocarb	

### Oregon Cannabis Residual Pesticide Mix 2

CP-ORE-02 **1 mL**  
100 µg/mL each in Acetonitrile 16 comps.

Acephate	Dursban	Naled
Bifenthrin	Ethoprop	Permethrin
Cyfluthrin	Etofenprox	Phosmet
Cypermethrin	Malathion	Prallethrin
Diazinon	Methyl parathion	Pyrethrins
Dimethoate		

### Oregon Cannabis Residual Pesticide Mix 3

CP-ORE-03 **1 mL**  
100 µg/mL each in Acetonitrile 23 comps.

Acetamiprid	Fludioxonil	Propiconazole
Azoxystrobin	Imazalil	Pyridaben
Bifenazate	Kresoxim-methyl	Spiromesifen
Boscalid	Metalaxyl	Spiroxamine
Chlorfenapyr	MGK-264	Tebuconazol
Dichlorvos	Myclobutanil	Thiacloprid
Etoazole	Paclbutrazol	Trifloxystrobin
Fipronil	Piperonyl butoxide	

# Cannabis Analysis

## Canada Cannabis Residual Pesticides

### Canada Cannabis Pesticide Set

CP-CAN-SET

5 x 1 mL

CP-CAN-01, CP-CAN-02, CP-CAN-03, CP-CAN-04, P-711S

### Canada Cannabis Pesticide Mix 1

CP-CAN-01

1 mL

100 µg/mL each in Acetonitrile

36 comps.

Allethrin	Endosulfan II	Phenothrin
Buprofezin	Endosulfan sulfate	Pirimicarb
Clothianidin	Etridiazole	Pyraclostrobin
Coumaphos	Fensulfothion	Quintozene
Cyantraniliprole	Fenthion	Resmethrin
Cyprodinil	Fenvalerate	Spinetoram
Deltamethrin	Fluopyram	Spirodiclofen
Dichlorvos	Iprodione	Tebufenozide
Dinotefuran	Kinoprene	Teflubenzuron
Dimethomorph	Methoprene	Tetrachlorvinphos
Dodemorph	Mevinphos	Tetramethrin
Endosulfan I	Novaluron	Thiophanate-methyl

### Canada Cannabis Pesticide Mix 2

CP-CAN-02

1 mL

100 µg/mL each in Acetonitrile

20 comps.

Abamectin	Daminozide	Methomyl
Acequinocyl	Fenoxycarb	Oxamyl
Carbaryl	(E)-Fenpyroximate	Propoxur
Carbofuran	Fonicamid	Spinosad
Chlorantraniliprole	Hexythiazox	Spirotetramat
Clofentezine	Imidacloprid	Thiamethoxam
Clofentezine	Methiocarb	

### Canada Cannabis Pesticide Mix 3

CP-CAN-03

1 mL

100 µg/mL each in Acetonitrile

23 comps.

Acetamiprid	Fludioxonil	Propiconazole
Azoxystrobin	Imazalil	Pyridaben
Bifenazate	Kresoxim-methyl	Spiromesifen
Boscalid	Metalaxyl	Spiroxamine
Chlorfenapyr	MGK-264	Tebuconazol
Dichlorvos	Myclobutanil	Thiacloprid
Etoazole	Paclbutrazol	Trifloxystrobin
Fipronil	Piperonyl butoxide	

### Canada Cannabis Pesticide Mix 4

CP-CAN-04

1 mL

100 µg/mL each in Acetonitrile

16 comps.

Acephate	Dursban	Naled
Bifenthrin	Ethoprop	Permethrin
Cyfluthrin	Etofenprox	Phosmet
Cypermethrin	Malathion	Prallethrin
Diazinon	Methyl parathion	Pyrethrins
Dimethoate		

### Azadirachtin

P-711S

1 mL

100 µg/mL in Methanol

# Honeybee Colony Collapse Disorder (CCD)

## Neonicotinoids and Fipronils (CCD)

On-going research into honeybee colony collapse disorder (CCD) has revealed that this group of pesticides may be a contributing factor which, may be solely responsible or working synergistically contributing to honeybee decline. Included in this group are the Neonicotinoid pesticides. Fipronil and Fipronil metabolites also have been suspected as possible causative agents.

### Neonicotinoids

Compound	CAS	NEAT Cat. No.	Unit	SOLUTION Cat. No.	100 µg/mL Solvent	Unit
Acetamiprid	135410-20-7	P-820N	10 mg	P-820S-CN	AcCN	1 mL
6-Chloropyridine-3-carboxylic acid	5326-23-8	P-1267N	10 mg	P-1267S	MeOH	1 mL
Clothianidin	210880-92-5	P-947N	10 mg	P-947S	MeOH	1 mL
N-Desmethylthiamethoxam	171103-04-1	-----	-----	P-1266S	MeOH	1 mL
Dinotefuran	165252-70-0	-----	-----	P-986S-CN	AcCN	1 mL
Furathiocarb	65907-30-4	P-569N	10 mg	P-569S	MeOH	1 mL
6-Hydroxypyridine-3-carboxylic acid	5006-66-6	P-1226N	10 mg	P-1226S	MeOH	1 mL
Imidacloprid	138261-41-3	P-596N	10 mg	P-596S	MeOH	1 mL
2-Imidazolidone	120-93-4	P-1224N	10 mg	P-1224S	MeOH	1 mL
Nitenpyram	150824-47-8	P-858N	10 mg	P-858S-CN	AcCN	1 mL
Sulfoxaflor	946578-00-3	-----	-----	P-1133S	MeOH	1 mL
Thiacloprid	111988-49-9	P-838N	10 mg	P-838S-CN	AcCN	1 mL
Thiacloprid-amide	676228-91-4	P-1223N	10 mg	P-1223S	MeOH	1 mL
Thiamethoxam	153719-23-4	P-866N	10 mg	P-866S-CN	AcCN	1 mL

### Fipronils

Compound	CAS	NEAT Cat. No.	Unit	SOLUTION Cat. No.	100 µg/mL Solvent	Unit
Fipronil	120068-37-3	P-738N	10 mg	P-738S	MeOH	1 mL
				P-738S-A	Acetone	1 mL
Fipronil desulfinyl	205650-65-3	-----	-----	P-782S-A	Acetone	1 mL
Fipronil sulfide	120067-83-6	P-781N-5MG	5 mg	P-781S-A	Acetone	1 mL
Fipronil sulfone	120068-36-2	-----	-----	P-780S-A	Acetone	1 mL
<b>Fipronil and Metabolite Kit</b>				<b>P-FIP-MET-KIT</b>		<b>4 x 1 mL</b>
				P-738S-A, P-782S-A, P-781S-A, P-780S-A		

#### Technical Note

Fipronil is in the phenyl pyrazole class of pesticides. It is a broad-spectrum insecticide used in many different applications. Fipronil can be found in many commercial topical flea and tick treatments for cats and dogs, because it is not readily absorbed through the skin, and has a comparatively low toxicity if ingested.

Fipronil produces three notable metabolites: Fipronil sulfide, Fipronil sulfone and Fipronil desulfinyl. These metabolites form under various conditions and are more toxic and environmentally persistent than the parent compound.

# Triazines and Metabolites

The controversy over potential human health hazards, resulting from the use of atrazine and other triazine herbicides has renewed an interest in analyzing these compounds. Triazine herbicides are one of the most used agricultural chemicals in the United States. They are used to control broadleaf weeds primarily for corn and soybeans.

A number of studies have shown that atrazine is an endocrine disruptor, causing damage to reproductive systems in frogs, fish and other wildlife. Potential health hazards to people and a negative environmental impact led to the banning of atrazine in the European Union (EU) in 2005.

## Triazines and Metabolites

Compound	CAS	Cat. No.	Matrix	Unit
Ametryn	834-12-8	P-003N	NEAT	10 mg
		P-003S	100 µg/mL in MeOH	1 mL
Ammeline (Atrazine-desethyl-desisopropyl-2-hydroxy)	645-92-1	-----	* Custom	
Anilazine	101-05-3	P-287N	NEAT	10 mg
		P-287S-H	100 µg/mL in Hexane:Acetone(80:20)	1 mL
Atrazine	1912-24-9	P-005N	NEAT	10 mg
		P-005S	100 µg/mL in MeOH	1 mL
Atrazine desethyl	6190-65-4	P-343N	NEAT	10 mg
		P-343S	100 µg/mL in MeOH	1 mL
Atrazine-desethyl-2-hydroxy	19988-24-0	P-544S	100 µg/mL in MeOH	1 mL
Atrazine-desethyl-desisopropyl	3397-62-4	P-428N	NEAT	10 mg
		P-428S	100 µg/mL in MeOH	1 mL
Atrazine-desisopropyl	1007-28-9	P-345N	NEAT	10 mg
		P-345S	100 µg/mL in MeOH	1 mL
Atrazine-desisopropyl-2-hydroxy	7313-54-4	P-344N	NEAT	10 mg
		P-334S-MC	100 µg/mL in Methyl cellosolve	1 mL
2-Chloro-4-ethylamino-6-methylethylamino-s-triazine		P-539N	NEAT	10 mg
		P-539S-MC	100 µg/mL in Methyl cellosolve	1 mL
2-Chloro-4-ethylamino-6-propylamino-s-triazine	90952-64-0	P-537N	NEAT	10 mg
		P-537S-MC	100 µg/mL in Methyl cellosolve	1 mL
2-Chloro-4-methylamino-6-sec-butylamino-s-triazine		P-540N	NEAT	10 mg
		P-540S-MC	100 µg/mL in Methyl cellosolve	1 mL
2-Chloro-4-methylamino-6-diethylamino-s-triazine		P-541N	NEAT	10 mg
		P-541S-MC	100 µg/mL in Methyl cellosolve	1 mL
2,3-Diuron (3-(2,3-Dichlorophenyl)-1,1-dimethylurea)		P-632N	NEAT	10 mg
		P-632S	100 µg/mL in MeOH	1 mL
Cyanazine	21725-46-2	P-175N	NEAT	10 mg
		P-175S	100 µg/mL in MeOH	1 mL
Cyprazine	22936-86-3	P-420N	NEAT	10 mg
		P-420S	100 µg/mL in MeOH	1 mL
Cyromazine	66215-27-8	P-420S-H	100 µg/mL in Hexane	1 mL
		P-296N	NEAT	10 mg
Desmetryn	1014-69-3	P-296S	100 µg/mL in MeOH	1 mL
		P-566N	NEAT	10 mg
2,4-Dichloro-6-ethylamino-1,3,5-triazine	3440-19-5	P-566S	100 µg/mL in MeOH	1 mL
		P-538N	NEAT	10 mg
Dimepax	22936-75-0	P-538S-MC	100 µg/mL in Methyl cellosolve	1 mL
		P-643N	NEAT	10 mg
Dipropetryn	4147-51-7	P-643S	100 µg/mL in MeOH	1 mL
		P-580N	NEAT	10 mg
2,4-bis(Ethylamino)-6-diethylamino-s-triazine		P-580S	100 µg/mL in MeOH	1 mL
		P-536N	NEAT	10 mg
Gesatamine (Atrazine-methoxy)	1610-17-9	P-536S-MC	100 µg/mL in Methyl cellosolve	1 mL
		P-189N	NEAT	10 mg
2-Hydroxyatrazine (Atrazine-2-hydroxy)	2163-68-0	P-189S	100 µg/mL in MeOH	1 mL
		P-326S	100 µg/mL in MeOH:Acetone(98:2)	1 mL
Imazethapyr	81335-77-5	P-326S-MC	100 µg/mL in Methyl cellosolve	1 mL
		P-285S	100 µg/mL in MeOH	1 mL
Indaziflam	950782-86-2	P-1168S-CN	100 µg/mL in AcCN	1 mL
Irgarol	28159-98-0	P-746N	NEAT	10 mg
		P-746S	100 µg/mL in MeOH	1 mL
2-Isopropylamino-4,6-dichloro-s-triazine	3703-10-4	P-635N	NEAT	10 mg
		P-635S	100 µg/mL in MeOH	1 mL
Methoprotryne	841-06-5	P-564N	NEAT	10 mg
		P-564S	100 µg/mL in MeOH	1 mL
2-Monuron		P-633N	NEAT	10 mg
		P-633S	100 µg/mL in MeOH	1 mL
Prometon	1610-18-0	P-077N	NEAT	10 mg
		P-077S	100 µg/mL in MeOH	1 mL
Prometryne	7287-19-6	P-078N	NEAT	10 mg
		P-078S	100 µg/mL in MeOH	1 mL
Propazine	139-40-2	P-079N	NEAT	10 mg
		P-079S	100 µg/mL in MeOH	1 mL
Sebuthylazin	7286-69-3	P-432N	NEAT	10 mg
		P-432S	100 µg/mL in MeOH	1 mL
Secbumeton	26259-45-0	P-165N	NEAT	10 mg
		P-165S	100 µg/mL in MeOH	1 mL
Simazine	122-34-9	P-085N	NEAT	10 mg
		P-085S	100 µg/mL in MeOH	1 mL
Simazine-2-hydroxy	2599-11-3	P-1191S	100 µg/mL in MeOH	1 mL

\* For custom products, please contact Technical Dept.

Triazines and Metabolites continued on next page

# Triazines, Pesticides-Herbicides: Kits & Mixtures

## Triazines and Metabolites (Cont.)

Compound	CAS	Cat. No.	Matrix	Unit
Simeton	673-04-1	P-501N	NEAT	10 mg
		P-501S	100 µg/mL in MeOH	1 mL
Simetryn	1014-70-6	P-166N	NEAT	10 mg
		P-166S	100 µg/mL in MeOH	1 mL
Terbumeton	33693-04-8	P-504N	NEAT	10 mg
		P-504S	100 µg/mL in MeOH	1 mL
Terbuthylazine	5915-41-3	P-169N	NEAT	10 mg
		P-169S	100 µg/mL in MeOH	1 mL
Terbuthylazine desethyl	30125-63-4	P-613N	NEAT	10 mg
		P-613S	100 µg/mL in MeOH	1 mL
Trietazine	1912-26-1	P-492N	NEAT	10 mg
		P-492S	100 µg/mL in MeOH	1 mL
Trietazine-desethyl	38902-68-0	-----	* Custom	

## Pesticide Kits and Mixtures

### Neat Pesticide Kit

Z-004-SET ❖

20 x 10 mg

Aldrin	p,p'-DDE	Lindane ( $\gamma$ -BHC)
$\alpha$ -BHC	o,p'-DDT	Malathion
$\beta$ -BHC	p,p'-DDT	Methoxychlor
$\delta$ -BHC	Dieldrin	Mirex
o,p'-DDD	Heptachlor	Parathion
p,p'-DDD	Heptachlor epoxide	Carbaryl
o,p'-DDE	(Isomer B)	Toxaphene

### Pesticide (Solid Waste) Kit

Z-017-SET

6 x 10 mg

2,4-D	Lindane	Silvex
Endrin	Methoxychlor	Toxaphene

### Pesticide Mixture for Evaluating GC Columns

M-100

1 x 1 mL

At stated conc. ( $\mu$ g/mL) in Isooctane

13 comps.

Aldrin	0.050	p,p'-DDT	0.260
$\alpha$ -BHC	0.025	Dieldrin	0.120
$\beta$ -BHC	0.100	Endrin	0.200
o,p'-DDD	0.200	Heptachlor	0.025
p,p'-DDD	0.190	Heptachlor epoxide (Isomer B)	0.080
p,p'-DDE	0.100	Lindane ( $\gamma$ -BHC)	0.025
o,p'-DDT	0.225		

#### Technical Note

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.

### Pesticides in Solutions (Individual and Kits)

SOLUTIONS in Isooctane

Compound	Conc.	Cat. No.
Aldrin	200 ng/ $\mu$ L	P-002S-1
	2 ng/ $\mu$ L	P-002S-2
Chlordane	200 ng/ $\mu$ L	P-017S-1
	2 ng/ $\mu$ L	P-017S-2
2,4-D methyl ester	200 ng/ $\mu$ L	P-021S-1
p,p'-DDE	200 ng/ $\mu$ L	P-027S-1
	2 ng/ $\mu$ L	P-027S-2
p,p'-DDT	200 ng/ $\mu$ L	P-029S-1
	2 ng/ $\mu$ L	P-029S-2
Dieldrin	200 ng/ $\mu$ L	P-037S-1
	2 ng/ $\mu$ L	P-037S-2
Endrin	200 ng/ $\mu$ L	P-045S-1
	2 ng/ $\mu$ L	P-045S-2
Heptachlor	200 ng/ $\mu$ L	P-053S-1
	2 ng/ $\mu$ L	P-053S-2
Lindane	200 ng/ $\mu$ L	P-059S-1
	2 ng/ $\mu$ L	P-059S-2
Methoxychlor	200 ng/ $\mu$ L	P-064S-1
	2 ng/ $\mu$ L	P-064S-2
Silvex methyl ester	200 ng/ $\mu$ L	P-115S-1
Toxaphene	200 ng/ $\mu$ L	P-093S-1

Z-023-SET

21 x 1 mL

#### Technical Note

Designed for evaluating the ability of a column to separate pesticides and their degradation products.

❖ V-Rated packaging surcharge applies for international shipments.

## Herbicide Kit and Mixtures

### Herbicide Kit

Z-031-SET

15 x 1 mL

0.1 mg/mL each in MeOH

Atrazine	Prometon
Dicamba	Propanil
Benfluralin	Propazine
Bentazon +	Simazine
Dacthal	Tebuthiuron
Dichlobenil	Trifluralin
Metolachlor	
Prometryne	+ in Acetone

### Herbicide Mix #1

M-HERB-1

1 x 1 mL

0.1 mg/mL each in EtOAc

13 comps.

