Kit Name: LC/MS Pesticide Standard Kit

Kit PN: 5190-0551

This product is a kit, composed of the following individual chemical components:

Kit Components

<table>
<thead>
<tr>
<th>Component Part Number</th>
<th>Component Name</th>
<th>Volume or mass/container and unit</th>
<th>No. of component containers/kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>5190-0551-1</td>
<td>LC/MS Pesticide Standard 1</td>
<td>1 mL</td>
<td>1</td>
</tr>
<tr>
<td>5190-0551-2</td>
<td>LC/MS Pesticide Standard 2</td>
<td>1 mL</td>
<td>1</td>
</tr>
<tr>
<td>5190-0551-3</td>
<td>LC/MS Pesticide Standard 3</td>
<td>1 mL</td>
<td>1</td>
</tr>
<tr>
<td>5190-0551-4</td>
<td>LC/MS Pesticide Standard 4</td>
<td>1 mL</td>
<td>1</td>
</tr>
<tr>
<td>5190-0551-5</td>
<td>LC/MS Pesticide Standard 5</td>
<td>1 mL</td>
<td>1</td>
</tr>
<tr>
<td>5190-0551-6</td>
<td>LC/MS Pesticide Standard 6</td>
<td>1 mL</td>
<td>1</td>
</tr>
<tr>
<td>5190-0551-7</td>
<td>LC/MS Pesticide Standard 7</td>
<td>1 mL</td>
<td>1</td>
</tr>
<tr>
<td>5190-0551-8</td>
<td>LC/MS Pesticide Standard 8</td>
<td>1 mL</td>
<td>1</td>
</tr>
</tbody>
</table>

SDSs for each component follow this cover sheet.

Transportation Information for the Kit:

Proper Shipping Names:

<table>
<thead>
<tr>
<th>DOT</th>
<th>IATA/ICAO</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Regulated</td>
<td>Not Regulated</td>
<td>UN1648, Acetonitrile Solution, 3, II</td>
</tr>
</tbody>
</table>

Not regulated
1 Identification

- Product identifier
  - Trade name: LC/MS Pesticide Standard 1
  - Part number: 5190-0551-1

- Application of the substance / the mixture
  Reagents and Standards for Analytical Chemical Laboratory Use

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Agilent Technologies, Inc.
    5301 Stevens Creek Blvd.
    Santa Clara, CA  95051  USA

- Information department:
  Telephone: 800-227-9770
  e-mail: pdl-msds_author@agilent.com
  - Emergency telephone number: CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- Classification of the substance or mixture

  GHS02 Flame

  Flam. Liq. 2 H225 Highly flammable liquid and vapor.

  GHS07

  Acute Tox. 4 H302 Harmful if swallowed.
  Eye Irrit. 2A H319 Causes serious eye irritation.

- Label elements
  - GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms

    GHS02  GHS07

- Signal word Danger

- Hazard-determining components of labeling:
  acetonitrile

- Hazard statements
  Highly flammable liquid and vapor.
  Harmful if swallowed.
  Causes serious eye irritation.

- Precautionary statements
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  Keep container tightly closed.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting/equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.

(Contd. on page 2)
3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
  - 75-05-8 acetonitrile 99.67%

4 First-aid measures

- Description of first aid measures
- General information:
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Immediately call a doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>13 ppm</td>
</tr>
<tr>
<td>86-50-0 azinphos-methyl (ISO)</td>
<td>0.6 mg/m³</td>
</tr>
<tr>
<td>298-04-4 disulfoton</td>
<td>0.18 mg/m³</td>
</tr>
<tr>
<td>2642-71-9 azinphos-ethyl (ISO)</td>
<td>0.35 mg/m³</td>
</tr>
<tr>
<td>22224-92-6 fenamiphos (ISO)</td>
<td>0.15 mg/m³</td>
</tr>
<tr>
<td>10265-92-6 methamidophos (ISO)</td>
<td>0.11 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>50 ppm</td>
</tr>
<tr>
<td>86-50-0 azinphos-methyl (ISO)</td>
<td>0.7 mg/m³</td>
</tr>
<tr>
<td>298-04-4 disulfoton</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>2642-71-9 azinphos-ethyl (ISO)</td>
<td>3.9 mg/m³</td>
</tr>
<tr>
<td>22224-92-6 fenamiphos (ISO)</td>
<td>0.9 mg/m³</td>
</tr>
<tr>
<td>10265-92-6 methamidophos (ISO)</td>
<td>1.2 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>150 ppm</td>
</tr>
<tr>
<td>86-50-0 azinphos-methyl (ISO)</td>
<td>20 mg/m³</td>
</tr>
<tr>
<td>298-04-4 disulfoton</td>
<td>8.8 mg/m³</td>
</tr>
<tr>
<td>2642-71-9 azinphos-ethyl (ISO)</td>
<td>17 mg/m³</td>
</tr>
<tr>
<td>22224-92-6 fenamiphos (ISO)</td>
<td>3.1 mg/m³</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
7 Handling and storage

- Handling:
- Precautions for safe handling: No special precautions are necessary if used correctly.
- Information about protection against explosions and fires:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storeroms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
  Keep receptacle tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.

- Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters

- Components with limit values that require monitoring at the workplace:

  75-05-8 acetonitrile

<table>
<thead>
<tr>
<th></th>
<th>Long-term value: 70 mg/m³, 40 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 34 mg/m³, 20 ppm</td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 34 mg/m³, 20 ppm</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing.
  Wash hands before breaks and at the end of work.
  Avoid contact with the eyes.
  Avoid contact with the eyes and skin.

- Breathing equipment:
  When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and
  with standard practices does not result in significant airborne exposures and therefore respiratory protection is not
  needed.
  Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved
  device/equipment with appropriate organic or acid gas cartridge.

- Protection of hands:
  Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil
  thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is
  direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times
  exceeding 4 hrs. Supplier recommendations should be followed.
**Material of gloves**
- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

**Penetration time of glove material**
- For normal use: nitrile rubber: 1 hour
- For direct contact with the chemical: butyl rubber: >4 hours

**Eye protection:**
- Tightly sealed goggles

---

### 9 Physical and chemical properties

*Information on basic physical and chemical properties*

**General Information**

- **Appearance:** Fluid
  - **Form:** Fluid
  - **Color:** Colorless
  - **Odor:** Aromatic
  - **Odor threshold:** Not determined.

- **pH-value:** Not determined.

**Change in condition**

- **Melting point/Melting range:** -46 °C (-50.8 °F)
  - **Boiling point/Boiling range:** 81 °C (177.8 °F)

- **Flash point:** 2 °C (35.6 °F)

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:** 525 °C (977 °F)

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

**Explosion limits:**
- **Lower:** 4.4 Vol %
- **Upper:** 16 Vol %

**Vapor pressure at 20 °C (68 °F):** 0 hPa (0 mm Hg)

**Density at 20 °C (68 °F):** 0.786 g/cm³ (6.55917 lbs/gal)

**Relative density**

- Not determined.

**Vapor density**

- Not determined.

**Evaporation rate**

- Not determined.