Atrazine	Oxyfluorfen
Bromacil	Sencor
Cycloate	Sutan
Eptam	Terbacil
Isopropalin	Tillam
Hexazinone	Trifluralin
Molinate	

### Herbicide Mix #2

M-HERB-2

1 x 1 mL

0.1 mg/mL each in EtOAc

9 comps.

Benfluralin	Prowl
Metolachlor	Simazine
Oxadiazon	Tolban
Propachlor	Vernam
Propazine	

## Phenylurea Pesticide Mixtures

### Phenylurea Pesticide Mixture

PES-PU-001

1 x 1 mL

PES-PU-001-PAK

5 x 1 mL

200 µg/mL each in AcCN:Acetone

8 comps.

Diflurbenzuron	Fluometuron	Propanil	Tebuthiuron
Diuron	Linuron	Siduron	Thidiazuron

### Phenylurea Surrogate Mixture

PES-PU-SS

1 x 1 mL

PES-PU-SS-PAK

5 x 1 mL

500 µg/mL each in MeOH:AcCN

2 comps.

Carbazole	Monuron
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# CLP - Pesticide Mixtures

## CLP - Pesticide Mixtures

### Pesticide Set

**CLP-018/019-10X-SET** 2 x 1 mL  
CLP-018-10X, CLP-019-10X

**CLP-018-10X** 1 x 1 mL  
**CLP-018-10X-PAK** 5 x 1 mL  
At stated conc. ( $\mu\text{g/mL}$ ) in Isooctane 11 comps.

Aldrin	1.0	Endosulfan II	2.0
$\gamma$ -BHC	0.5	Endrin aldehyde	2.5
p,p'-DDT	2.0	Heptachlor	1.0
Dibutylchloredate	5.0	Heptachlor epoxide (Isomer B)	1.0
Dieldrin	1.0	Methoxychlor	10
Endosulfan I	1.0		

**CLP-019-10X** 1 x 1 mL  
**CLP-019-10X-PAK** 5 x 1 mL  
At stated conc. ( $\mu\text{g/mL}$ ) in Isooctane 12 comps.

Aldrin	1.0	p,p'-DDD	2.0
$\alpha$ -BHC	0.5	p,p'-DDE	1.0
$\beta$ -BHC	1.0	Dibutylchloredate	5.0
$\delta$ -BHC	1.0	Endosulfan sulfate	2.0
$\alpha$ -Chlordane	1.0	Endrin	1.0
$\gamma$ -Chlordane	1.0	Endrin ketone	2.0

## CLP - Pesticide Surrogates

**CLP-032-R** 1 x 1 mL  
**CLP-032-R-PAK** 5 x 1 mL  
200  $\mu\text{g/mL}$  each in Acetone 2 comps.  
Decachlorobiphenyl Tetrachloro-*m*-xylene

**CLP-034** 1 x 1 mL  
**CLP-034-PAK** 5 x 1 mL  
200  $\mu\text{g/mL}$  each in Acetone 2 comps.  
Dibutylchloredate Tetrachloro-*m*-xylene

**CLP-PES-A** 1 x 1 mL  
**CLP-PES-A-PAK** 5 x 1 mL  
200  $\mu\text{g/mL}$  in Acetone  
**CLP-PES-A-20X** 1 x 1 mL  
4000  $\mu\text{g/mL}$  in Acetone  
Dibutylchloredate

## Pesticide Calibration Mixtures - Statement of Work 2/88 to 8/94

### Working Level Pesticide Standard

At stated conc. (ng/mL) in Isooctane 11 comps.

Compound	Level 1	2	3	4	5
$\alpha$ -BHC	50	200	500	1,500	8,000
$\gamma$ -BHC	50	200	500	1,500	8,000
p,p'-DDD	100	400	1,000	3,000	16,000
p,p'-DDT	100	400	1,000	3,000	16,000
Decachlorobiphenyl	100	400	1,000	3,000	16,000
Dieldrin	100	400	1,000	3,000	16,000
Endosulfan I	50	200	500	1,500	8,000
Endrin	100	400	1,000	3,000	16,000
Heptachlor	50	200	500	1,500	8,000
Methoxychlor	500	2,000	5,000	15,000	80,000
Tetrachloro- <i>m</i> -xylene	50	200	500	1,500	8,000

Level 1	CLP-023R	1 mL
Level 2	CLP-023R-4X	1 mL
Level 3	CLP-023R-10X	1 mL
Level 4	CLP-023R-30X	1 mL
Level 5	CLP-023R-160X	1 mL

### Level 2 Daily QC (for mid level curves)

**CLP-023R-WL-4X-10ML** 1 x 10 mL  
**CLP-023R-WL-4X-25ML** 1 x 25 mL  
**CLP-023R-WL-4X-100ML** 1 x 100 mL  
At stated conc. (ng/mL) in Isooctane 11 comps.

$\alpha$ -BHC	20	Endosulfan I	20
$\gamma$ -BHC	20	Endrin	40
p,p'-DDD	40	Heptachlor	20
p,p'-DDT	40	Methoxychlor	200
Decachlorobiphenyl	40	Tetrachloro- <i>m</i> -xylene	20
Dieldrin	40		

### Working Level Pesticide Standard

At stated conc. (ng/mL) in Isooctane 13 comps.

Compound	Level 1	2	3	4	5
Aldrin	50	200	500	1,500	8,000
$\beta$ -BHC	50	200	500	1,500	8,000
$\delta$ -BHC	50	200	500	1,500	8,000
$\alpha$ -Chlordane	50	200	500	1,500	8,000
$\gamma$ -Chlordane	50	200	500	1,500	8,000
p,p'-DDE	100	400	1,000	3,000	16,000
Decachlorobiphenyl	100	400	1,000	3,000	16,000
Endosulfan II	100	400	1,000	3,000	16,000
Endosulfan sulfate	100	400	1,000	3,000	16,000
Endrin aldehyde	100	400	1,000	3,000	16,000
Endrin ketone	100	400	1,000	3,000	16,000
Heptachlor epoxide (Isomer B)	50	200	500	1,500	8,000
Tetrachloro- <i>m</i> -xylene	50	200	500	1,500	8,000

Level 1	CLP-024R	1 mL
Level 2	CLP-024R-4X	1 mL
Level 3	CLP-024R-10X	1 mL
Level 4	CLP-024R-30X	1 mL
Level 5	CLP-024R-160X	1 mL

### Level 2 Daily QC (for mid level curves)

**CLP-024R-WL-4X-10ML** 1 x 10 mL  
**CLP-024R-WL-4X-25ML** 1 x 25 mL  
**CLP-024R-WL-4X-100ML** 1 x 100 mL  
At stated conc. (ng/mL) in Isooctane 13 comps.

Aldrin	20	Endosulfan II	40
$\beta$ -BHC	20	Endosulfan sulfate	40
$\delta$ -BHC	20	Endrin aldehyde	40
$\alpha$ -Chlordane	20	Endrin ketone	40
$\gamma$ -Chlordane	20	Heptachlor epoxide (Isomer B)	20
p,p'-DDE	40	Tetrachloro- <i>m</i> -xylene	20
Decachlorobiphenyl	40		

### Pesticide Calibration Sets

**CLP-023R/024R-SET** 2 x 1 mL  
CLP-023R, CLP-024R

**CLP-023R/024R-40X-SET** 2 x 1 mL  
CLP-023R-40X, CLP-024R-40X

**CLP-023R/024R-4X-SET** 2 x 1 mL  
CLP-023R-4X, CLP-024R-4X

**CLP-023R/024R-160X-SET** 2 x 1 mL  
CLP-023R-160X, CLP-024R-160X



# EPA 500 Series - Pesticide Methods

## Method 505 Organohalide Pesticides by Microextraction & GC/ECD

<b>M-505R-2</b>			<b>1 x 1 mL</b>
<b>M-505R-2-PAK</b>			<b>5 x 1 mL</b>
At stated conc. ( $\mu\text{g/mL}$ ) in MeOH			16 comps.
Alachlor	10	Heptachlor epoxide (Isomer B)	1
Aldrin	1	Hexachlorobenzene	1
Atrazine	250	Hexachlorocyclopentadiene	1
$\alpha$ -Chlordane	1	Lindane	1
$\gamma$ -Chlordane	1	Methoxychlor	5
Dieldrin	1	<i>cis</i> -Nonachlor	1
Endrin	1	<i>trans</i> -Nonachlor	1
Heptachlor	1	Simazine	250

<b>M-505-ASL</b>			<b>1 x 1 mL</b>
<b>M-505-ASL-PAK</b>			<b>5 x 1 mL</b>
At stated conc. ( $\mu\text{g/mL}$ ) in Acetone			12 comps.
Alachlor	50	Heptachlor	20
Aldrin	20	Heptachlor epoxide (Isomer B)	20
Atrazine	500	Hexachlorobenzene	10
$\gamma$ -BHC	20	Hexachlorocyclopentadiene	20
Dieldrin	20	Methoxychlor	200
Endrin	20	Simazine	100

Alternate Source

## Multi-Component Analytes - Chlordane & Toxaphene

Each at 1,000 $\mu\text{g/mL}$ in Hexane			<b>-PAK (5 x 1 mL)</b>
Chlordane	P-017S-H-10X	P-017S-H-10X-PAK	
Toxaphene	P-093S-H-10X	P-093S-H-10X-PAK	

## Degradation Standard

<b>P-045S</b>	<b>1 x 1 mL</b>
100 $\mu\text{g/mL}$ in MeOH	
Endrin	

## Method 507 Nitrogen/Phosphorus Pesticides by GC/NPD

### Mix G

<b>M-507G</b>			<b>1 x 1 mL</b>
<b>M-507G-PAK</b>			<b>5 x 1 mL</b>
1.0 mg/mL each in MtBE			8 comps.
Benfenin	Oxadiazon	Profluralin	
Isopropalin	Oxyfluorfen	Trifluralin	
Pendimethalin	Propachlor		

## Performance Check Solution

<b>M-507-QC</b>			<b>1 x 1 mL</b>
<b>M-507-QC-PAK</b>			<b>5 x 1 mL</b>
At stated conc. (ng/mL) in MtBE			6 comps.
Atrazine	150	Bromacil	5,000
DNB	2,500	Prometon	300
		TPP	2,500
		Vernolate	50

## Internal Standard

<b>M-507-IS</b>	<b>1 x 1 mL</b>
<b>M-507-IS-PAK</b>	<b>5 x 1 mL</b>
0.5 mg/mL in MtBE	
<b>M-507-IS-10X</b>	<b>1 x 1 mL</b>
5.0 mg/mL in MtBE	
Triphenyl phosphate	

## Method 507 Nitrogen/Phosphorus Pesticides (Cont.)

### Surrogate Standard

<b>M-507-SS</b>	<b>1 x 1 mL</b>
<b>M-507-SS-PAK</b>	<b>5 x 1 mL</b>
0.25 mg/mL in MtBE	
<b>M-507-SS-4X</b>	<b>1 x 1 mL</b>
1.0 mg/mL in MtBE	
1,3-Dimethyl-2-nitrobenzene	

### Mix H

<b>M-507H</b>	<b>1 x 1 mL</b>
<b>M-507H-PAK</b>	<b>5 x 1 mL</b>
1.0 mg/mL each in MtBE	
DEF 6 (for Merphos quantitation)	

## Method 508 Chlorinated Pesticides by GC/ECD

### Chlorinated Pesticides Mix A

<b>M-508P-A</b>			<b>1 x 1 mL</b>
<b>M-508P-A-PAK</b>			<b>5 x 1 mL</b>
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 (Isomer B)	
$\gamma$ -BHC	Endosulfan II	Methoxychlor	
4,4'-DDD	Endosulfan sulfate		

### Chlorinated Pesticides Mix B

<b>M-508P-B-R</b>			<b>1 x 1 mL</b>
<b>M-508P-B-R-PAK</b>			<b>5 x 1 mL</b>
1.0 mg/mL each in MtBE			13 comps.
$\alpha$ -Chlordane	Chlorpyrifos	<i>cis</i> -Permethrin	
$\gamma$ -Chlordane	DCPA	<i>trans</i> -Permethrin	
Chlorobenzilate	Etridiazole	Propachlor	
Chloroneb	Hexachlorobenzene	Trifluralin	
Chlorothalonil			

<b>M-508P-B-R2</b>			<b>1 x 1 mL</b>
<b>M-508P-B-R2-PAK</b>			<b>5 x 1 mL</b>
1.0 mg/mL each in MtBE			15 comps.
$\alpha$ -Chlordane	Chlorpyrifos	<i>cis</i> -Permethrin	
$\gamma$ -Chlordane	DCPA	<i>trans</i> -Permethrin	
Chlorobenzilate	Etridiazole	Propachlor	
Chloroneb	Hexachlorobenzene	Trifluralin	
Chlorothalonil	Cyanazine	<i>trans</i> -Nonachlor	

### Internal Standard

<b>M-508-IS</b>	<b>1 x 1 mL</b>
<b>M-508-IS-PAK</b>	<b>5 x 1 mL</b>
0.1 mg/mL in MtBE	
<b>M-508-IS-10X</b>	<b>1 x 1 mL</b>
1.0 mg/mL in MtBE	
Pentachloronitrobenzene	

### Surrogate Standards

<b>M-508-SS</b>	<b>1 x 1 mL</b>
<b>M-508-SS-PAK</b>	<b>5 x 1 mL</b>
0.5 mg/mL in MtBE	
4,4'-Dichlorobiphenyl	
<b>M-508-SS-2</b>	<b>1 x 1 mL</b>
<b>M-508-SS-2-PAK</b>	<b>5 x 1 mL</b>
0.5 mg/mL in MtBE	
Decachlorobiphenyl	

# EPA 500 Series - Pesticide Methods

## Method 508 Chlorinated Pesticides by GC/ECD (Cont.)

### Decomposition Solution

<b>M-508-DS-100X</b>				1 x 1 mL
<b>M-508-DS-100X-PAK</b>				5 x 1 mL
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE				2 comps.
p,p'-DDT	200	Endrin	100	

### Performance Check Solution

<b>M-508-QC</b>				1 x 1 mL
<b>M-508-QC-PAK</b>				5 x 1 mL
At stated conc. (ng/mL) in MtBE				4 comps.
$\delta$ -BHC	40	Chlorpyrifos	2	
Chlorothalonil	50	Dacthal	50	

## 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>				5 x 1 mL
500 $\mu\text{g/mL}$ 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 (Isomer B)
4,4'-DDE	Methoxychlor
4,4'-DDT	

### Decomposition Solution

<b>M-508.1-DS-100X</b>				1 x 1 mL
<b>M-508.1-DS-100X-PAK</b>				5 x 1 mL
100 $\mu\text{g/mL}$ 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>				5 x 1 mL
100 $\mu\text{g/mL}$ 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>				5 x 1 mL
100 $\mu\text{g/mL}$ 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>				5 x 1 mL
At stated conc. (ng/mL) in MtBE				4 comps.
$\delta$ -BHC	400	Chlorpyrifos	20	
Chlorothalonil	500	DCPA	500	

### Chlorinated Pesticide Mix #2

<b>M-508.1-X2</b>				1 x 1 mL
<b>M-508.1-X2-PAK</b>				5 x 1 mL
500 $\mu\text{g/mL}$ each in Ethyl acetate				17 comps.

Alachlor	Hexachlorocyclopentadiene
Atrazine	Metolachlor
Chlorobenzilate	Metribuzin
Chloroneb	cis-Permethrin
Chlorothalonil	trans-Permethrin
Cyanazine	Propachlor
DCPA	Simazine
Etridiazole	Trifluralin
Hexachlorobenzene	

### Regulated Pesticide Mix (SDWA)

<b>M-508.1-ASL</b>				1 x 1 mL
<b>M-508.1-ASL-PAK</b>				5 x 1 mL
100 $\mu\text{g/mL}$ each in MtBE				17 comps.