**Solubility in / Miscibility with Water:** Not miscible or difficult to mix.

**Partition coefficient (n-octanol/water):** Not determined.
Trade name: LC/MS Pesticide Standard 1

- **Viscosity:**
  - Dynamic at 20 °C (68 °F): 0.39 mPas
  - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: 0.0 %
  - VOC content: 0.01 %
  - 0.1 g/l / 0.00 lb/gl

- **Solids content:** 0.3 %
- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
  - No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
  - No dangerous reactions known.
- **Conditions to avoid**
  - No further relevant information available.
- **Incompatible materials**
  - No further relevant information available.
- **Hazardous decomposition products**
  - No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

#### ATE (Acute Toxicity Estimate)

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50 Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1,324 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;2,007 mg/kg</td>
<td>(rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>3,599 mg/L</td>
<td>(mouse)</td>
</tr>
</tbody>
</table>

**75-05-8 acetonitrile**

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50 Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1,320 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;2,007 mg/kg</td>
<td>(rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>3,587 mg/L</td>
<td>(mouse)</td>
</tr>
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</table>

**2642-71-9 azinphos-ethyl (ISO)**

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50 Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>250 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>390 mg/L</td>
<td>(rat)</td>
</tr>
</tbody>
</table>

**22224-92-6 fenamiphos (ISO)**

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50 Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>10 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>80 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>91 mg/L</td>
<td>(rat)</td>
</tr>
</tbody>
</table>

**149961-52-4 dimoxystrobin (ISO)**

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50 Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>&gt;5,000 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;2,000 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>1,700 mg/L</td>
<td>(rat)</td>
</tr>
</tbody>
</table>
142459-58-3 flufenacet (ISO)

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>589 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>&gt;2,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>&gt;3,700 mg/L (rat)</td>
</tr>
</tbody>
</table>

- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** Irritating effect.
  - **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
  The product shows the following dangers according to internally approved calculation methods for preparations:
  - **Harmful**
  - **Irritant**

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    None of the ingredients is listed.
  - **NTP (National Toxicology Program)**
    None of the ingredients is listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)**
    None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
  Water hazard class 2 (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
  - **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
**14 Transport information**

<table>
<thead>
<tr>
<th>Category</th>
<th>DOT</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN-Number</strong></td>
<td>UN1648</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DOT, IMDG, IATA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>Acetonitrile solution</td>
<td>ACETONITRILE solution, MARINE POLLUTANT</td>
<td>ACETONITRILE solution</td>
</tr>
<tr>
<td><strong>DOT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>IMDG</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Label</strong></td>
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<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>IATA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Label</strong></td>
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<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>II</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DOT, IMDG, IATA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental hazards:</strong></td>
<td>Product contains environmentally hazardous substances: azinphos-methyl (ISO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Marine pollutant:</strong></td>
<td>Symbol (fish and tree)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Warning: Flammable liquids</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td><strong>Danger code (Kemler):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EMS Number:</strong></td>
<td>F-E,S-D</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stowage Category</strong></td>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transport/Additional information:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DOT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quantity limitations</strong></td>
<td>On passenger aircraft/rail: 5 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>On cargo aircraft only:</strong></td>
<td>On cargo aircraft only: 60 L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      - 86-50-0 azinphos-methyl (ISO)
      - 298-04-4 disulfoton
      - 2642-71-9 azinphos-ethyl (ISO)
      - 22224-92-6 fenamiphos (ISO)
      - 10265-92-6 methamidophos (ISO)
    - Section 313 (Specific toxic chemical listings):
      - 75-05-8 acetonitrile
      - 1134-23-2 cycloate
      - 88671-89-0 myclobutanil
      - 30560-19-1 acephate (ISO)
    - TSCA (Toxic Substances Control Act):
      - 75-05-8 acetonitrile
      - 50563-36-5 2-chloro-N-(2,6-dimethylphenyl)-N-(2-methoxyethyl)acetamide
    - Proposition 65
      - Chemicals known to cause cancer:
        - 148477-71-8 spirodiclofen
    - Chemicals known to cause reproductive toxicity for females:
      - None of the ingredients is listed.
    - Chemicals known to cause reproductive toxicity for males:
      - 88671-89-0 myclobutanil
    - Chemicals known to cause developmental toxicity:
      - 1134-23-2 cycloate
      - 88671-89-0 myclobutanil

- Carcinogenic categories

  - EPA (Environmental Protection Agency)
    - 75-05-8 acetonitrile | CBD, D
    - 67747-09-5 N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide | C
  - TLV (Threshold Limit Value established by ACGIH)
    - 75-05-8 acetonitrile | A4
Trade name: LC/MS Pesticide Standard 1

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>86-50-0</td>
<td>azinphos-methyl (ISO)</td>
<td>A4</td>
</tr>
<tr>
<td>298-04-4</td>
<td>disulfoton</td>
<td>A4</td>
</tr>
<tr>
<td>22224-92-6</td>
<td>fenamiphos (ISO)</td>
<td>A4</td>
</tr>
</tbody>
</table>

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  - None of the ingredients is listed.

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**
  - GHS02
  - GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
  - Acetonitrile
- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes serious eye irritation.
- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - If swallowed: Call a poison center/doctor if you feel unwell.
  - Rinse mouth.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
  - Continue rinsing.
  - If eye irritation persists: Get medical advice/attention.
  - In case of fire: Use for extinction: CO2, powder or water spray.
  - Store in a well-ventilated place. Keep cool.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

---

*Other information*

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Date of preparation / last revision** 08/13/2018 / 1
- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association

(Contd. on page 11)
Trade name: LC/MS Pesticide Standard 1

ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

* Data compared to the previous version altered.
1 Identification

- **Product identifier**
  - **Trade name:** LC/MS Pesticide Standard 2
  - **Part number:** 5190-0551-2
  - **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Agilent Technologies, Inc.
    5301 Stevens Creek Blvd.
    Santa Clara, CA  95051  USA
  - **Information department:**
    Telephone: 800-227-9770
    e-mail: pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS02 Flame
    Flam. Liq. 2  H225  Highly flammable liquid and vapor.
  - GHS07
    Acute Tox. 4  H302  Harmful if swallowed.
    Eye Irrit. 2A  H319  Causes serious eye irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - acetonitrile

- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes serious eye irritation.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.

(Contd. on page 2)
Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of fire: Use for extinction: CO2, powder or water spray. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

- **NFPA ratings (scale 0 - 4)**
  - Health = 2
  - Fire = 3
  - Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**
  - Health = 2
  - Fire = 3
  - Reactivity = 0

**Other hazards**

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**
  - 75-05-8 acetonitrile 99.606%

**4 First-aid measures**

- **Description of first aid measures**
- **General information:** Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:** No further relevant information available.
5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1</th>
<th>75-05-8</th>
<th>acetonitrile</th>
<th>13 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>56-72-4</td>
<td>coumaphos (ISO)</td>
<td>0.27 mg/m³</td>
</tr>
<tr>
<td></td>
<td>470-90-6</td>
<td>chlorfenvinphos (ISO)</td>
<td>0.91 mg/m³</td>
</tr>
<tr>
<td></td>
<td>563-12-2</td>
<td>ethion (ISO)</td>
<td>1.2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>2921-88-2</td>
<td>chlorpyrifos (ISO)</td>
<td>0.6 mg/m³</td>
</tr>
<tr>
<td></td>
<td>13194-48-4</td>
<td>ethoprophos (ISO)</td>
<td>0.14 mg/m³</td>
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<tr>
<td></td>
<td>62-73-7</td>
<td>dichlorvos (ISO)</td>
<td>1.8 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2</th>
<th>75-05-8</th>
<th>acetonitrile</th>
<th>50 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>56-72-4</td>
<td>coumaphos (ISO)</td>
<td>3 mg/m³</td>
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<tr>
<td></td>
<td>470-90-6</td>
<td>chlorfenvinphos (ISO)</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td></td>
<td>563-12-2</td>
<td>ethion (ISO)</td>
<td>13 mg/m³</td>
</tr>
<tr>
<td></td>
<td>2921-88-2</td>
<td>chlorpyrifos (ISO)</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td></td>
<td>13194-48-4</td>
<td>ethoprophos (ISO)</td>
<td>1.6 mg/m³</td>
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<tr>
<td></td>
<td>62-73-7</td>
<td>dichlorvos (ISO)</td>
<td>20 mg/m³</td>
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</table>