Alachlor	Dieldrin	Methoxychlor
Aldrin	Endrin	Metolachlor
Atrazine	Heptachlor	Metribuzin
$\gamma$ -BHC	Heptachlor epoxide (Isomer B)	Propachlor
$\alpha$ -Chlordane	Hexachlorobenzene	Simazine
$\gamma$ -Chlordane	Hexachlorocyclopentadiene	

# EPA 500 Series - Pesticide Methods

## 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 16 comps.

Acifluorfen methyl ester	Methyl 3,5-dichlorobenzoate
Bentazon methyl ester	Dichloroprop methyl ester
Chloramben methyl ester	Dinoseb methyl ester
2,4-D methyl ester	4-Nitroanisole
Dalapon methyl ester	Pentachloroanisole
2,4-DB methyl ester	Picloram methyl ester
DCPA methyl ester	2,4,5-T methyl ester
Dicamba methyl ester	2,4,5-TP methyl ester

### Underivatized Analytes

**M-515A-R2** 1 x 1 mL  
**M-515A-R2-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in MeOH 16 comps.

Acifluorfen	100	3,5-Dichlorobenzoic acid	100
Bentazon	200	Dichloroprop	300
Chloramben	100	Dinoseb	200
2,4-D	200	4-Nitrophenol	100
Dalapon	1300	Pentachlorophenol	100
2,4-DB	800	Picloram	100
DCPA acid	100	2,4,5-T	100
Dicamba	100	2,4,5-TP	100

### 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. (ng/mL) in MtBE 3 comps.

Methyl 3,5-dichlorobenzoate	600
Dinoseb methyl ether	4
4-Nitroanisole	1600

### 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. (ng/mL) in MtBE 5 comps.

4,4'-Dibromooctafluorobiphenyl (Internal Standard)	250
Methyl 3,5-dichlorobenzoate	600
Methyl 2,4-dichlorophenylacetate (Surrogate Standard)	500
Dinoseb methyl ether	4
4-Nitroanisole	1600

### Internal Standard

**M-515-IS** 1 x 1 mL  
**M-515-IS-PAK** 1 x 1 mL  
 0.1 mg/mL in MtBE

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** 5 x 1 mL  
 5.0 mg/mL in MtBE

Methyl 2,4-dichlorophenylacetate

**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. (µg/mL) in MeOH 6 comps.

DCPA methyl ester	100	Dinoseb methyl ester	200
Methyl 3,5-dichlorobenzoate	500	Pentachloroanisole	100
Dichloroprop methyl ester	100	2,4,5-T methyl ester	100

**M-515.2-2** 1 x 1 mL

**M-515.2-2-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in MeOH 7 comps.

Acifluorfen methyl ester	200	Dicamba methyl ester	300
Bentazon methyl ester	1000	Picloram methyl ester	300
2,4-D methyl ester	100	2,4,5-TP methyl ester	100
2,4-DB methyl ester	1000		

### Underivatized Analytes

**M-515.2A-1** 1 x 1 mL  
**M-515.2A-1-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in MeOH 6 comps.

DCPA acid	100	Dinoseb	200
3,5-Dichlorobenzoic acid	500	Pentachlorophenol	100
Dichloroprop	100	2,4,5-T	100

**M-515.2A-2** 1 x 1 mL

**M-515.2A-2-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in MeOH 7 comps.

Acifluorfen	200	Dicamba	300
Bentazon	1000	Picloram	300
2,4-D	100	2,4,5-TP	100
2,4-DB	1000		

## Method 515.1&15.2 Chlorinated Acids in Water by GC/ECD

### Laboratory Performance Check Solution

**M-8150/51-LPC-5ML** 1 x 5 mL  
 At stated conc. (ng/mL) in Isooctane 5 comps.

3,5-Dichlorobenzoic acid	618	DCAA	500
Dinoseb	4	DBOB	250
4-Nitrophenol	1600		

# EPA 500 Series - Pesticide Methods

## Method 515.3 Chlorinated Acids in Drinking Water by ECD

### Underivatized Acids

**M-515.3A** 1 x 1 mL  
**M-515.3A-PAK** 5 x 1 mL  
At stated conc. ( $\mu\text{g/mL}$ ) in Acetone 17 comps.

Acifluorfen	50	3,5-Dichlorobenzoic acid	50
Bentazon	100	Dichlorprop	100
Chloramben	50	Dinoseb	100
2,4-D	100	4-Nitrophenol	100
Dalapon	100	Pentachlorophenol	10
2,4-DB	100	Picloram	100
DCPA diacid	50	2,4,5-T	25
DCPA monoacid	50	Silvex	25
Dicamba	50		

### Laboratory Performance Check

#### Methyl Derivatives

**M-515.3-LPC** 1 x 1 mL  
**M-515.3-LPC-PAK** 5 x 1 mL  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 4 comps.

2,4-DB methyl ester	25	Chloramben methyl ester	12.5
Dinoseb methyl ether	25	4-Nitroanisole	25

### Independent Check Standard Methyl Derivatives

**M-515.3-ICS** 1 x 1 mL  
**M-515.3-ICS-PAK** 5 x 1 mL  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 16 comps.

Acifluorfen methyl ester	50	Methyl-3,5-Dichlorobenzoate	50
Bentazon methyl ester	100	Dichlorprop methyl ester	100
Chloramben methyl ester	50	Dinoseb methyl ether	100
2,4-D methyl ester	100	4-Nitroanisole	100
Dalapon methyl ester	100	Pentachloroanisole	10
2,4-DB methyl ester	100	Picloram methyl ester	100
Dacthal	100	2,4,5-T methyl ester	25
Dicamba methyl ester	50	Silvex methyl ester	25

### Internal Standard

**M-515-IS** 1 x 1 mL  
**M-515-IS-PAK** 5 x 1 mL  
0.1 mg/mL in MtBE

4,4'-Dibromooctafluorobiphenyl

## Method 515.4 Chlorinated Acids in Drinking Water by ECD

### Underivatized Acids

**M-515.4A** 1 x 1 mL  
**M-515.4A-PAK** 5 x 1 mL  
At stated conc. ( $\mu\text{g/mL}$ ) in Acetone 17 comps.

Acifluorfen	50	3,5-Dichlorobenzoic acid	50
Bentazon	100	Dichlorprop	100
Chloramben	50	Dinoseb	100
2,4-D	100	Pentachlorophenol	10
Dalapon	100	Picloram	50
2,4-DB	100	2,4,5-T	25
DCPA diacid	50	Silvex	25
DCPA monoacid	50	Quinclorac	50
Dicamba	50		

### Underivatized Surrogate

**M-8150B-SS** 1 x 1 mL  
**M-8150B-SS-PAK** 5 x 1 mL  
0.1 mg/mL in Acetone  
2,4-Dichlorophenylacetic acid

### Quality Control Sample Methyl Derivatives

**M-515.4-QCS** 1 x 1 mL  
**M-515.4-QCS-PAK** 5 x 1 mL  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 16 comps.

Acifluorfen methyl ester	50	Methyl-3,5-Dichlorobenzoate	50
Bentazon methyl	100	Dichlorprop methyl ester	100
Chloramben methyl ester	50	Dinoseb methyl ether	100
2,4-D methyl ester	100	Pentachloroanisole	10
Dalapon methyl ester	100	Picloram methyl ester	50
2,4-DB methyl ester	100	2,4,5-T methyl ester	25
Dacthal	100	Silvex methyl ester	25
Dicamba methyl ester	50	Quinclorac methyl ester	50

### 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** 5 x 1 mL  
0.1 mg/mL each in Acetone 12 comps.

**M-525-3-5X** 1 x 1 mL  
**M-525-3-5X-PAK** 5 x 1 mL  
0.5 mg/mL each in Acetone 12 comps.

Alachlor	Heptachlor
Aldrin	Heptachlor epoxide (Isomer B)
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** 5 x 1 mL  
2.5 mg/mL in Acetone

Toxaphene

# EPA 500 Series - Pesticide Methods

## Method 525.2 (Rev. 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 Pesticide 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. These solutions can be purchased individually or as a complete set for your laboratory's particular needs. Additionally, the required surrogate, internal, and tuning standards are offered below.

### Nitrogen/Phosphorus Pesticides

**M-507A** 1 x 1 mL  
**M-507A-PAK** 5 x 1 mL  
 1.0 mg/mL each in MtBE 6 comps.

Ametryn	Disulfoton	Merphos
Cycoate	Fenamiphos	Prometon

**M-507B** 1 x 1 mL  
**M-507B-PAK** 5 x 1 mL  
 1.0 mg/mL each in MtBE 9 comps.

Atrazine	Ethoprop	Propazine
Diphenamid	Mevinphos	Terbutryn
EPTC	Prometryne	Triadimefon

**M-507C** 1 x 1 mL  
**M-507C-PAK** 5 x 1 mL  
 1.0 mg/mL each in MtBE 9 comps.

Butachlor	Metolachlor	Norflurazon
Carboxin	Metribuzin	Terbufos
Diazinon	MGK-264	Vernolate

**M-507D** 1 x 1 mL  
**M-507D-PAK** 5 x 1 mL  
 1.0 mg/mL each in MtBE 10 comps.

Alachlor	Chlorpropham	Pronamide
Atraton	Hexazinone	Stirofos
Bromacil	Molinate	Tricyclazole
Butylate		

**M-507E** 1 x 1 mL  
**M-507E-PAK** 1 x 1 mL  
 1.0 mg/mL each in MtBE 8 comps.

Dichlorvos	Napropamide	Tebuthiuron
Fenarimol	Pebulate ( <i>Tillam</i> )	Terbacil
Fluridone	Simetryn	

**M-507F-R2** 1 x 1 mL  
**M-507F-R2-PAK** 5 x 1 mL  
 1.0 mg/mL each in Acetone 2 comps.

Methyl paraoxon	Simazine
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### Auxiliary Standards

#### Internal Standard

**M-525.2-IS** 1 x 1 mL  
**M-525.2-IS-PAK** 5 x 1 mL  
 0.5 mg/mL each in Acetone 3 comps.

Acenaphthene-d <sub>10</sub>	Chrysene-d <sub>12</sub>	Phenanthrene-d <sub>10</sub>
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#### Surrogate Standard

**M-525.2-SS** 1 x 1 mL  
**M-525.2-SS-PAK** 5 x 1 mL  
 0.5 mg/mL each in Acetone 3 comps.

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

#### Internal/Surrogate Standard

**M-525.2-IS/SS** 1 x 1 mL  
**M-525.2-IS/SS-PAK** 5 x 1 mL  
 0.5 mg/mL each in Acetone 6 comps.

Acenaphthene-d <sub>10</sub>	Perylene-d <sub>12</sub>
Chrysene-d <sub>12</sub>	Phenanthrene-d <sub>10</sub>
1,3-Dimethyl-2-nitrobenzene	Triphenylphosphate

#### Tuning Standard

**M-525.2-TS** 1 x 1 mL  
 0.5 mg/mL each in CH<sub>2</sub>Cl<sub>2</sub> 3 comps.

4,4'-DDT	DFTPP	Endrin
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### 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 a lower injection port temperature.

### Chlorinated Pesticides

#### Mix A

**M-508P-A** 1 x 1 mL  
**M-508P-A-PAK** 5 x 1 mL  
 1.0 mg/mL each in MtBE 17 comps.

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

#### Mix B

**M-508P-B-R2** 1 x 1 mL  
**M-508P-B-R2-PAK** 5 x 1 mL  
 1.0 mg/mL each in MtBE 15 comps.

α-Chlordane	Chlorpyrifos	trans-Nonachlor
γ-Chlordane	Cyanazine	cis-Permethrin
Chlorobenzilate	DCPA	trans-Permethrin
Chloroneb	Etridiazole	Propachlor
Chlorothalonil	Hexachlorobenzene	Trifluralin

Certificate will reflect actual cis/trans ratio

# EPA 500 Series - Pesticide Methods

## Method 525.2 (Cont.) 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** 1 x 1 mL  
**M-525.2-NP1-ASL-PAK** 5 x 1 mL  
*100 µg/mL each in Acetone* 41 comps.

Alternate Source

Alachlor	Ethoprop	Prometryne
Ametryn	Fenarimol	Pronamide
Atraton	Fluridone	Propachlor
Atrazine	Hexazinone	Propazine
Bromacil	Methyl paraoxon	Simetryn
Butachlor	Metolachlor	Tetrachlorvinphos
Butylate	Metribuzin	Tebuthiuron
Chlorpropham	Mevinphos	Terbacil
Dursban	MGK-264	Prebane
Cycloate	Molinate	Triadimefon
Cyanazine	Napropamide	Tricyclazole
Dichlorvos	Norflurazon	Trifluralin
Diphenamid	Pebulate	Vernolate
EPTC	Prometon	

### Nitrogen / Phosphorus Pesticide Mix Revision

**M-525.2-NP1-ASL-R1** 1 x 1 mL  
*100 µg/mL each in Acetone* 40 comps.

Alternate Source

Alachlor	Ethoprop	Prometryne
Ametryn	Fenarimol	Pronamide
Atraton	Fluridone	Propachlor
Atrazine	Hexazinone	Propazine
Bromacil	Methyl paraoxon	Simetryn
Butachlor	Metolachlor	Tetrachlorvinphos
Butylate	Mevinphos	Tebuthiuron
Chlorpropham	MGK-264	Terbacil
Dursban	Molinate	Prebane
Cycloate	Napropamide	Triadimefon
Cyanazine	Norflurazon	Tricyclazole
Dichlorvos	Pebulate	Trifluralin
Diphenamid	Prometon	Vernolate
EPTC		

### Nitrogen / Phosphorus Pesticide Mixture

**M-525.2-NP2-ASL** 1 x 1 mL  
**M-525.2-NP2-ASL-PAK** 5 x 1 mL  
*100 µg/mL each in Acetone* 6 comps.

Alternate Source

Carboxin	Fenamiphos
Diazinon	Merphos
Disulfoton	Terbufos

### Organochlorine Pesticides

**M-525.2-CP-ASL** 1 x 1 mL  
**M-525.2-CP-ASL-PAK** 5 x 1 mL  
*100 µg/mL each in Acetone* 30 comps.

Alternate Source

Alachlor	Dacthal	Etridiazole
Aldrin	p,p'-DDD	α-Chlordane
Atrazine	p,p'-DDE	γ-Chlordane
α-BHC	p,p'-DDT	Heptachlor
β-BHC	Diieldrin	Heptachlor epoxide (Isomer B)
δ-BHC	Endosulfan I	Methoxychlor
γ-BHC	Endosulfan II	cis-Permethrin
Chlorobenzilate	Endosulfan sulfate	trans-Permethrin
Chlorothalonil	Endrin	Simazine
Chloroneb	Endrin aldehyde	trans-Nonachlor

## Method 527 Pesticides & Flame Retardants in Drinking Water by SPE & Capillary GC/MS

### Pesticide Mix A

**M-527-PEST-A** 1 x 1 mL  
*500 µg/mL each in MeOH* 11 comps.

Atrazine	Kepone
Bioallethrin, S-cyclopentyl isomer	Norflurazon
Bromacil	Oxychlordan isomer
Esfenvalerate	Prometryne
Fenvalerate	Propazine
Hexazinone	

### Pesticide Mix B

**M-527-PEST-B** 1 x 1 mL  
*500 µg/mL each in MeOH* 12 comps.

Bifenthrin	Nitrofen
Dimethoate	Parathion
Dursban	Terbufos sulfone
Fenamiphos	Thiazopyr
Malathion	Thiobencarb
Mirex	Vinclozolin

## Method 531 + 531.1 N-Methyl carbamoyl oximes & N-Methyl carbamates by HPLC

### Method 531 Compounds (HPLC)

1 mL

Compound	Cat. No.	Compound	Cat. No.
Aldicarb sulfoxide	M-531-01	Propoxur	M-531-07
Aldicarb sulfone	M-531-02	Carbofuran	M-531-08
Oxamyl	M-531-03	Carbaryl	M-531-09
Methomyl	M-531-04	1-Naphthol	M-531-10
3-Hydroxycarbofuran	M-531-05	Methiocarb	M-531-11
Aldicarb	M-531-06		

**M-531-SET** 11 x 1 mL  
*Each at 0.1 mg/mL in AcCN*

**M-531M** 1 x 1 mL  
**M-531M-PAK** 5 x 1 mL  
*0.1 mg/mL each in AcCN* 11 comps.

### Performance Check Solution

**M-531-QC-R** 1 x 1 mL  
*At stated conc. (µg/mL) in AcCN* 4 comps.

Aldicarb sulfoxide	100	3-Hydroxycarbofuran	2
BDMC	10	Methiocarb	20

### Internal Standard

**M-531-IS** 1 x 1 mL  
*0.1 mg/mL in AcCN*

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

### Carbamate Pesticide Mix

**M-531-REG-ASL** 1 x 1 mL  
**M-531-REG-ASL-PAK** 5 x 1 mL  
*100 µg/mL in MeOH* 2 comps.

Carbofuran Oxamyl

# EPA 500 Series - Pesticide Methods

## Method 532 Phenylureas by HPLC

### Phenylurea Concentrate Standard

**M-532-CONC1** 1 x 1 mL  
**M-532-CONC1-PAK** 5 x 1 mL  
 5.0 mg/mL each in MeOH 6 comps.

Karmex	Linuron	Siduron
Fluometuron	Propanil	Tebuthiuron

### Phenylurea Concentrate Standard

**M-532-CONC2** 1 x 1 mL  
**M-532-CONC2-PAK** 5 x 1 mL  
 5.0 mg/mL each in Acetone 2 comps.

Diflufenzuron	Thidiazuron
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### Phenylurea Primary Dilution Standard

**M-532** 1 x 1 mL  
**M-532-PAK** 5 x 1 mL  
 100 µg/mL each in MeOH, except Siduron 8 comps.

Diflufenzuron	Linuron	Tebuthiuron
Karmex	Propanil	Thidiazuron
Fluometuron	Siduron (200 µg/mL)	

### Phenylurea Surrogate Standard

**M-532-SS** 1 x 1 mL  
**M-532-SS-PAK** 5 x 1 mL  
 500 µg/mL each in MeOH 2 comps.

Carbazole	Monuron
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## Method 535 Acetanilide/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.

### Method 535 Set

**M-535-SET** 14 x 1 mL  
 At stated conc. (µg/mL) in MeOH

Acetochlor ESA	50	Propachlor ESA	20
Acetochlor OA	50	Propachlor OA	20
Alachlor ESA	50	Dimethenamid ESA	10
Alachlor OA	50	Dimethenamid OA	10
Flufenacet ESA	20	Butachlor ESA sodium salt	20
Flufenacet OA	20	(internal standard)	
Metolachlor ESA	50	Dimethachlor ESA sodium salt	20
Metolachlor OA	50	(surrogate standard)	

## Method 547 Glyphosate by HPLC

**M-547** 1 x 1 mL

0.1 mg/mL in Deionized water

**M-547-10X** 1 x 1 mL

1.0 mg/mL in Deionized water

Glyphosate

### Glyphosate Metabolite

**M-547-02** 1 x 1 mL

0.1 mg/mL in Deionized water

Aminomethyl phosphonic acid (AMPA)

## Method 548 Endothall by GC/ECD

**M-548A** 1 x 1 mL

10 µg/mL in Deionized water

**M-548B** 1 x 1 mL

50 µg/mL in Deionized water

Endothall

### Internal Standard

**M-548-IS** 1 x 1 mL

10 µg/mL in MtBE

Endosulfan I

### Calibration Standard

**M-548-CAL** 1 x 1 mL

100 µg/mL in MtBE

Endothall pentafluorophenyl hydrazine derivative

## Method 548.1 Endothall by GC/MS

**P-183S** 1 x 1 mL

100 µg/mL in MeOH

Endothall

### Internal Standard

**M-548.1-IS** 1 x 1 mL

500 µg/mL in MeOH

Acenaphthene-d<sub>10</sub>

### Methyl Derivative

**M-548.1-ME** 1 x 1 mL

100 µg/mL in MeOH

Endothall dimethyl ester

## Method 549.1/549.2 Diquat & Paraquat Liquid - Solid Extraction & HPLC

**M-549.1** 1 x 1 mL

1.0 mg/mL each in Deionized water as non-hydrated species 2 comps.

Diquat dibromide - H<sub>2</sub>O (1.97 mg/mL)

Paraquat dichloride - 4 H<sub>2</sub>O (1.77 mg/mL)

## Method 551 Chlorinated Organic Solvents + Trihalomethanes by GC/ECD

**M-551A** 1 x 1 mL

**M-551A-PAK** 5 x 1 mL

5.0 mg/mL each in MeOH 10 comps.

Bromodichloromethane	1,2-Dibromoethane
Bromoform	1,2-Dibromo-3-chloropropane
Carbon tetrachloride	Tetrachloroethene
Chlorodibromomethane	1,1,1-Trichloroethane
Chloroform	Trichloroethene

### Disinfection By-products

**M-551B** 1 x 1 mL

5.0 mg/mL each in Acetone 8 comps.

**M-551B-SET** 8 x 1 mL

Each at 5.0 mg/mL in Acetone

	Cat. No.	1 mL
Bromochloroacetonitrile	M-551B-1	
Chloral hydrate	M-551B-2	
Chloropicrin	M-551B-3	
Dibromoacetonitrile	M-551B-4	
Dichloroacetonitrile	M-551B-5	
1,1-Dichloro-2-propanone	M-551B-6	
Trichloroacetonitrile	M-551B-7	
1,1,1-Trichloro-2-propanone	M-551B-8	

# EPA 500 Series - Pesticide Methods

## Method 551.1A Chlorinated Solvents, Trihalomethanes Disinfection By-products & Halogenated Pesticides/Herbicides in Drinking Water by GC/ECD

### Chlorinated Organic Solvents + Trihalomethanes

**M-551.1A** 1 x 1 mL  
**M-551.1A-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in Acetone 12 comps.

Bromodichloromethane	1000
Bromoform	1000
Carbon tetrachloride	500
Chloroform	1000
Dibromochloromethane	1000
1,2-Dibromo-3-chloropropane	1000
1,2-Dibromoethane	1000
Tetrachloroethene	500
1,1,1-Trichloroethane	1000
1,1,2-Trichloroethane	10,000
Trichloroethene	1000
1,2,3-Trichloropropane	10,000

### Disinfection By-products

**M-551.1B** 1 x 1 mL  
**M-551.1B-PAK** 5 x 1 mL  
 1000 µg/mL each in Acetone 8 comps.

Bromochloroacetonitrile	Dichloroacetonitrile
Chloral hydrate	1,1-Dichloro-2-propanone
Chloropicrin	Trichloroacetonitrile
Dibromoacetonitrile	1,1,1-Trichloro-2-propanone

### Pesticide/Herbicide Mixture

**M-551.1C** 1 x 1 mL  
**M-551.1C-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in Acetone 17 comps.

Alachlor	10	Hexachlorobenzene	1
Atrazine	200	Hexachlorocyclopentadiene	1
Bromacil	10	Lindane	1
Cyanazine	30	Methoxychlor	5
Endrin	2	Metolachlor	10
Endrin aldehyde	2	Metribuzin	5
Endrin ketone	2	Simazine	200
Heptachlor	1	Trifluralin	1
Heptachlor epoxide (Isomer B)	1		

## Method 551.1A Auxiliary Standards by ECD

### Laboratory Performance Check Solutions

#### Pentane Extracts

**M-551.1-LPC-P** 1 x 1 mL  
**M-551.1-LPC-P-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in Pentane 7 comps.

Alachlor	83	Hexachlorocyclopentadiene	20
Bromacil	83	Lindane	0.2
Bromodichloromethane	30	Trichloroethene	30
Endrin	30		

#### MtBE Extracts

**M-551.1-LPC** 1 x 1 mL  
**M-551.1-LPC-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in MtBE 7 comps.

Alachlor	83	Hexachlorocyclopentadiene	20
Bromacil	83	Lindane	0.2
Bromodichloromethane	30	Trichloroethene	30
Endrin	30		

### Internal Standard Solutions

**M-551.1-IS** 1 x 1 mL  
**M-551.1-IS-PAK** 5 x 1 mL  
 100 µg/mL in Acetone

**M-551.1-IS-100X** 1 x 1 mL  
**M-551.1-IS-100X-PAK** 5 x 1 mL  
 10,000 µg/mL in Acetone

p-Bromofluorobenzene

## Method 551.1A Auxiliary Standards by ECD (Cont.)

### Modified Laboratory Performance Check Solutions

#### Pentane Extracts

**M-551.1-MLPC-P** 1 x 1 mL  
**M-551.1-MLPC-P-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in Pentane 4 comps.

γ-BHC	0.2	Hexachlorocyclopentadiene	20
Bromodichloromethane	30	Trichloroethene	30

#### MtBE Extracts

**M-551.1-MLPC** 1 x 1 mL  
**M-551.1-MLPC-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in MtBE 4 comps.

γ-BHC	0.2	Hexachlorocyclopentadiene	20
Bromodichloromethane	30	Trichloroethene	30

### Surrogate Standard Solutions

**M-551.1-SS** 1 x 1 mL  
**M-551.1-SS-PAK** 5 x 1 mL  
 10 µg/mL in Acetone

**M-551.1-SS-100X** 1 x 1 mL  
**M-551.1-SS-100X-PAK** 5 x 1 mL  
 1,000 µg/mL in Acetone

Decafluorobiphenyl

## Method 553 Benzidines & Nitrogen containing Pesticides by L-L or L-S Extraction & RP HPLC/Particle Beam/MS

### Analytes

**M-553\*** 1 x 1 mL  
 At stated conc. (µg/mL) in AcCN:MeOH (50:50) 13 comps.

Benzidine †	250	3,3'-Dimethylbenzidine †	350
Benzoylprop ethyl	350	Diuron	450
Caffeine	300	Linuron	1,300
Carbaryl	1,000	Monuron	400
o-Chlorophenyl thiourea	750	Rotenone	3,200
3,3'-Dichlorobenzidine †	250	Siduron	450
3,3'-Dimethoxybenzidine †	750		

† Subject to oxidation

### Performance Check Solution

**M-553-PC** 1 x 1 mL  
 0.1 mg/mL in AcCN

DFTPPO (Decafluorotriphenylphosphine oxide)

## Method 555 Chlorinated Acids by HPLC

### Mix A

**M-555A** 1 x 1 mL  
 1.0 mg/mL each in AcCN 8 comps.

Acifluorfen	2,4-D	Picloram
Bentazon	Dicamba	2,4,5-TP
Chloramben	Dichlorprop	

### Mix B

**M-555B** 1 x 1 mL  
 1.0 mg/mL each in AcCN 8 comps.

2,4-DB	MCPA	Pentachlorophenol
3,5-Dichlorobenzoic acid	MCPP	2,4,5-T
Dinoseb	4-Nitrophenol	

\* ColdPAK required to maintain integrity of product



# National Primary Drinking Water Standards

## EPA Safe Drinking Water Act (SDWA) Amendment National Primary Drinking Water Standards

### Regulated Herbicide Mixture (Non-derivatized)

<b>M-515-REG</b>			<b>1 x 1 mL</b>
At stated conc. ( $\mu\text{g/mL}$ ) in Acetone			8 comps.
Acifluorfen $\diamond\diamond$	100	Dinoseb	200
2,4-D	300	Pentachlorophenol	100
Dalapon	1000	Picloram	100
Dicamba $\diamond\diamond$	100	2,4,5-TP	100

### Regulated Herbicide Mixtures (Methyl Derivatives)

<b>M-515-REG-ME</b>			<b>1 x 1 mL</b>
At stated conc. ( $\text{ng/mL}$ ) in MtBE			8 comps.
Acifluorfen methyl ester $\diamond\diamond$	250	Dinoseb methyl ether	500
2,4-D methyl ester	500	Pentachloroanisole	100
Dalapon methyl ester	2000	Picloram methyl ester	250
Dicamba methyl ester $\diamond\diamond$	500	2,4,5-TP methyl ester	500

<b>M-515-REG-ME-1000X</b>			<b>1 x 1 mL</b>
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE			8 comps.
Acifluorfen methyl ester $\diamond\diamond$	250	Dinoseb methyl ether	500
2,4-D methyl ester	500	Pentachloroanisole	100
Dalapon methyl ester	2000	Picloram methyl ester	250
Dicamba methyl ester $\diamond\diamond$	500	2,4,5-TP methyl ester	500

### Regulated Semi-Volatiles Mixture

<b>M-525-REG-EA</b>		<b>1 x 1 mL</b>
0.1 mg/mL each in Ethyl Acetate		25 comps.

<b>M-525-REG-EA-5X</b>		<b>1 x 1 mL</b>
0.5 mg/mL each in Ethyl Acetate		25 comps.

Alachlor	Endrin
Aldrin $\diamond$	Heptachlor
Atrazine	Heptachlor epoxide (Isomer B)
Benz[a]pyrene	Hexachlorobenzene
Butachlor $\diamond$	Hexachlorocyclopentadiene
$\alpha$ -Chlordane	Lindane
$\gamma$ -Chlordane	Methoxychlor
Cyanazine $\diamond\diamond$	Metolachlor $\diamond\diamond$
Dieldrin $\diamond$	Metribuzin $\diamond\diamond$
2,4-Dinitrotoluene $\diamond\diamond$	<i>trans</i> -Nonachlor
2,6-Dinitrotoluene $\diamond\diamond$	Propachlor $\diamond$
bis(2-Ethylhexyl)adipate	Simazine
bis(2-Ethylhexyl)phthalate	

$\diamond$  Unregulated Additions  
 $\diamond\diamond$  Proposed Phase VIB Additions

### Regulated Pesticide Mixture

<b>M-531-REG</b>		<b>1 x 1 mL</b>
0.1 mg/mL each in Acetonitrile		8 comps.
Aldicarb	Carbofuran	
Aldicarb sulfone	3-Hydrocarbofuran $\diamond$	
Aldicarb sulfoxide	Methomyl $\diamond\diamond$	
Carbaryl $\diamond$	Oxamyl	

### Proposed Phase VIA Additions

#### Disinfectant By-products

Bromoform $\diamond\diamond$	}	see Method 501 Total Trihalomethanes
Chloroform $\diamond\diamond$		
Dibromochloromethane $\diamond\diamond$		
Dichlorobromomethane $\diamond\diamond$	}	Method 551, Chlorinated Solvents + Disinfectant By-products

Bromoacetic acid $\diamond\diamond$	}	Haloacetic acids see Method 552.2
Chloroacetic acid $\diamond\diamond$		
Dibromoacetic acid $\diamond\diamond$		
Dichloroacetic acid $\diamond\diamond$		
Trichloroacetic acid $\diamond\diamond$		

### Regulated Pesticide Mixture

<b>M-508.1-ASL</b>		<b>1 x 1 mL</b>
<b>M-508.1-ASL-PAK</b>	<b>Alternate Source</b>	<b>5 x 1 mL</b>
100 $\mu\text{g/mL}$ each in MtBE		17 comps.

Alachlor	Heptachlor epoxide (Isomer B)
Aldrin	Hexachlorobenzene
Atrazine	Hexachlorocyclopentadiene
$\gamma$ -BHC	Methoxychlor
$\alpha$ -Chlordane	Metolachlor
$\gamma$ -Chlordane	Metribuzin
Dieldrin	Propachlor
Endrin	Simazine
Heptachlor	

### Regulated Semi-Volatiles Mixture

<b>M-525-REG-ASL</b>		<b>1 x 1 mL</b>
<b>M-525-REG-ASL-PAK</b>	<b>Alternate Source</b>	<b>5 x 1 mL</b>
0.5 mg/mL each in Acetone		6 comps.

Benz[a]pyrene	Hexachlorobenzene
bis(2-Ethylhexyl)adipate	Hexachlorocyclopentadiene
bis(2-Ethylhexyl)phthalate	Pentachlorophenol (2.0 mg/mL)

### Carbamate Pesticide Mixture

<b>M-531-REG-ASL</b>		<b>1 x 1 mL</b>
<b>M-531-REG-ASL-PAK</b>	<b>Alternate Source</b>	<b>5 x 1 mL</b>
100 $\mu\text{g/mL}$ each in MeOH		2 comps.
Carbofuran	Oxamyl	

# EPA 600 Series - Pesticide Methods

## 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 7 comps.

Chlorobenzilate	Etridiazole
Chloroneb	Pentachloronitrobenzene
Chloropropylate	Propachlor
1,2-Dibromo-3-chloropropane	

**M-608.2** 1 x 1 mL  
**M-608.2-PAK** 5 x 1 mL  
 100 µg/mL each in Isooctane 6 comps.

Chlorothalonil	Methoxychlor
DCPA	cis-Permethrin *
Dichloran	trans-Permethrin *

\* Certificate will reflect actual cis/trans ratio

## Method 609 Nitroaromatics & Isophorone by GC/ECD/FID

### Method 609 Nitroaromatic and Isophorone Set

**M-609-R-SET** 2 x 1 mL  
 M-609A-R, M-609B-R

**M-609A-R** 1 x 1 mL  
 1.0 mg/mL each in Hexane 2 comps.

Isophorone	Nitrobenzene
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**M-609B-R** 1 x 1 mL  
 1.0 mg/mL each in Hexane 2 comps.

2,4-Dinitrotoluene	2,6-Dinitrotoluene
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## Performance Check Solution

**M-609-QC** 1 x 1 mL  
 At stated conc. (µg/mL) in Acetone 4 comps.

Isophorone	100	2,4-Dinitrotoluene	20
Nitrobenzene	100	2,6-Dinitrotoluene	20

## Method 614 & 614.1 Organophosphorus Pesticides by GC/NPD

**M-614** 1 x 1 mL  
 1,000 µg/mL each in Acetone:Hexane (50:50) 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 (50:50) 4 comps.

Dioxathion	Ethion
EPN	Terbufos

**M-614.1-ASL** 1 x 1 mL  
 At stated conc. (µg/mL) in Hexane 4 comps.

Dioxathion	10	Ethion	100
EPN	200	Terbufos	4

Alternate Source

## Method 615 Chlorinated Herbicides

### Chlorinated Herbicides

<b>Herbicide Acids</b>	<b>Methyl Derivatives</b>
0.2 mg/mL in MeOH	0.2 mg/mL in Hexane

Compound	Cat. No.	Cat. No.	1 mL
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>10 x 1 mL</b>	<b>M-8150A-SET</b>	<b>M-8150-SET</b>	

### Underivatized

**M-8150A** 1 x 1 mL  
 0.1 mg/mL in MEOH, except MCPA and MCPP 10 comps.

2,4-D	Dichlorprop	MCPA (10 mg/mL)
Dalapon	Dinoseb	2,4,5-TP
2,4-DB	MCPA (10 mg/mL)	2,4,5-T
Dicamba		

### Methyl Derivatives

**M-8150** 1 x 1 mL  
 0.1 mg/mL in MEOH, except MCPA and MCPP 10 comps.

2,4-D methyl ester	Dinoseb methyl ester
Dalapon methyl ester	MCPA methyl ester (10 mg/mL)
2,4-DB methyl ester	MCPP methyl ester (10 mg/mL)
Dicamba methyl ester	2,4,5-TP methyl ester
Dichlorprop methyl ester	2,4,5-T methyl ester

## Method 615 Underivatized Chlorinated Herbicides

**M-615A-ASL** 1 x 1 mL  
**M-615A-ASL-PAK** 5 x 1 mL  
 At stated conc. in MeOH 10 comps.

2,4-D	100	Dalapon	250	Dinoseb	50
2,4-DB	100	Dicamba	10	MCPA	10,000
2,4,5-T	10	Dichlorprop	100	MCPP	10,000
2,4,5-TP	10				

## Method 615 Methyl Derivatives of Chlorinated Herbicides

**M-615-ASL** 1 x 1 mL  
**M-615-ASL-PAK** 5 x 1 mL  
 At stated conc. (µg/mL) in MeOH 10 comps.

2,4-D methyl ester	100	Dicamba methyl ester	10
2,4-DB methyl ester	100	Dichlorprop methyl ester	100
2,4,5-T methyl ester	10	Dinoseb methyl ester	50
2,4,5-TP methyl ester	10	MCPA methyl ester	10,000
Dalapon methyl ester	250	MCPP methyl ester	10,000

## 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 (50:50) 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 (Isomer B)
4,4'-DDD	Endosulfan sulfate	Methoxychlor

### Mix #2 - Analytes

**M-617-2** 1 x 1 mL  
 2.0 mg/mL each in Hexane:Toluene (50:50) 9 comps.

Captan	Dicofol	Pentachloronitrobenzene
Carbophenothion	Isodrin	Perthane
Dichloran	Mirex	Trifluralin

# EPA 600 Series - Pesticide Methods

## Method 617 Chlorinated Pesticides & PCBs (Cont.)

### 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

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

**M-619-SET** 11 x 1 mL  
Each at 0.1 mg/mL in MeOH

**M-619M** 1 x 1 mL  
0.1 mg/mL each 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		Terbutylazine	M-619-10	
Prometryne	M-619-05		Terbutryn	M-619-11	
Propazine	M-619-06				

## Method 622 Organophosphorus Pesticides by GC/NPD

### Organophosphorus Pesticides

**M-622-SET** 27 x 1 mL

Each at 1000 µg/mL in Hexane

Azinphos methyl	Merphos
Bolstar (Sulprofos)	Mevinphos
Chlorpyrifos	Monocrotophos
Coumaphos	Naled
Demeton, O & S	Parathion ethyl
Diazinon	Parathion methyl
Dichlorvos	Phorate
Dimethoate	Ronnel
Disulfoton	Stirophos
EPN	Sulfotep
Ethoprop	TEPP
Fensulfothion *	Tokuthion
Fenthion	Trichloronate
Malathion	

\* Hexane:Acetone (95:5)

## Method 622.1 Thiophosphate Pesticides by GC/NPD

### Thiophosphate Pesticides

**M-622.1** 1 x 1 mL  
1.0 mg/mL each in MtBE

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.