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<th>75-05-8</th>
<th>acetonitrile</th>
<th>150 ppm</th>
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</thead>
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<tr>
<td></td>
<td>56-72-4</td>
<td>coumaphos (ISO)</td>
<td>13 mg/m³</td>
</tr>
<tr>
<td></td>
<td>470-90-6</td>
<td>chlorfenvinphos (ISO)</td>
<td>500 mg/m³</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
Trade name: LC/MS Pesticide Standard 2

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>563-12-2</td>
<td>ethion (ISO)</td>
<td>38 mg/m³</td>
</tr>
<tr>
<td>2921-88-2</td>
<td>chlorpyrifos (ISO)</td>
<td>44 mg/m³</td>
</tr>
<tr>
<td>13194-48-4</td>
<td>ethoprophos (ISO)</td>
<td>9.3 mg/m³</td>
</tr>
<tr>
<td>62-73-7</td>
<td>dichlorvos (ISO)</td>
<td>200 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about protection against explosions and fires:
    - Keep ignition sources away - Do not smoke.
    - Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities

- Storage:
  - Requirements to be met by storerooms and receptacles: Store in a cool location.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions:
    - Keep receptacle tightly sealed.
    - Store in cool, dry conditions in well sealed receptacles.

- Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters

- Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Limit Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8</td>
<td>acetonitrile</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PEL</td>
<td>Long-term value: 70 mg/m³, 40 ppm</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>Long-term value: 34 mg/m³, 20 ppm</td>
</tr>
<tr>
<td></td>
<td>TLV</td>
<td>Long-term value: 34 mg/m³, 20 ppm</td>
</tr>
<tr>
<td></td>
<td>Skin</td>
<td></td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls

- Personal protective equipment:
  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes.
    - Avoid contact with the eyes and skin.

- Breathing equipment:
  - When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
  - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.

- Protection of hands:
  - Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is
direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**
  For normal use: nitrile rubber, 11-13 mil thickness
  For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**
  For normal use: nitrile rubber: 1 hour
  For direct contact with the chemical: butyl rubber: >4 hours

- **Eye protection:**
  Tightly sealed goggles

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**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:** Fluid
    - **Form:** Fluid
    - **Color:** Colorless
    - **Odor:** Aromatic
    - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.
  - **Change in condition**
    - Melting point/Melting range: -46 °C (-50.8 °F)
    - Boiling point/Boiling range: 81 °C (177.8 °F)
  - **Flash point:** 2 °C (35.6 °F)
  - **Flammability (solid, gaseous):** Not applicable.
  - **Ignition temperature:** 525 °C (977 °F)
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
  - **Explosion limits:**
    - Lower: 4.4 Vol %
    - Upper: 16 Vol %
  - **Vapor pressure at 20 °C (68 °F):** 0 hPa (0 mm Hg)
  - **Density at 20 °C (68 °F):** 0.786 g/cm³ (6.55917 lbs/gal)
  - **Relative density**
    - Not determined.
  - **Vapor density**
    - Not determined.
  - **Evaporation rate**
    - Not determined.
  - **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
Partition coefficient (n-octanol/water): Not determined.

Viscosity:
- Dynamic at 20 °C (68 °F): 0.39 mPas
- Kinematic: Not determined.

Solvent content:
- Organic solvents: 0.1%
- VOC content: 0.06%
  0.6 g/l / 0.01 lb/gl
- Solids content: 0.3%

Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th></th>
<th>Oral</th>
<th>LD50</th>
<th>Dermal</th>
<th>LD50</th>
<th>Inhalative</th>
<th>LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (Acute Toxicity Estimate)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>1,325 mg/kg (rat)</td>
<td>Dermal</td>
<td>LD50</td>
<td>&gt;2,008 mg/kg (rabbit)</td>
<td>Inhalative</td>
</tr>
<tr>
<td>75-05-8 acetonitrile</td>
<td>Oral</td>
<td>LD50</td>
<td>1,320 mg/kg (rat)</td>
<td>Dermal</td>
<td>LD50</td>
<td>&gt;2,000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>563-12-2 ethion (ISO)</td>
<td>Oral</td>
<td>LD50</td>
<td>13 mg/kg (rat)</td>
<td>Dermal</td>
<td>LD50</td>
<td>62 mg/kg (rat)</td>
</tr>
<tr>
<td>2921-88-2 chlorpyrifos (ISO)</td>
<td>Oral</td>
<td>LD50</td>
<td>60 mg/kg (mouse)</td>
<td>Dermal</td>
<td>LD50</td>
<td>120 mg/kg (mouse)</td>
</tr>
</tbody>
</table>
Trade name: LC/MS Pesticide Standard 2

<table>
<thead>
<tr>
<th>Inhalative LC50/4 h</th>
<th>&gt;200 mg/L (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5598-13-0 chlorpyrifos-methyl</strong></td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>1,828 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>&gt;2,000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative LC50/4 h</td>
<td>&gt;670 mg/L (rat)</td>
</tr>
</tbody>
</table>

| Oral LD50 | 55 mg/kg (rat) |
| Dermal LD50 | >2,000 mg/kg (rabbit) |

| Oral LD50 | 15 mg/L (rat) |
| Dermal LD50 | 107 mg/kg (rat) |
| Inhalative LC50/4 h | |

- Primary irritant effect:
  - on the skin: No irritant effect.
  - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
- Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
  - Harmful
  - Irritant
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - 333-41-5 diazinon (ISO) 2A
    - 62-73-7 dichlorvos (ISO) 2B
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
    - Bioaccumulative potential: No further relevant information available.
    - Mobility in soil: No further relevant information available.
  - Additional ecological information:
  - General notes:
    Water hazard class 2 (Self-assessment): hazardous for water
    Do not allow product to reach ground water, water course or sewage system.
    Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
Trade name: LC/MS Pesticide Standard 2

- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, IMDG, IATA: UN1648

- UN proper shipping name
  - DOT: Acetonitrile solution
  - IMDG: ACETONITRILE solution, MARINE POLLUTANT
  - IATA: ACETONITRILE solution

- Transport hazard class(es)
  - DOT
    - Class: 3 Flammable liquids
    - Label: 3
  - IMDG
    - Class: 3 Flammable liquids
    - Label: 3
  - IATA
    - Class: 3 Flammable liquids
    - Label: 3

- Packing group
  - DOT, IMDG, IATA: II

- Environmental hazards:
  - Product contains environmentally hazardous substances: coumaphos (ISO), ethion (ISO)

- Marine pollutant:
  - Symbol (fish and tree)
Trade name: LC/MS Pesticide Standard 2

- Special precautions for user
  Warning: Flammable liquids
- Danger code (Kemler):
  33
- EMS Number:
  F-E,S-D
- Stowage Category
  B
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  Not applicable.