Aldrin	Dieldrin
β-BHC	Endosulfan sulfate
δ-BHC	Endrin aldehyde
4,4'-DDD	Heptachlor
4,4'-DDE	Heptachlor epoxide (Isomer B)
4,4'-DDT	

### Chlordane and Toxaphene

**M-001J** 1 x 1 mL  
**M-001J-PAK** 5 x 1 mL

At stated conc. (mg/mL) in MeOH

Chlordane	0.02	Toxaphene	0.20
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### Pesticides - Mix #1

**Z-014C** 1 x 1 mL  
**Z-014C-PAK** 5 x 1 mL

2.0 mg/mL each in Toluene:Hexane (50:50)

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

### 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 (50:50)

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	(Isomer B)
γ-Chlordane	Endosulfan sulfate	Methoxychlor

### 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 (50:50)

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

## 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)
Isopropalin	Trifluralin

**M-627-R** 1 x 1 mL  
1.0 mg/mL each in MeOH 5 comps.

Benfluralin	Tolban (Profluralin)
Ethalfuralin	Trifluralin
Isopropalin	

# EPA 600 Series - Pesticide Methods

## Method 632 Carbamates & Urea Pesticides in Waste Water by HPLC

### Carbamates & Urea Pesticides in Waste Water

**M-632-SET** 21 x 1 mL

Each at 0.1 mg/mL in AcCN

**M-632M** 1 x 1 mL

0.1 mg/mL each in AcCN 21 comps.

**M-632M-10X** 1 x 1 mL

1.0 mg/mL each in AcCN 21 comps.

	Cat. No.		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** 4 x 1 mL

Each at 0.1 mg/mL in AcCN

	Cat. No.		Cat. No.
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

## Method 645 Amino Pesticides & Lethane by GC/NPD

### Amino Pesticides Mix

**M-645** 1 x 1 mL

1.0 mg/mL each in Hexane:Acetone (80:20) 6 comps.

Alachlor	Diphenamid	Lethane
Butachlor	Fluridone	Norflurazon

## HPLC 600's Additional Methods for Pesticides in Waste Water by HPLC

Method	Each 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
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 & PCBs in Water & Soil/Sediment by GC/MS

### Pesticide Mix

**M-680P** 1 x 1 mL

**M-680P-PAK** 5 x 1 mL

At stated conc. ( $\mu\text{g/mL}$ ) in Toluene:Hexane (50:50) 22 comps.

Aldrin	1,000	Endosulfan I	2,000
$\alpha$ -BHC	1,000	Endosulfan II	2,000
$\beta$ -BHC	1,000	Endosulfan sulfate	1,000
$\gamma$ -BHC	1,000	Endrin	1,000
$\delta$ -BHC	1,000	Endrin aldehyde	1,000
$\alpha$ -Chlordane	1,000	Endrin ketone	1,000
$\gamma$ -Chlordane	1,000	Heptachlor	1,000
4,4'-DDD	1,000	Heptachlor epoxide (Isomer B)	1,000
4,4'-DDE	1,000	Methoxychlor	1,000
4,4'-DDT	1,000	cis-Nonachlor	1,000
Dieldrin	1,000	trans-Nonachlor	1,000

### Pesticide Mid-Level Check

**M-680P-MLC** 1 x 1 mL

**M-680P-MLC-PAK** 5 x 1 mL

At stated conc. ( $\mu\text{g/mL}$ ) Toluene:Hexane (50:50) 21 comps.

Aldrin	1,000	Endosulfan I	2,000
$\alpha$ -BHC	1,000	Endosulfan II	2,000
$\beta$ -BHC	1,000	Endosulfan sulfate	1,000
$\gamma$ -BHC	1,000	Endrin	1,000
$\delta$ -BHC	1,000	Endrin ketone	1,000
$\alpha$ -Chlordane	1,000	Heptachlor	1,000
$\gamma$ -Chlordane	1,000	Heptachlor epoxide (Isomer B)	1,000
4,4'-DDD	1,000	Methoxychlor	1,000
4,4'-DDE	1,000	cis-Nonachlor	1,000
4,4'-DDT	1,000	trans-Nonachlor	1,000
Dieldrin	1,000		

# EPA 1300 Series - Pesticide Methods

## Method 1311 Toxicity Characteristic Leaching Procedure (TCLP)

### Pesticide Spiking Mix

**TCLP-PES** 1 x 1 mL  
**TCLP-PES-PAK** 5 x 1 mL  
*2.0 mg/mL each in MeOH, except Toxaphene* 7 comps.

Chlordane (tech)	Lindane
Endrin	Methoxychlor
Heptachlor	Toxaphene (4.0 mg/mL)
Heptachlor epoxide (Isomer B)	

**Pesticide Spiking Set**  
**TCLP-PES-1/2-SET** 2 x 1 mL  
 CLP-PES-1, TCLP-PES-2

**TCLP-PES-1** 1 x 1 mL  
**TCLP-PES-1-PAK** 5 x 1 mL  
*2.0 mg/mL each in MeOH* 5 comps.

Endrin	Lindane
Heptachlor	Methoxychlor
Heptachlor epoxide (Isomer B)	

**TCLP-PES-2** 1 x 1 mL  
**TCLP-PES-2-PAK** 5 x 1 mL  
*At stated conc. (mg/mL) in MeOH* 2 comps.

Chlordane 2.0	Toxaphene 4.0
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### Herbicide, PFB Derivative Mix

**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
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### 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 Mixes

**TCLP-HERB** 1 x 1 mL  
**TCLP-HERB-PAK** 5 x 1 mL  
*2.0 mg/mL each in MeOH* 2 comps.

2,4-D	2,4,5-TP
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**TCLP-HERB-ME** 1 x 1 mL  
**TCLP-HERB-ME-PAK** 5 x 1 mL  
*2.0 mg/mL each in MeOH* 2 comps.

2,4-D methyl ester	2,4,5-TP methyl ester
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### Pesticide Set

**TCLP-PES-1/2-QC-SET** 2 x 1 mL  
 TCLP-PEST-1-QC, TCLP-PEST-2-QC

### Pesticides

**TCLP-PES-1-QC** 1 x 1 mL  
**TCLP-PES-1-QC-PAK** 5 x 1 mL  
*At stated conc. (µg/mL) in MeOH* 5 comps.

Endrin	0.2	Lindane	4.0
Heptachlor	0.4	Methoxychlor	100
Heptachlor epoxide (Isomer B)	0.04		

**TCLP-PES-2-QC** 1 x 1 mL  
**TCLP-PES-2-QC-PAK** 5 x 1 mL  
*At stated conc. (µg/mL) in MeOH* 2 comps.

Chlordane	0.3	Toxaphene	5.0
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### Herbicides

**TCLP-HERB-ME-QC** 1 x 1 mL  
**TCLP-HERB-ME-QC-PAK** 5 x 1 mL  
*At stated conc. (µg/mL) in MeOH* 2 comps.

2,4-D methyl ester	106.3
2,4,5-TP methyl ester	10.5

# EPA 1600 Series - Pesticide Methods

## 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 following 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. (ng/mL) in Isooctane 14 comps.

Aldrin	100	Endosulfan II	200
Captan	200	Endrin aldehyde	100
Chlorobenzilate	500	Heptachlor	100
Diallate	250	Heptachlor epoxide (Isomer B)	100
p,p'-DDE	200	Lindane	100
p,p'-DDT	20	Methoxychlor	200
Endosulfan I	200	Isodrin	100

**M-1618-2** 1 x 1 mL  
 At stated conc. (ng/mL) in Isooctane 16 comps.

α-BHC	100	Dichlone	100
β-BHC	100	Dieldrin	100
δ-BHC	100	Endrin	100
α-Chlordane	100	Endosulfan sulfate	100
γ-Chlordane	100	Endrin ketone	100
Carbophenothion	1000	Mirex	100
Captafol	200	PCNB	100
p,p'-DDD	100	Trifluralin	200

### Organophosphate Pesticides

**M-1618-3** 1 x 1 mL  
 At stated conc. (ng/mL) in Isooctane 19 comps.

Azinphos methyl	100	Merphos	200
Coumaphos	5	Methyl parathion	100
Diazinon	100	Malathion	100
Dichlorvos	50	Phorate	100
Dimethoate	100	Ronnel	100
EPN	100	Sulprofos	50
Ethyl parathion	100	Terbufos	100
Ethoprop	100	Tetrachlorvinphos	100
Ethyl azinphos	100	Trichlorofon	100
Fensulfothion	200		

**M-1618-4** 1 x 1 mL  
 At stated conc. (ng/mL) in Isooctane 16 comps.

Chlorfenvinphos	50	Ethion	100
Chlorpyrifos	50	Famphur	200
Chlorpyrifos methyl	100	Fenthion	100
Crotoxyphos	200	Leptophos	100
Dichlorofenthion	100	Mevinphos	100
Demeton (mixed isomers)	400	Naled	100
Dioxathion	600	Phosmet	200
Disulfoton	100	Sulfotep	50

### 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 methyl ester	Dalapon methyl ester
2,4-DB methyl ester	Dicamba methyl ester
2,4,5-T methyl ester	Dichlorprop methyl ester
2,4,5-TP methyl ester	Dinoseb methyl ester

**M-8150M-2** 1 x 1 mL  
**M-8150M-2-PAK** 5 x 1 mL  
 2.0 mg/mL in Hexane 2 comps.

MCPA methyl ester	MCPPP methyl ester
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### 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-Dichlorophenylacetic acid

#### Decomposition Solution

**M-1618D** \* 1 x 1 mL  
**M-1618D-PAK** \* 5 x 1 mL  
 At stated conc. (µg/mL) in Acetone 2 comps.  
 p,p'-DDT 2.0      Endrin 1.0

#### GPC Calibration Solution

**M-1618-GP-5ML** 1 x 5 mL  
 At stated conc. (mg/mL) in Acetone 5 comps.  
 Corn oil 300.0      Perylene 0.1  
 bis(2-Ethylhexyl)phthalate 15.0      Sulfur 0.5  
 Pentachlorophenol 1.4

#### 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

\* ColdPAK required to maintain integrity of product.

# EPA 1600 Series - Pesticide Methods

## 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, as well as 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. (mg/mL) in CH<sub>2</sub>Cl<sub>2</sub>

1 x 5 mL  
5 comps.

Corn oil	300	Perylene	0.1
bis(2-Ethylhexyl)phthalate	15	Sulfur	0.5
Pentachlorophenol	1.4		

### Solid-phase Extraction Cartridge Calibration Solution

#### M-1600-SPE

1 x 1 mL

0.1 mg/mL in Acetone

2,4,6-Trichlorophenol

### Decomposition Test Solution

#### M-1656-DS

1 x 1 mL

At stated conc. (µg/mL) in Isooctane

2 comps.

4,4'-DDT 2                      Endrin 1

<b>M-1656-CAL-SET</b>	<b>7 x (3 x 1 mL)</b>
M-1656-01-CAL-SET, M-1656-02-CAL-SET	
M-1656-03-CAL-SET, M-1656-04-CAL-SET	
M-1656-05-CAL-SET, M-1656-06-CAL-SET	
M-1656-07-CAL-SET	

### Calibration Group 1

#### M-1656-01-CAL-SET

3 x 1 mL

At stated conc. (ng/mL) in Isooctane 14 comps.

Components	Low (1X)	Medium (5X)	High (20X)
Acephate	2,000	10,000	40,000
Alachlor	20	100	400
Atrazine	1,000	5,000	20,000
β-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	5,000	20,000
Tetrachloro- <i>m</i> -xylene	5	25	100

\* Certificate will reflect actual cis/trans ratio

### Calibration Group 2

#### M-1656-02-CAL-SET

3 x 1 mL

At stated conc. (ng/mL) in Isooctane 11 comps.

Components	Low (1X)	Medium (5X)	High (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
Dichlone	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

3 x 1 mL

At stated conc. (ng/mL) in Isooctane 10 comps.

Components	Low (1X)	Medium (5X)	High (20X)
γ-BHC	5	25	100
γ-Chlordane	5	25	100
Decachlorobiphenyl	10	50	200
Endrin ketone	10	50	200
Heptachlor epoxide (Isomer B)	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

### Calibration Group 4

#### M-1656-04-CAL-SET

3 x 1 mL

At stated conc. (ng/mL) in Isooctane 10 comps.

Components	Low (1X)	Medium (5X)	High (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- <i>m</i> -xylene	5	25	100
Triadimefon	100	500	2,000

### Calibration Group 5

#### M-1656-05-CAL-SET

3 x 1 mL

At stated conc. (ng/mL) in Isooctane 8 comps.

Components	Low (1X)	Medium (5X)	High (20X)
α-Chlordane	10	50	200
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- <i>m</i> -xylene	5	25	100

### Surrogate Spiking Solutions

#### CLP-PES-A

1 x 1 mL

0.2 mg/mL in Acetone

Dibutylchlorendate

#### CLP-032-R

1 x 1 mL

0.2 mg/mL each in Acetone

2 comps.

Decachlorobiphenyl

Tetrachloro-*m*-xylene

#### CLP-034

1 x 1 mL

0.2 mg/mL each in Acetone

2 comps.

Dibutylchlorendate

Tetrachloro-*m*-xylene

### Calibration Group 6

#### M-1656-06-CAL-SET

3 x 1 mL

At stated conc. (ng/mL) in Isooctane 9 comps.

Components	Low (1X)	Medium (5X)	High (20X)
Aldrin	20	100	400
δ-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- <i>m</i> -xylene	5	25	100

### Calibration Group 7

#### M-1656-07-CAL-SET

3 x 1 mL

At stated conc. (ng/mL) in Isooctane 13 comps.

Components	Low (1X)	Medium (5X)	High (20X)
Carbophenothion	80	400	1,600
Chlorobenz	300	1,500	6,000
Chloropropylate	200	1,000	4,000
1,2-Dibromo-3-chloropropane	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- <i>m</i> -xylene	5	25	100

# EPA 1600 Series - Pesticide Methods

## Method 1657 Organo-Phosphorus Pesticides in Municipal & Industrial Wastewater by FPD

### GPC Calibration Solution

<b>M-1600-GPC-5ML</b>	<b>1 x 5 mL</b>
At stated conc. (mg/mL) in CH <sub>2</sub> Cl <sub>2</sub>	5 comps.
Corn oil	300
bis(2-Ethylhexyl)phthalate	15
Pentachlorophenol	1.4
Perylene	0.1
Sulfur	0.5

### Solid-phase Extraction Cartridge Calibration Solution

<b>M-1600-SPE</b>	<b>1 x 1 mL</b>
0.1 mg/mL in Acetone	
2,4,6-Trichlorophenol	

### Surrogate Spiking Solution

<b>M-1657-SS</b>	<b>1 x 1 mL</b>
0.2 mg/mL each in Acetone	2 comps.
Tributyl phosphate	
Triphenyl phosphate	

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, and the Comprehensive Environmental Response, Compensation and Liability Act, as well as other compounds amenable to extraction and analysis by wide-bore capillary column gas chromatography with a flame photometric detector (FPD).

## Method 1657 Calibration Solutions & Suggested Calibration Groups

### Calibration Group 1

<b>M-1657-01-R1-CAL-SET</b>	<b>3 x 1 mL</b>
At stated conc. (ng/mL) in Isooctane	9 comps.

Components	Low (1X)	Medium (5X)	High (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	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
<b>Low</b>	M-1657-01-R1-1X		<b>1 mL</b>
<b>Medium</b>	M-1657-01-R1-5X		<b>1 mL</b>
<b>High</b>	M-1657-01-R1-20X		<b>1 mL</b>

### Calibration Group 3

<b>M-1657-03-CAL-SET</b>	<b>3 x 1 mL</b>
At stated conc. (ng/mL) in Isooctane	14 comps.

Components	Low (1X)	Medium (5X)	High (20X)
Azinphos ethyl	200	1,000	4,000
Crotoxyphos	500	2,500	10,000
DEF 6	200	1,000	4,000
Fensulfthion	500	2,500	10,000
Chlorpyrifos-methyl	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	100	500	2,000
Sulfotep	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
<b>Low</b>	M-1657-03-1X		<b>1 mL</b>
<b>Medium</b>	M-1657-03-5X		<b>1 mL</b>
<b>High</b>	M-1657-03-20X		<b>1 mL</b>

### Calibration Group 4

<b>M-1657-04-CAL-SET</b>	<b>3 x 1 mL</b>
At stated conc. (ng/mL) in Isooctane	11 comps.