- Transport/Additional information:
  - DOT
    - Quantity limitations
      On passenger aircraft/rail: 5 L
      On cargo aircraft only: 60 L
  - IMDG
    - Limited quantities (LQ) 1L
    - Exempted quantities (EQ) Code: E2
      Maximum net quantity per inner packaging: 30 ml
      Maximum net quantity per outer packaging: 500 ml

- UN "Model Regulation": UN 1648 ACETONITRILE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

**15 Regulatory information**

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      - 56-72-4 coumaphos (ISO)
      - 470-90-6 chlorfenvinphos (ISO)
      - 563-12-2 ethion (ISO)
      - 13194-48-4 ethoprophos (ISO)
      - 62-73-7 dichlorvos (ISO)
    - Section 313 (Specific toxic chemical listings):
      - 75-05-8 acetonitrile
      - 5598-13-0 chlorpyrifos-methyl
      - 82657-04-3 bifenthrin
      - 13194-48-4 ethoprophos (ISO)
      - 60168-88-9 fenarimol (ISO)
      - 35554-44-0 imazalil (ISO)
      - 60207-90-1 propiconazole
      - 333-41-5 diazinon (ISO)
      - 62-73-7 dichlorvos (ISO)
    - TSCA (Toxic Substances Control Act):
      - 75-05-8 acetonitrile
      - 60168-88-9 fenarimol (ISO)
      - 41814-78-2 5-methyl-1,2,4-triazolo(3,4-b)benzo-1,3-thiazole
      - 333-41-5 diazinon (ISO)
### Trade name: LC/MS Pesticide Standard 2

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS Number</th>
<th>ISO Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>62-73-7</td>
<td>dichlorvos (ISO)</td>
<td></td>
</tr>
</tbody>
</table>

#### Proposition 65

- **Chemicals known to cause cancer:**
  - 13194-48-4 ethoprophos (ISO)
  - 35554-44-0 imazalil (ISO)
  - 62-73-7 dichlorvos (ISO)

- **Chemicals known to cause reproductive toxicity for females:**
  - None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**
  - None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**
  - 2921-88-2 chlorpyrifos (ISO)

#### Carcinogenic categories

- **EPA (Environmental Protection Agency)**
  - 75-05-8 acetonitrile CBD, D
  - 62-73-7 dichlorvos (ISO) B2

- **TLV (Threshold Limit Value established by ACGIH)**
  - 75-05-8 acetonitrile A4
  - 56-72-4 coumaphos (ISO) A4
  - 563-12-2 ethion (ISO) A4
  - 2921-88-2 chlorpyrifos (ISO) A4
  - 333-41-5 diazinon (ISO) A4
  - 62-73-7 dichlorvos (ISO) A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  - None of the ingredients is listed.

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

#### Hazard pictograms

GS02  GS07

#### Signal word** Danger

- **Hazard-determining components of labeling:**
  - acetonitrile

- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes serious eye irritation.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation.
No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Date of preparation / last revision 08/13/2018 / 1

· Abbreviations and acronyms:
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  IMDG: International Maritime Code for Dangerous Goods
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  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit
  Flam. Liq. 2: Flammable liquids – Category 2
  Acute Tox. 4: Acute toxicity – Category 4
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

· * Data compared to the previous version altered.
1 Identification

- Product identifier
  - Trade name: LC/MS Pesticide Standard 3
  - Part number: 5190-0551-3
  - Application of the substance / the mixture: Reagents and Standards for Analytical Chemical Laboratory Use

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier: Agilent Technologies, Inc.
    5301 Stevens Creek Blvd.
    Santa Clara, CA  95051  USA
  - Information department:
    Telephone: 800-227-9770
    e-mail:  pdl-msds_author@agilent.com
  - Emergency telephone number: CHEMTREC®:  1-800-424-9300

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS02 Flame
    Flam. Liq. 2  H225  Highly flammable liquid and vapor.
  - GHS07
    Acute Tox. 4  H302  Harmful if swallowed.
    Eye Irrit. 2A  H319  Causes serious eye irritation.

- Label elements
  - GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS07

- Signal word: Danger

- Hazard-determining components of labeling:
  - acetonitrile

- Hazard statements
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes serious eye irritation.

- Precautionary statements
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.

(Contd. on page 2)
Trade name: LC/MS Pesticide Standard 3

Wash thoroughly after handling. 
Do not eat, drink or smoke when using this product. 
Wear protective gloves/protective clothing/eye protection/face protection. 
If swallowed: Call a poison center/doctor if you feel unwell. 
Rinse mouth. 
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. 
Continue rinsing. 
If eye irritation persists: Get medical advice/attention. 
In case of fire: Use for extinction: CO2, powder or water spray. 
Store in a well-ventilated place. Keep cool. 
Dispose of contents/container in accordance with local/regional/national/international regulations. 

**Classification system:** 
- **NFPA ratings (scale 0 - 4)** 
  - Health = 2 
  - Fire = 3 
  - Reactivity = 0 
- **HMIS-ratings (scale 0 - 4)** 
  - Health = 2 
  - Fire = 3 
  - Reactivity = 0 
- **Other hazards** 
- **Results of PBT and vPvB assessment** 
  - PBT: Not applicable. 
  - vPvB: Not applicable. 

**3 Composition/information on ingredients** 
- **Chemical characterization:** Mixtures 
- **Description:** Mixture of the substances listed below with nonhazardous additions. 

- **Dangerous components:** 
  - 75-05-8 acetonitrile 99.441% 

**4 First-aid measures** 
- **Description of first aid measures** 
  
  **General information:** 
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. 
  **After inhalation:** Supply fresh air; consult doctor in case of complaints. 
  **After skin contact:** Generally the product does not irritate the skin. 
  **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. 
  **After swallowing:** Immediately call a doctor. 
  **Information for doctor:** 
  **Most important symptoms and effects, both acute and delayed** No further relevant information available. 

(Contd. on page 3)
Trade name: LC/MS Pesticide Standard 3

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
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<tbody>
<tr>
<td>75-05-8</td>
<td>acetonitrile</td>
</tr>
<tr>
<td>121-75-5</td>
<td>malathion (ISO)</td>
</tr>
<tr>
<td>7786-34-7</td>
<td>mevinphos (ISO)</td>
</tr>
<tr>
<td>13171-21-6</td>
<td>phosphamidon</td>
</tr>
<tr>
<td>13071-79-9</td>
<td>S-tert-butylthiomethyl O,O-diethylphosphorodithioate</td>
</tr>
<tr>
<td>24017-47-8</td>
<td>triazophos (ISO)</td>
</tr>
<tr>
<td>950-37-8</td>
<td>methidathion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
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<tr>
<td>75-05-8</td>
<td>acetonitrile</td>
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<tr>
<td>121-75-5</td>
<td>malathion (ISO)</td>
</tr>
<tr>
<td>7786-34-7</td>
<td>mevinphos (ISO)</td>
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<table>
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<td>75-05-8</td>
<td>acetonitrile</td>
</tr>
<tr>
<td>121-75-5</td>
<td>malathion (ISO)</td>
</tr>
<tr>
<td>7786-34-7</td>
<td>mevinphos (ISO)</td>
</tr>
</tbody>
</table>

(Contd. of page 2)
### 7 Handling and storage

- **Handling:**
  - **Precautions for safe handling:** No special precautions are necessary if used correctly.
  - **Information about protection against explosions and fires:**
    - Keep ignition sources away - Do not smoke.
    - Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:**
    - Keep receptacle tightly sealed.
    - Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)**: No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>PEL: 70 mg/m³, 40 ppm; REL: 34 mg/m³, 20 ppm; TLV: 34 mg/m³, 20 ppm</td>
</tr>
</tbody>
</table>

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
  - **General protective and hygienic measures:**
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes.
    - Avoid contact with the eyes and skin.
  - **Breathing equipment:**
    - When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
    - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.
  - **Protection of hands:**
    - Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is...
direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**
  - For normal use: nitrile rubber, 11-13 mil thickness
  - For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**
  - For normal use: nitrile rubber: 1 hour
  - For direct contact with the chemical: butyl rubber: >4 hours

- **Eye protection:**
  - Tightly sealed goggles

---

**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - Form: Fluid
      - Color: Colorless
    - **Odor:** Aromatic
    - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.
  - **Change in condition**
    - Melting point/Melting range: -46 °C (-50.8 °F)
    - Boiling point/Boiling range: 81 °C (177.8 °F)
  - **Flash point:** 2 °C (35.6 °F)
  - **Flammability (solid, gaseous):** Not applicable.
  - **Ignition temperature:** 525 °C (977 °F)
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
  - **Explosion limits:**
    - Lower: 4.4 Vol %
    - Upper: 16 Vol %
  - **Vapor pressure at 20 °C (68 °F):** 0 hPa (0 mm Hg)
  - **Density at 20 °C (68 °F):** 0.786 g/cm³ (6.55917 lbs/gal)
  - **Relative density**
    - Not determined.
  - **Vapor density**
    - Not determined.
  - **Evaporation rate**
    - Not determined.
  - **Solubility in / Miscibility with**
    - Water: Not miscible or difficult to mix.


### 47.0

- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic at 20 °C (68 °F): 0.39 mPas
  - Kinematic: Not determined.
- **Solvent content:**
  - Organic solvents: 0.1 %
  - VOC content: 0.08 %
  - 0.8 g/l / 0.01 lb/gl
- **Solids content:** 0.4 %
- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
  - No dangerous reactions known.
- **Conditions to avoid**
  - No further relevant information available.
- **Incompatible materials:**
  - No further relevant information available.
- **Hazardous decomposition products:**
  - No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

#### ATE (Acute Toxicity Estimate)

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
<th>LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1,327 mg/kg (rat)</td>
<td>3,607 mg/L (mouse)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;2,011 mg/kg (rabbit)</td>
<td>3,587 mg/L (mouse)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>71 mg/kg (rat)</td>
<td>59 mg/L (rat)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compound</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalative LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 Acetonitrile</td>
<td>1,320 mg/kg (rat)</td>
<td>&gt;2,000 mg/kg (rabbit)</td>
<td>3,587 mg/L (mouse)</td>
</tr>
<tr>
<td>2597-03-7 Phenthoate (ISO)</td>
<td>71 mg/kg (rat)</td>
<td>700 mg/kg (rat)</td>
<td>59 mg/L (rat)</td>
</tr>
<tr>
<td>121-75-5 Malathion (ISO)</td>
<td>1,000 mg/kg (rat)</td>
<td>8,790 mg/kg (rabbit)</td>
<td></td>
</tr>
<tr>
<td>7786-34-7 Mevinphos (ISO)</td>
<td>3 mg/kg (rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade name: LC/MS Pesticide Standard 3</td>
<td></td>
<td></td>
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<tr>
<td>--------------------------------------</td>
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</table>

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Dermal LD50</th>
<th>Orally LD50</th>
<th>Dermal LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>molinate (ISO)</td>
<td>4 mg/kg (rat)</td>
<td>369 mg/kg (rat)</td>
<td>3,536 mg/kg (rabbit)</td>
</tr>
<tr>
<td>phosalone</td>
<td>85 mg/kg (rat)</td>
<td>1,000 mg/kg (rabbit)</td>
<td></td>
</tr>
<tr>
<td>etofenprox</td>
<td>&gt;42,800 mg/kg (rat)</td>
<td>&gt;2,140 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Metazachlor (ISO)</td>
<td>1,000 mg/kg (rat)</td>
<td>&gt;6,810 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>O-(4-bromo-2-chlorophenyl) O-ethyl S-propyl phosphorothioate</td>
<td>620.5 mg/kg (rat)</td>
<td>564 mg/kg (rat)</td>
<td>330 mg/L (mouse)</td>
</tr>
<tr>
<td>trans-isopropyl-3-[(ethylamino)-methoxyfosfinothioyl]oxy]crotonate</td>
<td>26 mg/kg (rat)</td>
<td>300 mg/kg (rat)</td>
<td>28 mg/L (rat)</td>
</tr>
<tr>
<td>quinalphos (ISO)</td>
<td>6.5 mg/kg (rat)</td>
<td>4.5 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>triazophos (ISO)</td>
<td>57 mg/kg (rat)</td>
<td>1,100 mg/kg (rat)</td>
<td>28 mg/L (rat)</td>
</tr>
<tr>
<td>isoxaflutole (ISO)</td>
<td>&gt;5,000 mg/kg (rat)</td>
<td>&gt;2,000 mg/kg (rabbit)</td>
<td>5,200 mg/L (rat)</td>
</tr>
<tr>
<td>tebufenpyrad</td>
<td>595 mg/kg (rat)</td>
<td>&gt;2,000 mg/kg (rat)</td>
<td></td>
</tr>
</tbody>
</table>

- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** Irritating effect.
  - **Sensitization:** No sensitizing effects known.

**Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

(Contd. on page 8)
Carcinogenic categories
- IARC (International Agency for Research on Cancer)
  121-75-5 malathion (ISO) 2A
  122-42-9 propham 3
- NTP (National Toxicology Program)
  None of the ingredients is listed.
- OSHA-Ca (Occupational Safety & Health Administration)
  None of the ingredients is listed.

12 Ecological information
- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 2 (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
  - Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations
- Waste treatment methods
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information
- UN-Number
- DOT, IMDG, IATA: UN1648
- UN proper shipping name
- DOT: Acetonitrile solution
- IMDG: ACETONITRILE solution, MARINE POLLUTANT
- IATA: ACETONITRILE solution
Transport hazard class(es)

- **DOT**

<table>
<thead>
<tr>
<th>Class</th>
<th>3 Flammable liquids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>3</td>
</tr>
</tbody>
</table>

- **IMDG**

<table>
<thead>
<tr>
<th>Class</th>
<th>3 Flammable liquids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>3</td>
</tr>
</tbody>
</table>

- **IATA**

<table>
<thead>
<tr>
<th>Class</th>
<th>3 Flammable liquids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>3</td>
</tr>
</tbody>
</table>

- **Packing group**

| DOT, IMDG, IATA | II |

- **Environmental hazards:**

  Product contains environmentally hazardous substances: phenthoate (ISO), malathion (ISO)

- **Marine pollutant:**

  Symbol (fish and tree)

- **Special precautions for user**

  Warning: Flammable liquids

- **Danger code (Kemler):**

  33

- **EMS Number:**

  F-E,S-D

- **Stowage Category**

  B

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

- **Transport/Additional information:**

- **DOT**

  - **Quantity limitations**

    On passenger aircraft/rail: 5 L
    On cargo aircraft only: 60 L

- **IMDG**

  - **Limited quantities (LQ)**

    1L

  - **Excepted quantities (EQ)**

    Code: E2
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 500 ml
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
</tr>
</thead>
<tbody>
<tr>
<td>7786-34-7 mevinphos (ISO)</td>
</tr>
<tr>
<td>13171-21-6 phosphamidon</td>
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</tr>
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</tr>
<tr>
<td>7786-34-7 mevinphos (ISO)</td>
</tr>
<tr>
<td>2212-67-1 molinate (ISO)</td>
</tr>
<tr>
<td>19666-30-9 3-[2,4-dichloro-5-(1-methylethoxy)phenyl]-5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3H)-one</td>
</tr>
<tr>
<td>40487-42-1 pendimethalin (ISO)</td>
</tr>
<tr>
<td>29232-93-7 pirimiphos-methyl (ISO)</td>
</tr>
<tr>
<td>41198-08-7 O-(4-bromo-2-chlorophenyl) O-ethyl S-propyl phosphorothioate</td>
</tr>
<tr>
<td>31218-83-4 trans-isopropyl-3-[(ethylamino)methoxyfosfinothioyl]oxy]crotonate</td>
</tr>
<tr>
<td>23950-58-5 propyzamide (ISO)</td>
</tr>
<tr>
<td>43121-43-3 triadimefon (ISO)</td>
</tr>
</tbody>
</table>

- TSCA (Toxic Substances Control Act):

| 75-05-8 acetonitrile                         |
| 122-42-9 propham                             |