Components	Low (1X)	Medium (5X)	High (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
<b>Low</b>	M-1657-04-1X		<b>1 mL</b>
<b>Medium</b>	M-1657-04-5X		<b>1 mL</b>
<b>High</b>	M-1657-04-20X		<b>1 mL</b>

### Calibration Group 2

<b>M-1657-02-CAL-SET</b>	<b>3 x 1 mL</b>
At stated conc. (ng/mL) in Isooctane	12 comps.

Components	Low (1X)	Medium (5X)	High (20X)
Chlorfevinphos	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
<b>Low</b>	M-1657-02-1X		<b>1 mL</b>
<b>Medium</b>	M-1657-02-5X		<b>1 mL</b>
<b>High</b>	M-1657-02-20X		<b>1 mL</b>

<b>M-1657-CAL-SET</b>	<b>4 x (3 x 1 mL)</b>
M-1657-01-R1-CAL-SET, M-1657-02-CAL-SET, M-1657-03-CAL-SET, M-1657-04-CAL-SET	

## Method 1658 Phenoxy-Acid Herbicides

<b>M-1658-CAL-SET</b>	<b>3 x 1 mL</b>
At stated conc. (ng/mL) in Isooctane	12 comps.

Components	Low (1X)	Medium (10X)	High (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 (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 1658 consolidates several EPA wastewater methods used to determine Phenoxy-Acid Herbicides and Herbicide esters associated with the CWA, RCRA and CERCLA, as well as other compounds amenable to extraction and analysis by wide-bore capillary column GC/ECD.

## 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

<b>M-1659-RPS</b>	<b>1 x 1 mL</b>
25 µg/mL in Acetone	
Methyl isothiocyanate (MITC)	

### Matrix Spiking Solution

<b>M-1659-MS</b>	<b>1 x 1 mL</b>
25 µg/mL in Acetone	
Dazomet	

### Calibration Solutions

<b>M-1659-CAL-SET</b>	<b>3 x 1 mL</b>	
<b>M-1659-CAL-1X</b>	0.2 mg/mL in Acetone	<b>1 mL</b>
<b>M-1659-CAL-5X</b>	1.0 mg/mL in Acetone	<b>1 mL</b>
<b>M-1659-CAL-25X</b>	5.0 mg/mL in Acetone	<b>1 mL</b>
Methyl isothiocyanate (MITC)		



# EPA 8000 Series - Pesticide Methods

## Method 8080A Organochlorine Pesticides by GC/ECD

### Organochlorine Pesticides

<b>M-8080</b>		<b>1 x 1 mL</b>
<b>M-8080-PAK</b>		<b>5 x 1 mL</b>
2.0 mg/mL each in Acetone		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 (Isomer B)	
4,4'-DDT	Methoxychlor	
Dieldrin		

### Organochlorine Pesticide QC Standard

<b>M-8080-QC-R</b>		<b>1 x 1 mL</b>	
<b>M-8080-QC-R-PAK</b>		<b>5 x 1 mL</b>	
At stated conc. (mg/mL) in Acetone		17 comps.	
Aldrin	0.02	Endosulfan I	0.02
α-BHC	0.02	Endosulfan II	0.1
β-BHC	0.02	Endosulfan sulfate	0.1
δ-BHC	0.02	Endrin	0.1
γ-BHC	0.02	Endrin aldehyde	0.02
4,4'-DDD	0.1	Heptachlor	0.02
4,4'-DDE	0.02	Heptachlor epoxide (Isomer B)	0.02
4,4'-DDT	0.1	Methoxychlor	0.02
Dieldrin	0.02		

### Internal Standard

<b>M-508-IS</b>		<b>1 x 1 mL</b>
<b>M-508-IS-PAK</b>		<b>5 x 1 mL</b>
0.1 mg/mL in MtBE		
Pentachloronitrobenzene		

### Surrogate Standard

<b>CLP-032-R</b>		<b>1 x 1 mL</b>
<b>CLP-032-R-PAK</b>		<b>5 x 1 mL</b>
0.2 mg/mL each in Acetone		2 comps.
Decachlorobiphenyl	Tetrachloro- <i>m</i> -xylene	

### Chlordane & Toxaphene

Each at 1,000 µg/mL in Hexane		(5 x 1 mL)	
	<b>Cat. No.</b>	<b>1 mL</b>	<b>Cat. No.</b>
Chlordane	P-017S-H-10X		P-017S-H-10X-PAK
Toxaphene	P-093S-H-10X		P-093S-H-10X-PAK

### Decomposition Solution

<b>M-1618D</b> *		<b>1 x 1 mL</b>	
<b>M-1618D-PAK</b> *		<b>5 x 1 mL</b>	
At stated conc. (µg/mL) in Acetone		2 comps.	
p,p'-DDT	2	Endrin	1

### o,p'-DDT and Metabolites

<b>M-8080-OP</b>		<b>1 x 1 mL</b>
<b>M-8080-OP-PAK</b>		<b>5 x 1 mL</b>
0.25 mg/mL each in Hexane:Toluene (50:50)		3 comps.
o,p'-DDD		o,p'-DDT
o,p'-DDE		

### Organochlorine Pesticide Mixture

<b>M-8080A-ASL</b>		<b>1 x 1 mL</b>
<b>M-8080A-ASL-PAK</b>	<b>Alternate Source</b>	<b>5 x 1 mL</b>
250 µg/mL each in Hexane:Toluene (50:50)		17 comps.
Aldrin	p,p'-DDE	Endrin
α-BHC	p,p'-DDT	Endrin aldehyde
β-BHC	Dieldrin	Heptachlor
δ-BHC	Endosulfan I	Heptachlor epoxide (Isomer B)
γ-BHC	Endosulfan II	Methoxychlor (1000 µg/mL)
p,p'-DDD	Endosulfan sulfate	

## Method 8080/8081 Matrix Spike Solutions & Surrogates at Working Level

### Matrix Spiking Solutions

#### For Water Samples

<b>CLP-014-5ML</b>		<b>1 x 5 mL</b>	
<b>CLP-014-25ML</b>		<b>1 x 25 mL</b>	
At stated conc. (ng/mL) in MeOH		6 comps.	
Aldrin	200	Endrin	500
4,4'-DDT	500	Heptachlor	200
Dieldrin	500	Lindane	200

#### For Waste Samples

<b>CLP-014-5X-5ML</b>		<b>1 x 5 mL</b>	
<b>CLP-014-5X-25ML</b>		<b>1 x 25 mL</b>	
At stated conc. (ng/mL) in MeOH		6 comps.	
Aldrin	1,000	Endrin	2,500
4,4'-DDT	2,500	Heptachlor	1,000
Dieldrin	2,500	Lindane	1,000

### Surrogate Solutions

#### For Water Samples

<b>CLP-032R-WL-10ML</b>		<b>1 x 10 mL</b>
<b>CLP-032R-WL-50ML</b>		<b>1 x 50 mL</b>
<b>CLP-032R-WL-100ML</b>		<b>1 x 100 mL</b>
1 µg/mL each in Acetone		2 comps.
Decachlorobiphenyl	Tetrachloro- <i>m</i> -xylene	

#### For Waste Samples

<b>CLP-032R-WL-5X-10ML</b>		<b>1 x 10 mL</b>
<b>CLP-032R-WL-5X-50ML</b>		<b>1 x 50 mL</b>
<b>CLP-032R-WL-5X-100ML</b>		<b>1 x 100 mL</b>
5 µg/mL each in Acetone		2 comps.
Decachlorobiphenyl	Tetrachloro- <i>m</i> -xylene	

\* ColdPAK required to maintain integrity of product.

# EPA 8000 Series - Pesticide Methods

## 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>	5 x 1 mL
1.0 mg/mL each in Hexane:Toluene (50:50)	20 comps.
Aldrin	Dieldrin
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 (Isomer B)
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 Mixes

<b>M-8081A-SC</b>	1 x 1 mL
<b>M-8081A-SC-PAK</b>	5 x 1 mL
1.0 mg/mL each in Hexane:Toluene (50:50)	7 comps.
Chlorobenzilate	Hexachlorocyclopentadiene
1,2-Dibromo-3-chloropropane	Isodrin
Diallate	Kepone
Hexachlorobenzene	

<b>M-8081A-SC-R</b>	1 x 1 mL
<b>M-8081A-SC-R-PAK</b>	5 x 1 mL
1.0 mg/mL each in Hexane:Toluene (50:50)	6 comps.
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 (50:50)	22 comps.
Alachlor	Etridiazole
Captafol	Hexachlorobenzene
Captan	Hexachlorocyclopentadiene
Chlorobenzilate	Isodrin
Chloroneb	Mirex
Chloropropylate	trans-Nonachlor
Chlorothalonil	Pentachloronitrobenzene
1,2-Dibromo-3-chloropropane	Perthane
DCPA	Propachlor
Diallate	Permethrin * (cis & trans)
Dicofol	Trifluralin

\* Certificate will reflect actual cis/trans ratio

### Tailing Test Standard

<b>M-8081-T</b>	1 x 1 mL
1.0 mg/mL each in Hexane:Toluene (50:50)	4 comps.
Carbophenothion	Kepone
Dichlone	Nitrofen
<b>M-8081-T-R</b>	1 x 1 mL
1.0 mg/mL each in Hexane:Toluene (50:50)	3 comps.
Carbophenothion	Nitrofen
Dichlone	

### Surrogate Standards

<b>CLP-032-R</b>	1 x 1 mL
<b>CLP-032-R-PAK</b>	5 x 1 mL
0.2 mg/mL each in Acetone	2 comps.

Decachlorobiphenyl	Tetrachloro- <i>m</i> -xylene
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<b>CLP-034</b>	1 x 1 mL
<b>CLP-034-PAK</b>	5 x 1 mL
0.2 mg/mL each in Acetone	2 comps.

Dibutylchlorendate	Tetrachloro- <i>m</i> -xylene
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<b>M-8081-SS-X</b>	1 x 1 mL
<b>M-8081-SS-X-PAK</b>	5 x 1 mL

1.0 mg/mL in Acetone

2-Bromobiphenyl
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### For Dual Column

<b>M-8081-SS-DC</b>	1 x 1 mL
<b>M-8081-SS-DC-PAK</b>	5 x 1 mL

1.0 mg/mL in Acetone

4-Chloro-3-nitrobenzotrifluoride
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### Internal Standards

<b>M-8081-IS</b>	1 x 1 mL
<b>M-8081-IS-PAK</b>	5 x 1 mL

1.0 mg/mL in Acetone

Pentachloronitrobenzene (PCNB)
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<b>M-8081-IS-X</b>	1 x 1 mL
<b>M-8081-IS-X-PAK</b>	5 x 1 mL

1.0 mg/mL in Acetone

α,α-Dibromo- <i>m</i> -xylene
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### For Dual Column

<b>M-8081-IS-DC</b>	1 x 1 mL
<b>M-8081-IS-DC-PAK</b>	5 x 1 mL

1.0 mg/mL in Acetone

1-Bromo-2-nitrobenzene
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### Decomposition Standard

<b>M-8081-DS</b>	1 x 1 mL
<b>M-8081-DS-PAK</b>	5 x 1 mL

0.2 mg/mL each in Hexane

4,4'-DDT	Endrin
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# EPA 8000 Series - Pesticide Methods

## Method 8085 Pesticides by GC/AED

### Nitrogen Containing Pesticides

#### Mix #1

**M-8085-N1** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 19 comps.

Alachlor	18	Metribuzin	5	Pronamide	20
Atrazine	5	Napropamide	15	Propachlor	12
Bromacil	20	Norflurazon	10	Simazine	5
Dichlobenil	10	Oxyfluorfen	20	Tebuthiuron	7.5
Diphenamid	15	Pendimethalin	7.5	Terbacil	15
Ethalfuralin	7.5	Prometryne	5	Trifluralin	7.5
Metolachlor	20				

#### Mix #2

**M-8085-N2** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 18 comps.

Ametryn	5	Cycloate	10	Prometon	5
Benfluralin	7.5	EPTC	10	Propargite	10
Butylate	10	Hexazinone	7.5	Propazine	5
Chlorpropham	20	Molinate	10	Tillam	10
Chlorothalonil	12	Prebane	5	Triallate	13
Cyanazine	7.5	Profluralin	12	Vernolate	10

#### Mix #3

**M-8085-N3** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 15 comps.

Butachlor	30	Gesatamine	7.5	cis-Permethrin	10
Carboxin	30	Hexazinone	7.5	Resmethrin	10
Diallate	35	Karmex	30	Sumithrin	10
Fenarimol	15	Metalaxyl	30	Triadimefon	13
Fenvalerate	20	MGK-264	40	Triallate	15

### Technical Note

These standards are for those laboratories participating in the analysis of pesticides by EPA Method 8085 Pesticide Screening and Compound Independent Elemental Quantitation by Gas Chromatography with Atomic Emission Detection (AED).

### Chlorinated Pesticides

#### Mix #1

**M-8085-C1** **1 x 5 mL**  
2.5  $\mu\text{g/mL}$  each in Hexane 23 comps.

Aldrin	p,p'-DDE	Endrin ketone
$\alpha$ -BHC	p,p'-DDT	Heptachlor
$\beta$ -BHC	Dieldrin	Heptachlor epoxide (Isomer B)
$\gamma$ -BHC	Endosulfan I	Methoxychlor
$\delta$ -BHC	Endosulfan II	cis-nonachlor
$\gamma$ -Chlordane	Endosulfan sulfate	Oxychlordane
$\alpha$ -Chlordane	Endrin	Pentachloroanisole
p,p'-DDD	Endrin aldehyde	

#### Mix #2

**M-8085-C2** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in Hexane 9 comps.

Captan	6.75	Hexachlorobenzene	2.5
Captafol	12.5	Kelthane	10
o,p'-DDE	2.5	Mirex	2.5
o,p'-DDD	2.5	trans-Nonachlor	2.5
o,p'-DDT	2.5		

### Compound Independent Calibration (CIC) Mix

**M-8085-CIC** **1 x 5 mL**  
At stated conc. ( $\text{ng/mL}$ ) in MtBE 15 comps.

Decachlorobiphenyl	492	Pentachloronitrobenzene	1690
Diazinon	9800	Phorate	2100
4,4'-Dibromooctafluorobiphenyl	1000	Silvex methyl ester	400
Dichlobenil	6140	Terbufos	7600
Dursban	5680	2,4,6-Tribromoanisole	2870
Ethoprop	391	1,2,3-Trichlorobenzene	6810
loxynil methyl	500	Trifluralin	16000
Malathion	1070		

### Organo Phosphorous Pesticides

#### Mix #1

**M-8085-P1** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 14 comps.

Azinphos ethyl	8	EPN	5
Carbophenothion	5	Ethion	3.5
Chlorpyrifos methyl ester	4	Fenamiphos	5
Demeton (mixed isomers)	7	Fenitrothion	3.5
Disulfoton	3	Malathion	4
Dursban	4	Merphos	6
Dyfonate	3	Sulfotep	3

#### Mix #2

**M-8085-P2** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 12 comps.

Azinphos methyl	8	Ethoprop	4	Methyl parathion	3.5
Bolstar	3.5	Fensulfotiothion	5	Parathion	4
Diazinon	4	Fenthion	3.5	Phorate	3.5
Dimethoate	4	Imidan	5.5	Ronnel	3.5

### Herbicides as Methyl Derivatives

#### Mix #1

**M-8085-H1-M** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 12 comps.

Bentazon methyl ester	7.5	4-Nitroanisole	10
Bromoxynil methyl ether	5	Pentachloroanisole	2.5
Chloramben methyl ester	5	2,3,4,5-Tetrachloroanisole	2.75
Dinoseb methyl ether	7.5	2,3,4,6-Tetrachloroanisole	2.75
MCPA methyl ester	10	2,4,5-Trichloroanisole	3
MCPP methyl ester	10	2,4,6-Trichloroanisole	3

#### Mix #2

**M-8085-H2-M** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 13 comps.

Dalapon methyl ester	4	loxynil methyl ether	5
2,4-D methyl ester	5	Methyl 3,5-Dichlorobenzoate	5
2,4-DB methyl ester	6	Picloram methyl ester	5
DCPA methyl ester	4	Silvex methyl ester	4
Dicamba methyl ester	5	2,4,5-T methyl ester	4
Dichlorprop methyl ester	5.5	Triclopyr methyl ester	4
Diclofop methyl	7.5		

### Surrogates

**M-8085-PEST-SS** **1 x 5 mL**  
At stated conc. ( $\mu\text{g/mL}$ ) in MtBE 4 comps.

Decachlorobiphenyl	10	1,3-Dimethyl-2-nitrobenzene	20
4,4'-Dibromooctafluorobiphenyl	20	Triphenylphosphate	20

### Technical Note

Organophosphorus and Nitrogen/Phosphorus pesticides are light sensitive, store in deactivated amber vials.

### Alternate Surrogates

**M-8085-PEST-SS2** **1 x 5 mL**  
20  $\mu\text{g/mL}$  each in MtBE 2 comps.

Dibutylchloroendate	Tetrachloro-m-xylene
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### Herbicide Surrogate

**M-8085-HERB-SS** **1 x 5 mL**  
20  $\mu\text{g/mL}$  in MtBE

2,4,6-Tribromophenol
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# EPA 8000 Series - Pesticide Methods

## Method 8140 Organophosphorous Pesticides by GC/NPD/ELCD/FPD

### Organophosphorous Pesticides

#### M-8140M

#### M-8140M-PAK

0.04 mg/mL each in Hexane

#### M-8140M-5X \*

#### M-8140M-5X-PAK \*

0.2 mg/mL each in Hexane:Acetone (95:5)

1 x 1 mL  
5 x 1 mL  
20 comps.

1 x 1 mL  
5 x 1 mL  
20 comps.