- Proposition 65

<table>
<thead>
<tr>
<th>Chemicals known to cause cancer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>121-75-5 malathion (ISO)</td>
</tr>
<tr>
<td>19666-30-9 3-[2,4-dichloro-5-(1-methylethoxy)phenyl]-5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3H)-one</td>
</tr>
<tr>
<td>23103-98-2 pirimicarb</td>
</tr>
<tr>
<td>32809-16-8 procymidine</td>
</tr>
<tr>
<td>23950-58-5 propyzamide (ISO)</td>
</tr>
<tr>
<td>141112-29-0 isoxaflutole (ISO)</td>
</tr>
<tr>
<td>110235-47-7 mepanipyrim</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemicals known to cause reproductive toxicity for females:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2212-67-1 molinate (ISO)</td>
</tr>
<tr>
<td>43121-43-3 triadimefon (ISO)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemicals known to cause reproductive toxicity for males:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2212-67-1 molinate (ISO)</td>
</tr>
</tbody>
</table>
Trade name: LC/MS Pesticide Standard 3

- **Chemicals known to cause developmental toxicity:**
  - 2212-67-1 molinate (ISO)
  - 19666-30-9 3-[2,4-dichloro-5-(1-methylethoxy)phenyl]-5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3H)-one
  - 43121-43-3 triadimefon (ISO)

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**
  - 75-05-8 acetonitrile CBD, D
  - 51218-45-2 metolachlor C

- **TLV (Threshold Limit Value established by ACGIH)**
  - 75-05-8 acetonitrile A4
  - 121-75-5 malathion (ISO) A4
  - 7786-34-7 mevinphos (ISO) A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  - None of the ingredients is listed.

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - acetonitrile

- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes serious eye irritation.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - If swallowed: Call a poison center/doctor if you feel unwell.
  - Rinse mouth.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
  - Continue rinsing.
  - If eye irritation persists: Get medical advice/attention.
  - In case of fire: Use for extinction: CO2, powder or water spray.
  - Store in a well-ventilated place. Keep cool.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

Date of preparation / last revision 08/13/2018 / 1

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LD50: Lethal dose, 50 percent
LC50: Lethal concentration, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

* Data compared to the previous version altered.
1 Identification

- **Product identifier**
- **Trade name:** LC/MS Pesticide Standard 4
- **Part number:** 5190-0551-4
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Agilent Technologies, Inc.
    5301 Stevens Creek Blvd.
    Santa Clara, CA  95051  USA
  - **Information department:**
    Telephone: 800-227-9770
    e-mail: pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS02 Flame
    Flam. Liq. 2  H225  Highly flammable liquid and vapor.
  - GHS07
    Acute Tox. 4  H302  Harmful if swallowed.
    Eye Irrit. 2A  H319  Causes serious eye irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - acetonitrile

- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes serious eye irritation.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.

(Contd. on page 2)
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

- **NFPA ratings (scale 0 - 4):**
  
  - Health = 2
  - Fire = 3
  - Reactivity = 0

- **HMIS-ratings (scale 0 - 4):**
  
  - HEALTH: 2
  - FIRE: 3
  - REACTIVITY: 0

- **Other hazards**
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8</td>
<td>acetonitrile</td>
<td>99.365%</td>
</tr>
</tbody>
</table>

**4 First-aid measures**

- **Description of first aid measures**
- **General information:**
  
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
  
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

  **PAC-1:**
  - 75-05-8 acetonitrile 13 ppm
  - 3878-19-1 furberidazole 0.3 mg/m³
  - 64902-72-3 2-chloro-N-[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]amino]carbonyl]benzenesulphonamide 3.9 mg/m³
  - 6923-22-4 monocrotophos (ISO) 0.15 mg/m³

  **PAC-2:**
  - 75-05-8 acetonitrile 50 ppm
  - 3878-19-1 furberidazole 3.3 mg/m³
  - 64902-72-3 2-chloro-N-[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]amino]carbonyl]benzenesulphonamide 43 mg/m³
  - 6923-22-4 monocrotophos (ISO) 0.63 mg/m³

  **PAC-3:**
  - 75-05-8 acetonitrile 150 ppm
  - 3878-19-1 furberidazole 15 mg/m³
  - 64902-72-3 2-chloro-N-[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]amino]carbonyl]benzenesulphonamide 260 mg/m³
  - 6923-22-4 monocrotophos (ISO) 3.5 mg/m³

(Contd. on page 4)
7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: Store in a cool location.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions:
      Keep receptacle tightly sealed.
      Store in cool, dry conditions in well sealed receptacles.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters

- Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>75-05-8 acetonitrile</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
</tr>
<tr>
<td>REL</td>
</tr>
<tr>
<td>TLV</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes.
  - Avoid contact with the eyes and skin.
- Breathing equipment:
  - When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
  - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.
- Protection of hands:
  - Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- Material of gloves:
  - For normal use: nitrile rubber, 11-13 mil thickness
  - For direct contact with the chemical: butyl rubber, 12-15 mil thickness

(Contd. of page 3)
**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:** Fluid
  - **Form:** Fluid
  - **Color:** Colorless
  - **Odor:** Aromatic
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/Melting range:** -46 °C (-50.8 °F)
  - **Boiling point/Boiling range:** 81 °C (177.8 °F)

- **Flash point:** 2 °C (35.6 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 525 °C (977 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**
  - **Lower:** 4.4 Vol %
  - **Upper:** 16 Vol %

- **Vapor pressure at 20 °C (68 °F):** 0 hPa (0 mm Hg)

- **Density at 20 °C (68 °F):** 0.786 g/cm³ (6.55917 lbs/gal)
  - **Relative density:** Not determined.
  - **Vapor density:** Not determined.
  - **Evaporation rate:** Not determined.

- **Solubility in / Miscibility with**
  - **Water:** Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - **Dynamic at 20 °C (68 °F):** 0.39 mPas
  - **Kinematic:** Not determined.
10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability:
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - ATE (Acute Toxicity Estimate)
      | Oral | LD50 | 1,328 mg/kg (rat) |
      | Dermal | LD50 | >2,013 mg/kg (rabbit) |
      | Inhalative | LC50/4 h | 3,610 mg/L (mouse) |
  - 75-05-8 acetonitrile
    | Oral | LD50 | 1,320 mg/kg (rat) |
    | Dermal | LD50 | >2,000 mg/kg (rabbit) |
    | Inhalative | LC50/4 h | 3,587 mg/L (mouse) |
  - 2312-35-8 propargite (ISO)
    | Oral | LD50 | 2,800 mg/kg (rat) |
    | Dermal | LD50 | 10,300 mg/kg (rabbit) |
  - 14816-18-3 phoxim (ISO)
    | Oral | LD50 | 300 mg/kg (rat) |
    | Dermal | LD50 | 1,000 mg/kg (rat) |
  - 120068-37-3 fipronil (ISO)
    | Oral | LD50 | 97 mg/kg (rat) |
    | Dermal | LD50 | 354 mg/kg (rabbit) |
    | Inhalative | LC50/4 h | 680 mg/L (rat) |
  - 101463-69-8 flufenoxuron
    | Oral | LD50 | >3,000 mg/kg (rat) |
    | Dermal | LD50 | >2,000 mg/kg (rat) |
    | Inhalative | LC50/4 h | 5,000 mg/L (rat) |
Trade name: LC/MS Pesticide Standard 4

101200-48-0 methyl 2-(3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)3-methylureidosulphonyl)benzoate

<table>
<thead>
<tr>
<th></th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;5,000 mg/kg (rat)</td>
<td>&gt;2,000 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

21087-64-9 metribuzin (ISO)

<table>
<thead>
<tr>
<th></th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,090 mg/kg (rat)</td>
<td>&gt;20,000 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Inhalative LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;860 mg/L (rat)</td>
</tr>
</tbody>
</table>

74223-64-6 metsulfuron-methyl

<table>
<thead>
<tr>
<th></th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;5,000 mg/kg (rat)</td>
<td>&gt;2,000 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Inhalative LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;5,000 mg/L (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: No irritant effect.
  - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    The product shows the following dangers according to internally approved calculation methods for preparations:
    - Harmful
    - Irritant

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 2 (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects: No further relevant information available.
13 Disposal considerations

- Waste treatment methods
- **Recommendation:**
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, IMDG, IATA** UN1648

- **UN proper shipping name**
- **DOT** Acetonitrile solution
- **IMDG** ACETONITRILE solution, MARINE POLLUTANT
- **IATA** ACETONITRILE solution

- **Transport hazard class(es)**
  - **DOT**
    - **Class** 3 Flammable liquids
    - **Label** 3
  - **IMDG**
    - **Class** 3 Flammable liquids
    - **Label** 3
  - **IATA**
    - **Class** 3 Flammable liquids
    - **Label** 3

- **Packing group**
- **DOT, IMDG, IATA** II

- **Environmental hazards:**
  Product contains environmentally hazardous substances: linuron (ISO), phoxim (ISO)

- **Marine pollutant:**
  Symbol (fish and tree)

- **Special precautions for user**
  Warning: Flammable liquids

- **Danger code (Kemler):**
  33
## EMS Number:
- F-E,S-D

## Stowage Category
- B

## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not applicable.