### Organophosphorous Pesticide Set

#### M-8140-SET

20 x 1 mL

Each at 1.0 mg/mL in Hexane, \* Hexane:Acetone (95:5)

Compound	Cat. No.	1 mL	Compound	Cat. No.	1 mL	Compound	Cat. No.	1 mL
Azinphosmethyl	M-8140-01		Disulfoton	M-8140-08		Naled	M-8140-15	
Bolstar	M-8140-02		Ethoprop	M-8140-09		Phorate	M-8140-16	
Chlorpyrifos	M-8140-03		Fensulfothion	M-8140-10 *		Ronnel	M-8140-17	
Coumaphos	M-8140-04		Fenthion	M-8140-11		Stirophos	M-8140-18	
Demeton	M-8140-05		Merphos	M-8140-12		Tokuthion	M-8140-19	
Diazinon	M-8140-06		Methyl parathion	M-8140-13		Trichloronate	M-8140-20	
Dichlorovos	M-8140-07		Mevinphos	M-8140-14		* Hexane:Acetone (95:5)		

## Method 8141A Additions to Method 8140 Organophosphorous Pesticides by GC/NPD

### Mix #1

#### M-8141M \*

1 x 1 mL

#### M-8141M-PAK \*

5 x 1 mL

0.2 mg/mL each in Hexane

7 comps.

#### M-8141-SET

7 x 1 mL

Each at 1.0 mg/mL in Hexane, \* Hexane:Acetone (90:10), \*\* (95:5)

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	

### Technical Note

Tetraethyl pyrophosphate TEPP is unstable, decomposes in water, and is thermally labile at inlet temperatures above 170°C.

### Mix #2

#### M-8141A-1M

1 x 1 mL

0.2 mg/mL each in Hexane

10 comps.

#### M-8141A-1-SET \*

10 x 1 mL

Each at 1.0 mg/mL in Hexane

Compound	Cat. No.	1 mL
Azinphos-ethyl	M-8141A-1-01	
Carbophenothion	M-8141A-1-02	
Chlorfenvinphos	M-8141A-1-03	
Dioxathion	M-8141A-1-04 *	
Ethion	M-8141A-1-05	
Famphur	M-8141A-1-06	
Leptophos	M-8141A-1-07	
Phosmet	M-8141A-1-08	
Phosphamidon	M-8141A-1-09 *	
Terbufos	M-8141A-1-10	

### Mix #3

#### M-8141A-2M

1 x 1 mL

0.2 mg/mL each in Hexane

9 comps.

#### M-8141A-2-SET

9 x 1 mL

Each at 1.0 mg/mL in Hexane

Aspon	Fenitrothion
Chlorpyrifos methyl ester	Fonophos
Crotoxyphos	Thionazin
Dichlofention	Trichlorfon
Dicrotophos	

### Industrial Chemicals & Triazine Herbicides

#### M-8141A-IC

1 x 1 mL

0.2 mg/mL each in Hexane

2 comps.

Hexamethylphosphoramide (HMPA) Tri-o-cresylphosphate (TOCP)

#### M-8141A-TH

1 x 1 mL

#### M-8141A-TH-PAK

5 x 1 mL

0.2 mg/mL each in Acetone

2 comps.

Atrazine Simazine

#### M-8141B-HSD

1 x 1 mL

#### M-8141B-HSD-PAK

5 x 1 mL

0.2 mg/mL each in Hexane

9 comps.

Chlorpyrifos	EPN	Stirophos
Coumaphos	Naled	Trichloronate
Dichlorvos	Ronnel	Tokuthion

### Internal Standard for NPD

#### M-8141A-IS

1 x 1 mL

#### M-8141A-IS-PAK

5 x 1 mL

1.0 mg/mL in Acetone

1-Bromo-2-nitrobenzene

### 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

#### M-8141A-SS

1 x 1 mL

#### M-8141A-SS-PAK

5 x 1 mL

1.0 mg/mL each in Acetone

2 comps.

Tributylphosphate Triphenylphosphate

### Surrogate Standard for NPD only

#### M-8141A-SS-X

1 x 1 mL

#### M-8141A-SS-X-PAK

5 x 1 mL

1.0 mg/mL in Acetone

4-Chloro-3-nitrobenzotrifluoride

### Technical Note

Organophosphorus and Nitrogen/Phosphorus pesticides are light sensitive, store in deactivated amber vials.

# EPA 8000 Series - Pesticide Methods

## Method 8150A/8150B Chlorinated Herbicides by GC/ECD

### Chlorinated Herbicides in Ground Water (Rev. 1, July 1992) and their Methyl Derivatives

Compound	(mg/mL) Conc.	Herbicides Acids	Methyl Derivative
		(in MeOH) Cat. No.	(in Hexane) 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
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
		<b>M-8150A-SET *</b>	<b>M-8150-SET</b> <b>10 x 1 mL</b>

#### Underivatized Solution (Varied Concentration)

<b>M-8150A</b>		<b>1 x 1 mL</b>
<b>M-8150A-PAK</b>		<b>5 x 1 mL</b>
0.1 mg/mL in MeOH, except MCPA and MCPP		
2,4-D	Dichlorprop	MCPP (10 mg/mL)
Dalapon	Dinoseb	2,4,5-TP
2,4-DB	MCPA (10 mg/mL)	2,4,5-T
Dicamba		

#### Methyl Derivatives Solutions (Varied Concentration)

<b>M-8150</b>		<b>1 x 1 mL</b>
0.1 mg/mL in MeOH, except MCPA and MCPP		
2,4-D methyl ester	Dinoseb methyl ester	
Dalapon methyl ester	MCPA methyl ester (10 mg/mL)	
2,4-DB methyl ester	MCPP methyl ester (10 mg/mL)	
Dicamba methyl ester	2,4,5-TP methyl ester	
Dichlorprop methyl ester	2,4,5-T methyl ester	

#### Underivatized Solution (Equal Concentration)

<b>M-8150M-A</b>		<b>1 x 1 mL</b>
<b>M-8150M-A-PAK</b>		<b>5 x 1 mL</b>
0.2 mg/mL each in MeOH		
2,4-D	Dichlorprop	MCPP
Dalapon	Dinoseb	2,4,5-TP
2,4-DB	MCPA	2,4,5-T
Dicamba		

#### Methyl Derivatives Solutions (Equal Concentration)

**M-8150M-SET**      **2 x 1 mL**  
M-8150M, M-8150M-2

<b>M-8150M</b>		<b>1 x 1 mL</b>
<b>M-8150M-PAK</b>		<b>5 x 1 mL</b>
20 µg/mL each in Hexane		

2,4-D methyl ester	Dichlorprop methyl ester
Dalapon methyl ester	Dinoseb methyl ester
2,4-DB methyl ester	2,4,5-TP methyl ester
Dicamba methyl ester	2,4,5-T methyl ester

#### Underivatized Surrogate Standards

<b>M-8150B-SS</b>	<b>1 x 1 mL</b>
<b>M-8150B-SS-PAK</b>	<b>5 x 1 mL</b>
0.1 mg/mL in Acetone	
<b>M-8150B-SS-10X</b>	<b>1 x 1 mL</b>
1.0 mg/mL in Acetone	
2,4-Dichlorophenylacetic acid	

<b>M-8150M-2</b>	<b>1 x 1 mL</b>
<b>M-8150M-2-PAK</b>	<b>5 x 1 mL</b>
2,000 µg/mL each in Hexane	
MCPA methyl ester	MCPP methyl ester

#### Internal Standard

<b>M-8151-IS</b>	<b>1 x 1 mL</b>
<b>M-8151-IS-PAK</b>	<b>5 x 1 mL</b>
0.25 mg/mL in Acetone	
4,4'-Dibromooctafluorobiphenyl	

#### Methyl Derivative Surrogate Standard

<b>M-515-SS</b>	<b>1 x 1 mL</b>
<b>M-515-SS-PAK</b>	<b>5 x 1 mL</b>
0.1 mg/mL in MtBE	
Methyl 2,4-dichlorophenylacetate	

#### PFB Derivatized Chlorinated Herbicides

<b>M-8150-02-PFB</b>	<b>1 x 1 mL</b>
0.1 mg/mL in MtBE	
2,4-D-PFB	
<b>M-8150-04-PFB</b>	<b>1 x 1 mL</b>
0.1 mg/mL in MtBE	
2,4,5-TP-PFB	

\* ColdPAK required to maintain integrity of product.

# EPA 8000 Series - Pesticide Methods

## Method 8151/8151A Chlorinated Herbicides by GC/ECD

### Methyl Derivatives

<b>M-8151</b>	<b>1 x 1 mL</b>
0.1 mg/mL each in MtBE, except MCPA & MCPP	18 comps.
Acifluorfen methyl ester	Dichlorprop methyl ester
Bentazon methyl ester	Dinoseb methyl ester
Chloramben methyl ester	MCPA methyl ester (10 mg/mL)
2,4-D methyl ester	MCPP methyl ester (10 mg/mL)
Dalapon methyl ester	4-Nitroanisole
2,4-DB methyl ester	Pentachloroanisole
DCPA methyl ester	Picloram methyl ester
Dicamba methyl ester	2,4,5-TP methyl ester
Methyl-3,5-dichlorobenzoate	2,4,5-T methyl ester

### Underivatized

<b>M-8151A</b>	<b>1 x 1 mL</b>
<b>M-8151A-PAK</b>	<b>5 x 1 mL</b>
0.1 mg/mL each in Acetone, except MCPA & MCPP	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

### Internal Standards

<b>M-8151-IS</b>	<b>1 x 1 mL</b>
<b>M-8151-IS-PAK</b>	<b>5 x 1 mL</b>
0.25 mg/mL in Acetone	
4,4'-Dibromooctafluorobiphenyl	

<b>M-8151-IS-2</b>	<b>1 x 1 mL</b>
<b>M-8151-IS-2-PAK</b>	<b>5 x 1 mL</b>
0.25 mg/mL in Acetone	
1,4-Dichlorobenzene	

### Surrogate Standards

<b>M-515-SS</b>	<b>1 x 1 mL</b>
<b>M-515-SS-PAK</b>	<b>5 x 1 mL</b>
0.1 mg/mL in MtBE	
Methyl-2,4-dichlorophenylacetate	

<b>M-8150B-SS</b>	<b>1 x 1 mL</b>
<b>M-8150B-SS-PAK</b>	<b>5 x 1 mL</b>
0.1 mg/mL in Acetone	
<b>M-8150B-SS-10X</b>	<b>1 x 1 mL</b>
1.0 mg/mL in Acetone	
2,4-Dichlorophenylacetic acid	

## ASL Method 8270C/D Pesticides by GC/MS ASL

### Organophosphorous Pesticide Mix

<b>M-8270-09-ASL</b>	<b>1 x 1 mL</b>	<b>Alternate Source</b>
2.0 mg/mL each in CH <sub>2</sub> Cl <sub>2</sub>	9 comps.	
Dimethoate	Thionazin	Methyl parathion
Disulfoton	Sulfotep	Parathion
Famphur	O,O,O-Triethylphosphorothioate	Phorate

### Organochlorine Pesticide Mix

<b>M-8270-14-ASL</b>	<b>1 x 1 mL</b>	
2.0 mg/mL each in Acetone	17 comps.	
Aldrin	4,4'-DDE	Endrin
α-BHC	4,4'-DDT	Endrin aldehyde
β-BHC	Dieldrin	Heptachlor
δ-BHC	Endosulfan I	Heptachlor epoxide
γ-BHC	Endosulfan II	(Isomer B)
4,4'-DDD	Endosulfan sulfate	Methoxychlor

## ASL Method 8270C/D Pesticides by GC/MS (Cont.)

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.

### Pesticide Mixes

<b>M-8270-10-ASL *</b>	<b>1 x 1 mL</b>
2.0 mg/mL each in CH <sub>2</sub> Cl <sub>2</sub>	6 comps.
Aramite	Isodrin
Chlorobenzilate	Kepone
Diallate	Pronamide

<b>M-8270-16</b>	<b>1 x 1 mL</b>
1000 µg/mL each in CH <sub>2</sub> Cl <sub>2</sub>	10 comps.
Anilazine	Dioxathion
Azinphos methyl	Mirex
Barbamate	Sulfoxide
Demeton (mixed isomers)	Sulfalate
Dichlone	Trifluralin

<b>M-8270-17</b>	<b>1 x 1 mL</b>
1000 µg/mL each in CH <sub>2</sub> Cl <sub>2</sub>	7 comps.
Brominal	Dinocap
Captafol	Fluchloralin
Captan	Nitrofen
Dinex	

<b>M-8270-18</b>	<b>1 x 1 mL</b>
1000 µg/mL each in CH <sub>2</sub> Cl <sub>2</sub>	6 comps.
Carbaryl	Mexacarbate
Carbofuran	Schradan (Octamethylpyrophosphoramidate)
Ethyl carbamate	Phenobarbital

<b>M-8270-19</b>	<b>1 x 1 mL</b>
1000 µg/mL each in CH <sub>2</sub> Cl <sub>2</sub>	12 comps.
Carbophenothion	Leptophos
Coumaphos	Malathion
EPN	Phosalone
Ethion	Imidan (Phosmet)
Fensulfothion	Terbufos
Fenthion	Tetrachlorvinphos

<b>M-8270-20</b>	<b>1 x 1 mL</b>
1000 µg/mL each in CH <sub>2</sub> Cl <sub>2</sub>	9 comps.
Chlorfenvinphos	Monocrotophos
Ciodrin (Crotoxyphos)	Naled
Dichlorvos	Phosphamidon
Dicrotophos	TEPP (Tetraethylpyrophosphate)
Mevinphos	

<b>M-8270-21</b>	<b>1 x 1 mL</b>
2.0 mg/mL each in Acetone	3 comps.
α-Chlordane	Endrin ketone
γ-Chlordane	

<b>M-8270-07-SET *</b>	<b>2 x 1 mL</b>
	M-8270-07-R1, APP-9-014-D-10X

<b>M-8270-07-R1 *</b>	<b>1 x 1 mL</b>	
2.0 mg/mL each in CH <sub>2</sub> Cl <sub>2</sub>	14 comps.	
Chlorobenzilate	Disulfoton	Phorate
Diallate	Famphur	Silvex (2,4,5-TP)
2,4-D	Kepone	Sulfotep
Dimethoate	Methyl parathion	Thionazin
Dinoseb	Parathion	

<b>APP-9-014-D-10X</b>	<b>1 x 1 mL</b>
2.0 mg/mL in CH <sub>2</sub> Cl <sub>2</sub>	
Aramite	

\* ColdPAK required to maintain integrity of product

## Method 8318 N-Methylcarbamates by HPLC

### N-Methylcarbamates

**M-8318M** 1 x 1 mL  
0.1 mg/mL each in MeOH 10 comps.

**M-8318-SET** 10 x 1 mL  
Each at 0.1 mg/mL in MeOH

Aldicarb	3-Hydroxycarbofuran
Aldicarb sulfone	Methiocarb
Carbaryl	Methomyl
Carbofuran	Promecarb
Dioxacarb	Propoxur

## Method 8321 Non-Volatile Compounds by HPLC/TSP/MS or UV Solvent Extractable

### Chlorinated Phenoxyacid Herbicide Mix

**M-8321-HERB** 1 x 1 mL  
0.1 mg/mL each in AcCN 14 comps.

Dalapon	Dinoseb
Dicamba	MCPA
2,4-D	MCPP
2,4-D butoxyethyl 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 butoxyethyl ester

### Organophosphorus Pesticide Mix

**M-8321-OP** 1 x 1 mL  
0.1 mg/mL each in AcCN 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** 1 x 1 mL  
At stated conc. (µg/mL) in AcCN:MeOH (50:50) 13 comps.

Benzidine †	250	3,3'-Dimethylbenzidine †	350
Benzoylprop ethyl	350	Diuron	450
Caffeine	300	Linuron	1,300
Carbaryl	1,000	Monuron	400
o-Chlorophenyl thiourea	750	Rotenone	3,200
3,3'-Dichlorobenzidine †	250	Siduron	450
3,3'-Dimethoxybenzidine †	750		

### Performance Check Solution

**M-553-PC** 1 x 1 mL  
0.1 mg/mL in AcCN

DFTPPO (Decafluorotriphenylphosphine oxide)

† Subject to oxidation

# European Methods - Pesticide Methods

## Pesticide Standards

The following Pesticide Standards are for German Regulations (for residue thresholds), Swiss Regulations (for components and contaminants in food), and DFG collected methods.

### Pesticide Mix #1

<b>AE-00010</b>	1 x 1 mL
<b>AE-00010-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Toluene</i> 31 comps.	
Aldrin	10
α-BHC	10
β-BHC	10
γ-BHC	10
δ-BHC	10
α-Chlordane	10
γ-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
Dieldrin	10
Endosulfan I	10
Endosulfan II	10
Endrin	10
Heptachlor	10
Heptachlor epoxide (Isomer A)	10
Heptachlor epoxide (Isomer B)	10
2,2',3,4,4',5,5'-Heptachlorobiphenyl	1
Hexachlorobenzene	10
2,2',3,4,4',5,5'-Hexachlorobiphenyl	1
2,2',4,4',5,5'-Hexachlorobiphenyl	1
Isodrin	10
Methoxychlor	10
Mirex	10
Oxychlordane	10
2,2',4,5,5'-Pentachlorobiphenyl	1
2,2',5,5'-Tetrachlorobiphenyl	1
2,4,4'-Trichlorobiphenyl	1

### Pesticide Mix #2

<b>AE-00011</b>	1 x 1 mL
<b>AE-00011-10ML</b>	1 x 10 mL
<i>10 µg/mL each in Toluene</i> 22 comps.	
Anilazine	Tecnacene
Captan	Tetradifon
Chlorthalonil	Tetrasul
Clorfenson	Tridiamefon
Dichlofluanid	Tridiamenol
Dicofol	Trifluarin
Endosulfan sulfate	Pentachloroaniline
Fenson	Procyimidon
Folpet	Propyzamid
Imazailil	Quintozen
Iprodion	Vinclozolin

### Pesticide Mix #3

<b>AE-00012</b>	1 x 1 mL
<b>AE-00012-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Toluene</i> 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

<b>AE-00013</b>	1 x 1 mL
<b>AE-00013-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Toluene</i> 5 comps.	
Cyproconazole	500
Hexaconazole	500
Penconazole	500
Tebuconazole	500
Tetrachlorvinphos	10

### Pesticide Mix #5

<b>AE-00014</b>	1 x 1 mL
<b>AE-00014-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Ethyl acetate</i> 8 comps.	
Atrazine	200
Cyanazine	200
Desmertryn	500
Metribuzin	500
Prometryne	500
Simazine	200
Terbutryn	500
Tetrachlorvinphos	10

### Tetrachlorvinphos Surrogate / Internal Standard

<b>AE-00047</b>	1 x 1 mL
<i>1000 µg/mL in Acetonitrile</i>	
Tetrachlorvinphos	

### Pesticide Mix #6

<b>AE-00015</b>	1 x 1 mL
<b>AE-00015-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Toluene</i> 8 comps.	
Chlorpyrifos-methyl	100
Diazinon	100
Ethion	100
Etrifos	50
Iodofenphos	200
Malathion	100
Phosphamidon	200
Tetrachlorvinphos	10

### Pesticide Mix #7

<b>AE-00016</b>	1 x 1 mL
<b>AE-00016-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Toluene</i> 8 comps.	
Bromophos-methyl	100
Bromophos-ethyl	150
Fenitrothion	200
Methacryfos	150
Omethoate	150
Phosalone	100
Tetrachlorvinfos	10
Tolclofos-methyl	100

### Pesticide Mix #8

<b>AE-00017</b>	1 x 1 mL
<b>AE-00017-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Toluene:Acetone:Hexane (90:5:5)</i> 6 comps.	
Chlorbufam	500
Chlorpropham	500
Dichlobenil	200
Imazailil	500
Pyrazon	500
2,3,5,6-Tetrachloronitrobenzene	100

### Pesticide Mix #9

<b>AE-00018</b>	1 x 1 mL
<b>AE-00018-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Toluene</i> 9 comps.	
Azinphos ethyl	100
Fenchlorvos	100
Fonophos	150
Methidathion	100
Mevinphos	200
Parathion-ethyl	150
Parathion-methyl	100
Pirimiphos-methyl	100
Tetrachlorvinphos	10

### Pesticide Mix #10

<b>AE-00019</b>	1 x 1 mL
<b>AE-00019-10ML</b>	1 x 10 mL
<i>At stated conc. (µg/mL) in Toluene</i> 7 comps.	
Benalaxyl	500
Carbaryl	500
Oxadixyl	500
Terbutylazine	250
Tetrachlorvinphos	10
Triadimefon	500
Triadimenol	500



# European Methods - Pesticide Methods

## Pesticide Standards (Cont.)

The following Pesticide Standards are for German Regulations (for residue thresholds), Swiss Regulations (for components and contaminants in food), and 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-BHC
Chloridazon	γ-BHC
o,p'-DDD	δ-BHC
p,p'-DDD	Heptachlor
o,p'-DDE	Heptachlor epoxide (Isomer B)
p,p'-DDE	Heptachlor epoxide (Isomer A)
o,p'-DDT	Hexachlorobenzene
p,p'-DDT	Tecnazene
Endrin	Tetrachlorvinphos
α-BHC	

### 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 sulfonate	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
Desethyl atrazine	Metolachlor
Desisopropylatrazine	Monolinuron
Desethylterbutylazine	Sebutylazin
Dimetufuron	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 *	Mechlorprop *
Chlortofuron	Metazachlor
Cyanazine	Metobromuron
2,4-D *	Metoxuron
Dichlorprop *	Sebutylazin
1,3-Dichlorpropene	Simazine
Endosulfan I	Terbutylazine
Endosulfan II	
Isoproturon	* Underivatized

Regulations - Test methods for organochlorine and organophosphorus compounds and pyrethroid  
 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	Pentachloraniline
Bromopropylate	cis-Permethrin
Carbophenothion	trans-Permethrin
Cypermethrin	Piperonyl butoxide
Deltamethrin	Pyrethrins
Endosulfane sulfate	Quintozene
Fenvalerate	
Methyl pentachlorophenyl sulfide	

### 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
Dichlorvos	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	Tecnazene
Ethion	

### 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	MCPA acid
Cyanazine	Metazachlor
2,4-D	Metobromuron
Dichlorprop	Metoxuron
1,1-Dichlorpropene	Sebutylazin
Endosulfan I	Simazine
Endosulfan II	Terbutylazine

### Pesticide Mix #21

**AE-00051** 1 x 1 mL  
**AE-00051-10ML** 1 x 10 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

### 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 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	MCPA acid

# European Methods - Pesticide Methods

## Pesticide Standards (Cont.)

### Pesticide Mix #24

<b>AE-00054</b>		<b>1 x 1 mL</b>	
<b>AE-00054-10ML</b>		<b>1 x 10 mL</b>	
<i>At stated conc. (µg/mL) in Cyclohexane</i>			
			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

<b>AE-00055</b>		<b>1 x 1 mL</b>	
<b>AE-00055-10ML</b>		<b>1 x 10 mL</b>	
<i>10 µg/mL each in Cyclohexane</i>			
			4 comps.
α-BHC		γ-BHC	
β-BHC		δ-BHC	

### Pesticide Mix #27

<b>AE-00057</b>		<b>1 x 1 mL</b>	
<b>AE-00057-10ML</b>		<b>1 x 10 mL</b>	
<i>1.0 µg/mL each in Isooctane</i>			
			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			

### Pesticide Mix #26

<b>AE-00056</b>		<b>1 x 1 mL</b>	
<b>AE-00056-10ML</b>		<b>1 x 10 mL</b>	
<i>1.0 µg/mL each in Cyclohexane</i>			
			5 comps.
α-BHC		δ-BHC	
β-BHC		ε-BHC	
γ-BHC			

## EN / DIN / ISO Pesticide Standards

### 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	Sebutylazin
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	

### DIN 38407-14 Free 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	Fenoprop acid
MCPA acid	MCPB acid
Dichlorprop acid	2,4,5-T acid
2,4-D acid	2,4-DB acid

### 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	Sebutylazin
Karmex (Diuron)	Simazine
Linuron	Terbutylazine
Metazachlor	

### DIN V 38407-11 Pesticide Mix

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	Sebutylazin
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	Fenoprop methyl ester
MCPA methyl ester	MCPB methyl ester
Dichlorprop methyl ester	2,4,5-T methyl ester
2,4-D methyl ester	2,4-DB methyl ester

### 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'-DDT	Heptachlor epoxide (Isomer B)
o,p'-DDD	Endosulfan I
p,p'-DDD	Endosulfan II
p,p'-DDT	

### 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
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## Canadian Drinking Water - Brownfield Regulation

### Phenoxyacid Herbicides Mix

**CCME-CDW-PHERB** **1 x 1 mL**  
*1000 µg/mL each in Acetone* **11 comps.**

Bromoxynil
2,4-D
Dicamba
2,4-Dichlorophenol
Diclofop methyl
Dinoseb
Pentachlorophenol
Picloram
2,4,5-T
2,3,4,6-Tetrachlorophenol
2,4,6-Trichlorophenol

### Chlorinated Pesticide Mix

**CCME-CDW-CPEST** **1 x 1 mL**  
*200 µg/mL each in Hexane:Toluene (50:50)* **14 comps.**

Aldrin	4,4'-DDT
γ-BHC	Dieldrin
α-Chlordane	Heptachlor
γ-Chlordane	Heptachlor epoxide (Isomer B)
2,4'-DDE	Methoxychlor
4,4'-DDE	Oxychlordane Isomer
2,4'-DDT	Trifluralin

### Carbamates Mix

**CCME-CDW-CARB** **1 x 1 mL**  
*100 µg/mL each in AcCN* **5 comps.**

Aldicarb	Carbofuran
Bendiocarb	Triallate
Carbaryl	

## Korean Drinking Water Regulation

### Pesticide Mix

**KDWR-003** **1 x 1 mL**  
**KDWR-003-PAK** **5 x 1 mL**  
*1000 µg/mL each in MeOH* **5 comps.**

Carbaryl
Diazinon
Fenitrothion
Malathion
Parathion

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50-29-3	29	107-07-3	19	512-56-1	106	1689-83-4	61	2642-81-1	19	10265-92-6	73
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52-68-6	103	115-26-4	36	535-89-7	23	1746-81-2	73	2797-51-5	91	10552-74-6	76
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53-19-0	29	115-32-2	64	556-22-9	56	1825-19-0	71	2814-20-2	62	10606-46-9	34
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95-06-7	94	315-18-4	73	1332-40-7	22	2581-34-2	71	7332-32-3	16	22224-92-6	46
95-94-3	98	319-84-6	9	1420-06-0	104	2588-03-6	81	7421-93-4	42	22248-79-9	98
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99-30-9	12	333-41-5	31	1570-64-5	19	2597-03-7	80	8001-35-2	102	23135-22-0	77
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101-42-8	49	500-28-7	21	1634-78-2	65	2635-10-1	70	9002-91-9	68	23564-05-8	101
103-17-3	17	504-24-5	4	1646-87-3	3	2636-26-2	24	9006-42-2	71	23564-06-9	100
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23950-58-5	85	39184-59-3	100	61213-25-0	53	82560-54-1	8	114420-56-3	21	150824-47-8	112
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24151-93-7	82	39300-45-3	38	62610-77-9	69	83055-99-6	8	115086-54-9	59	153233-91-1	45
24157-81-1	36	39515-40-7	26	62850-32-2	47	83121-18-0	96	115852-48-7	47	153719-23-4	99, 112
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24602-86-6	104	39856-16-1	40	64249-01-0	5	83657-24-3	38	117428-22-5	82	158062-67-0	50
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24691-80-3	47	40596-69-8	70	64628-44-0	105	84332-86-5	21	118134-30-8	94	161050-58-4	70
24934-91-6	18	40843-25-2	34	64700-56-7	104	84496-56-0	22	118712-89-3	102	161326-34-7	46
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P-1002S-TP	103	P-1059S	12	P-1151S-CN	35	P-1441S-CN	24
P-1003N	98	P-1060N	90	P-1152S-CN	4	P-1442S-CN	30
P-1003S	98	P-1060S	90	P-1153S-CN	81	P-1443-CN	30
P-1004N	103	P-1061N	82	P-1154N	82	P-1444S-CN	4
P-1004S	103	P-1061S	82	P-1154S-CN	82	P-1445N	24
P-1005N	33	P-1062N	67	P-1155N	53	P-1445S	24
P-1005S-T	33	P-1062S	67	P-1156S-CN	87	P-1458N	6
P-1006N	103	P-1063N	58	P-1157S-CN	21	PES-PU-001	114
P-1006S	103	P-1063S	58	P-1157S-CN-10X	21	PES-PU-001-PAK	114
P-1007N	74	P-1063S-CN	58	P-1158S-CN	86	PES-PU-SS	114
P-1007S	74	P-1064N	31	P-1158S-CN-10X	86	PES-PU-SS-PAK	114
P-1008N	33	P-1064S-A	31	P-1159S-CN	63	P-FIP-MET-KIT	112
P-1008S	33	P-1065N-5MG	22	P-1160S-CN	51	Z-004-SET	114
P-1009N	21	P-1065S-A	22	P-1160S-CN-10X	51	Z-014C	127
P-1009S	21	P-1066S	78	P-1161S-CN	81	Z-014C-PAK	127
P-1010N	67	P-1067N	80	P-1162S-CN	16	Z-014C-R	127
P-1010S	67	P-1067S	80	P-1163S-CN	18	Z-014C-R2	126, 127
P-1011S-CN	97	P-1068N	84	P-1163S-CN-10X	18	Z-014C-R2-PAK	126, 127
P-1011S-CN-10X	97	P-1069N	24	P-1164S-CN	72	Z-014C-R-PAK	127
P-1012S	13	P-1069S	24	P-1164S-CN-10X	72	Z-017-SET	114
P-1013N	72	P-1070N	43	P-1166-CN-10X	86	Z-023-SET	114
P-1013S	72	P-1070S	43	P-1166S-CN	86	Z-031-SET	114
P-1014N	86	P-1071N	23	P-1167S-CN	87		
P-1014S-W-0.5X	86	P-1074N	22	P-1167S-CN-10X	87		
P-1015N	88	P-1074S	22	P-1168S-CN	60, 113		
P-1015S-A	88	P-1075N	37	P-1169S-CN	101		
P-1016N	106	P-1075S	37	P-1169S-CN-10X	101		
P-1016S	106	P-1076N	15	P-1186S-CN	11		
P-1017N	17	P-1077N	94	P-1186S-CN-10X	11		
P-1017S-CN	17	P-1077S-CN	94	P-1191S	93, 113		
P-1018S-CN	81	P-1078N	91	P-1194S-CN	99		
P-1018S-T-0.1X	81	P-1078S	91	P-1194S-CN-10X	99		
P-1019S-CN-0.5X	59	P-1079N	19	P-1203S-CN	90		
P-1020S-A-0.5X	36	P-1079S	19	P-1204N	78		
P-1021S	47	P-1080N	8	P-1204S-CN	78		
P-1021S-0.5X	47	P-1080S	8	P-1205S-CN	25		
P-1022N	62	P-1081N	87	P-1205S-CN-10X	25		
P-1022S	62	P-1081S	87	P-1209S-CN	88		
P-1023N	66	P-1082N	66	P-1209S-CN-10X	88		
P-1023S-CN	66	P-1082S	66	P-1210N	35		
P-1024N	52	P-1083S-CN	93	P-1212S-CN	89		
P-1024S-A	52	P-1084S-CN	63	P-1212S-CN-10X	89		
P-1025N	50	P-1084S-CN-10X	63	P-1214S-CN	14		
P-1025S-CN	50	P-1085N	107	P-1214S-CN-10X	14		
P-1026N	19	P-1085S	107	P-1215S-CN	59		
P-1026S	19	P-1086N	25	P-1215S-CN-10X	59		
P-1027N	27	P-1086S	25	P-1218S-CN	51		
P-1027S-CN	27	P-1086S-CN	25	P-1218S-CN-10X	51		
P-1028S-CN	67	P-1087S-CN	28	P-1219S-A-CN	60		
P-1029N	67	P-1088S-CN	53	P-1219S-A-CN-10X	60		
P-1029S-CN	67	P-1088S-CN-10X	53	P-1220S-CN	69		
P-1030S-0.5X	90	P-1089S-CN	56	P-1220S-CN-10X	69		
P-1031N	77	P-1090S-CN	68	P-1223N	99, 112		
P-1031S-CN	77	P-1092S-CN	106	P-1223S	99, 112		
P-1032N	72	P-1093S-CN	89	P-1224N	60, 112		
P-1032S-CN	72	P-1094S	52	P-1224S	60, 112		
P-1033S-CN	30	P-1095S-CN	53	P-1226N	58, 112		
P-1033S-CN-10X	30	P-1096N	63	P-1226S	58, 112		
P-1034N	106	P-1096S-CN	63	P-1233S-A	60		
P-1034S	106	P-1097N	101	P-1233S-A-10X	60		
P-1035N	33	P-1097S-CN-10X	101	P-1266S	31, 112		
P-1035S	33	P-1098S-CN	43	P-1267N	20, 112		
P-1036S-CN-0.5X	6	P-1098S-CN-10X	43	P-1267S	20, 112		
P-1037N	1	P-1099S-CN	9	P-1272N	26		
P-1037S-CN	1	P-1099S-CN-10X	9	P-1272S	26		
P-1038N	33	P-1100S-CN	37	P-1291S-A	36		
P-1038S	33	P-1109N	96	P-1291S-A-10X	36		
P-1039S	3	P-1109S-CN	96	P-1293S	47		
P-1040S	63	P-1111S	90	P-1293S-10X	47		
P-1041N	7	P-1111S-10X	90	P-1312S	92		
P-1041S	7	P-1112S-CN	101	P-1327S-T	7		
P-1042N	49	P-1112S-CN-10X	101	P-1328N	93		
P-1042S-CN	49	P-1113S-CN	106	P-1329S-CN	61		



## Custom Quotation Request Form

Company : .....

Contact : ..... Job Function: .....

Address : .....

Postal Code: ..... Town: ..... Country: .....

Telephone : ..... FAX : .....

Email : ..... URL : .....

Area of Interest : .....

Product Description : .....

Concentration : .....

Matrix : .....

**Concentration Units :**

- ng/ml
- µg/ml
- mg/ml
- wt. %
- vol. %

**Requested Quantity :**

<b>Organic</b>	<b>Inorganic</b>
<input type="checkbox"/> 5 x 1 ml	<input type="checkbox"/> ___ x 500 ml
<input type="checkbox"/> Others __ x __	

**Component(s)**

**Concentration (if various)**

- 1. ....
- 2. ....
- 3. ....
- 4. ....
- 5. ....
- 6. ....
- 7. ....
- 8. ....
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- 10. ....
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The logo for TECHLAB is presented within a white rectangular frame. The word "TECHLAB" is written in a bold, sans-serif font. The letters "T", "E", "C", and "H" are blue, while the letters "L", "A", and "B" are grey. The frame is composed of two horizontal lines, one above and one below the text.

Matériaux de Référence certifiés et Equipements de Laboratoire

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