## Transport/Additional information:

### DOT
- **Quantity limitations**: On passenger aircraft/rail: 5 L  
  On cargo aircraft only: 60 L

### IMDG
- **Limited quantities (LQ)**: 1L  
- **Excepted quantities (EQ)**: Code: E2
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 500 ml

### UN "Model Regulation":
- UN 1648 ACETONITRILE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

## 15 Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Sara
- **Section 355 (extremely hazardous substances)**:
  - 3878-19-1 fuberidazole
  - 6923-22-4 monocrotophos (ISO)

#### Section 313 (Specific toxic chemical listings):
- 75-05-8 acetonitrile
- 330-55-2 linuron (ISO)
- 2312-35-8 propargite (ISO)
- 101200-48-0 methyl 2-((4-methoxy-6-methyl-1,3,5-triazin-2-yl)-3-methylureidosulphonyl)benzoate
- 21087-64-9 metribuzin (ISO)
- 64902-72-3 2-chloro-N-][[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulphonamide
- 35367-38-5 diflubenzuron

### TSCA (Toxic Substances Control Act):
- 75-05-8 acetonitrile
- 134-62-3 N,N-diethyl-m-toluamide
- 330-55-2 linuron (ISO)
- 1610-18-0 prometon
- 1698-60-8 5-amino-4-chloro-2-phenylpyrazidine-3-(2H)-one
- 57966-95-7 2-cyano-N-][(ethylamino)carbonyl]2-(methoxyimino)acetamide
- 35367-38-5 diflubenzuron

### Proposition 65
- **Chemicals known to cause cancer**:
  - 2312-35-8 propargite (ISO)
  - 143390-89-0 kresoxim-methyl (ISO)
### · Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

### · Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

### · Chemicals known to cause developmental toxicity:

- 330-55-2 linuron (ISO)
- 2312-35-8 propargite (ISO)

### · Carcinogenic categories

- **EPA (Environmental Protection Agency)**
  - 75-05-8 acetonitrile \(CBD, D\)
  - 74115-24-5 clofentezine \(C\)
  - 82558-50-7 isoxaben \(C\)
  - 21087-64-9 metribuzin (ISO) \(D\)

- **TLV (Threshold Limit Value established by ACGIH)**
  - 75-05-8 acetonitrile \(A4\)
  - 21087-64-9 metribuzin (ISO) \(A4\)
  - 6923-22-4 monocrotophos (ISO) \(A4\)

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

### · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

### · Hazard pictograms

- GHS02
- GHS07

### · Signal word

Danger

### · Hazard-determining components of labeling:

- acetonitrile

### · Hazard statements

- Highly flammable liquid and vapor.
- Harmful if swallowed.
- Causes serious eye irritation.

### · Precautionary statements

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Call a poison center/doctor if you feel unwell.
- Rinse mouth.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

(Contd. on page 11)
47.0

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation.
No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Date of preparation / last revision 08/13/2018 / 1
· Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit
  Flam. Liq. 2: Flammable liquids – Category 2
  Acute Tox. 4: Acute toxicity – Category 4
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

· * Data compared to the previous version altered.
1 Identification

· Product identifier
  · Trade name: LC/MS Pesticide Standard 5
  · Part number: 5190-0551-5
  · Application of the substance / the mixture: Reagents and Standards for Analytical Chemical Laboratory Use

· Details of the supplier of the safety data sheet
  · Manufacturer/Supplier: Agilent Technologies, Inc.
    5301 Stevens Creek Blvd.
    Santa Clara, CA  95051  USA
  · Information department:
    Telephone: 800-227-9770
    e-mail: pdl-msds_author@agilent.com
  · Emergency telephone number: CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

· Classification of the substance or mixture
  · GHS02 Flame
    Flam. Liq. 2 H225 Highly flammable liquid and vapor.
  · GHS07
    Acute Tox. 4 H302 Harmful if swallowed.
    Skin Irrit. 2 H315 Causes skin irritation.
    Eye Irrit. 2A H319 Causes serious eye irritation.

· Label elements
  · GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms
    GHS02  GHS07

· Signal word: Danger

· Hazard-determining components of labeling:
  · acetonitrile

· Hazard statements
  · Highly flammable liquid and vapor.
  · Harmful if swallowed.
  · Causes skin irritation.
  · Causes serious eye irritation.

· Precautionary statements
  · Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  · Keep container tightly closed.
  · Ground/bond container and receiving equipment.
  · Use explosion-proof electrical/ventilating/lighting/equipment.

(Contd. on page 2)
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
Specific treatment (see on this label).
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
- NFPA ratings (scale 0 - 4)
  - Health = 2
  - Fire = 3
  - Reactivity = 0
- HMIS-ratings (scale 0 - 4)
  - HEALTH
  - FIRE
  - REACTIVITY
  - Health = 2
  - Fire = 3
  - Reactivity = 0
- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

### 3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>86.194%</td>
</tr>
<tr>
<td>67-68-5 dimethyl sulfoxide</td>
<td>13.416%</td>
</tr>
</tbody>
</table>

### 4 First-aid measures

- Description of first aid measures
- General information:
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
Trade name: LC/MS Pesticide Standard 5

- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
  - Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
  - Special hazards arising from the substance or mixture: No further relevant information available.
- **Advice for firefighters**
  - Protective equipment: No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>13 ppm</td>
</tr>
<tr>
<td>67-68-5 dimethyl sulfoxide</td>
<td>150 ppm</td>
</tr>
<tr>
<td>16752-77-5 methomyl</td>
<td>0.91 mg/m³</td>
</tr>
<tr>
<td>23135-22-0 N,N'-dimethylcarbamoylmethylthio)methyleneamine N-methylcarbamate</td>
<td>0.15 mg/m³</td>
</tr>
<tr>
<td>39196-18-4 thiofanox</td>
<td>0.77 mg/m³</td>
</tr>
<tr>
<td>116-06-3 aldicarb (ISO)</td>
<td>0.027 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>50 ppm</td>
</tr>
<tr>
<td>67-68-5 dimethyl sulfoxide</td>
<td>290 ppm</td>
</tr>
<tr>
<td>16752-77-5 methomyl</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>23135-22-0 N,N'-dimethylcarbamoylmethylthio)methyleneamine N-methylcarbamate</td>
<td>1.7 mg/m³</td>
</tr>
<tr>
<td>39196-18-4 thiofanox</td>
<td>8.5 mg/m³</td>
</tr>
<tr>
<td>116-06-3 aldicarb (ISO)</td>
<td>0.3 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>150 ppm</td>
</tr>
</tbody>
</table>
7 Handling and storage

- **Handling**:
- **Precautions for safe handling**: No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires**:
  - Keep ignition sources away - Do not smoke.
  - Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**
  - **Storage**:
  - **Requirements to be met by storerooms and receptacles**: Store in a cool location.
  - **Information about storage in one common storage facility**: Not required.
  - **Further information about storage conditions**:
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.
  - **Specific end use(s)**: No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems**: No further data; see item 7.

- **Control parameters**

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value (mg/m³, ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>PEL: 70 mg/m³, 40 ppm, REL: 34 mg/m³, 20 ppm, TLV: 34 mg/m³, 20 ppm</td>
</tr>
<tr>
<td>67-68-5 dimethyl sulfoxide</td>
<td>WEEL: 250 ppm</td>
</tr>
</tbody>
</table>

- **Additional information**: The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment**:
  - **General protective and hygienic measures**:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.

- **Breathing equipment**:
  - When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
  - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.
Protection of hands:
Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

Material of gloves
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

Penetration time of glove material
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: >4 hours

Eye protection:
Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
  - Appearance:
    - Form: Fluid
    - Color: Colorless
    - Odor: Aromatic
    - Odor threshold: Not determined.
  - pH-value: Not determined.
- Change in condition
  - Melting point/Melting range: -46 °C (-50.8 °F)
  - Boiling point/Boiling range: 81 °C (177.8 °F)
- Flash point: 2 °C (35.6 °F)
- Flammability (solid, gaseous): Not applicable.
- Ignition temperature: 270 °C (518 °F)
- Decomposition temperature: Not determined.
- Auto igniting: Product is not selfigniting.
- Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- Explosion limits:
  - Lower: 1.8 Vol %
  - Upper: 63 Vol %
- Vapor pressure at 20 °C (68 °F): 0.4 hPa (0.3 mm Hg)
- Density: Not determined.
- Relative density: Not determined.
- Vapor density: Not determined.
- Evaporation rate: Not determined.
Trade name: LC/MS Pesticide Standard 5

- Solubility in / Miscibility with Water: Not miscible or difficult to mix.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  Dynamic at 20 °C (68 °F): 0.39 mPas
  Kinematic: Not determined.
- Solvent content:
  Organic solvents: 13.4 %
  VOC content: 13.42 %
    134.2 g/l / 1.12 lb/gl
- Solids content: 0.4 %
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- LD/LC50 values that are relevant for classification:
  ATE (Acute Toxicity Estimate)

<table>
<thead>
<tr>
<th></th>
<th>LD50</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1,531 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;2,320 mg/kg</td>
<td>(rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>4,162 mg/L</td>
<td>(mouse)</td>
</tr>
</tbody>
</table>

75-05-8 acetonitrile

<table>
<thead>
<tr>
<th></th>
<th>LD50</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1,320 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;2,000 mg/kg</td>
<td>(rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>3,587 mg/L</td>
<td>(mouse)</td>
</tr>
</tbody>
</table>

67-68-5 dimethyl sulfoxide

<table>
<thead>
<tr>
<th></th>
<th>LD50</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>14,500 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;5,000 mg/kg</td>
<td>(rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>40,250 mg/L</td>
<td>(rat)</td>
</tr>
</tbody>
</table>

16752-77-5 methomyl

<table>
<thead>
<tr>
<th></th>
<th>LD50</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>17 mg/kg</td>
<td>(rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>5,880 mg/kg</td>
<td>(rabbit)</td>
</tr>
</tbody>
</table>

(Contd. on page 7)
Trade name: LC/MS Pesticide Standard 5

<table>
<thead>
<tr>
<th>96489-71-3 2-tert-butyl-5-(4-tert-butylbenzylthio)-4-chloropyridazin-3(2H)-one</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
</tbody>
</table>

- **Primary irritant effect:**
  - **on the skin:** Irritant to skin and mucous membranes.
  - **on the eye:** Irritating effect.
  - **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**
  The product shows the following dangers according to internally approved calculation methods for preparations:
  - Harmful
  - Irritant

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    - 116-06-3 aldicarb (ISO) 3
  - **NTP (National Toxicology Program)**
    - None of the ingredients is listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)**
    - None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
  - Water hazard class 2 (Self-assessment): hazardous for water
  - Do not allow product to reach ground water, water course or sewage system.
  - Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:**
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings**
  - **Recommendation:** Disposal must be made according to official regulations.
## Transport information

- **UN-Number**
  - DOT, IMDG, IATA: UN1648

- **UN proper shipping name**
  - DOT: Acetonitrile solution
  - IMDG: ACETONITRILE solution, MARINE POLLUTANT
  - IATA: ACETONITRILE solution

- **Transport hazard class(es)**
  - **DOT**
    - Class: 3 Flammable liquids
    - Label: 3
  - **IMDG**
    - Class: 3 Flammable liquids
    - Label: 3
  - **IATA**
    - Class: 3 Flammable liquids
    - Label: 3

- **Packing group**
  - DOT, IMDG, IATA: II

- **Environmental hazards:**
  - Product contains environmentally hazardous substances: aldicarb (ISO), 2-tert-butyl-5-(4-tert-butylbenzylthio)-4-chloropyridazin-3(2H)-one

- **Marine pollutant:**
  - Symbol (fish and tree)

- **Special precautions for user**
  - Warning: Flammable liquids
  - Danger code (Kemler): 33
  - EMS Number: F-E,S-D
  - Stowage Category: B

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
  - **DOT**
    - Quantity limitations:
      - On passenger aircraft/rail: 5 L
      - On cargo aircraft only: 60 L
### 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Sara**

- **Section 355 (extremely hazardous substances):**
  - 16752-77-5 methomyl
  - 23135-22-0 \(N',N'\)-dimethylcarbamoyl(methylthio)methyleneamine \(N\)-methylcarbamate
  - 39196-18-4 thiofanox
  - 116-06-3 aldicarb (ISO)

- **Section 313 (Specific toxic chemical listings):**
  - 75-05-8 acetonitrile
  - 5234-68-4 carboxin
  - 59669-26-0 thiodicarb
  - 330-54-1 diuron(ISO)
  - 148-79-8 thiabenzol (ISO)
  - 116-06-3 aldicarb (ISO)

- **TSCA (Toxic Substances Control Act):**
  - 75-05-8 acetonitrile
  - 67-68-5 dimethyl sulfoxide
  - 3766-81-2 2-butylphenyl methylcarbamate
  - 39196-18-4 thiofanox
  - 10605-21-7 carbendazim (ISO)
  - 330-54-1 diuron(ISO)
  - 148-79-8 thiabenzol (ISO)
  - 116-06-3 aldicarb (ISO)

- **Proposition 65**
  - **Chemicals known to cause cancer:**
    - 140923-17-7 iprovalicarb
    - 59669-26-0 thiodicarb
    - 330-54-1 diuron(ISO)
  - **Chemicals known to cause reproductive toxicity for females:**
    None of the ingredients is listed.
  - **Chemicals known to cause reproductive toxicity for males:**
    None of the ingredients is listed.
· Chemicals known to cause developmental toxicity:
  None of the ingredients is listed.

· Carcinogenic categories
  · EPA (Environmental Protection Agency)
  - 75-05-8 acetonitrile CBD, D
  - 116-06-3 aldicarb (ISO) D
  · TLV (Threshold Limit Value established by ACGIH)
    - 75-05-8 acetonitrile A4
    - 16752-77-5 methomyl A4
    - 330-54-1 diuron(ISO) A4
  · NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.

· GHS label elements
  The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms
  - GHS02
  - GHS07

· Signal word
  - Danger

· Hazard-determining components of labeling:
  acetonitrile

· Hazard statements
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes skin irritation.
  - Causes serious eye irritation.

· Precautionary statements
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - If swallowed: Call a poison center/doctor if you feel unwell.
  - Rinse mouth.
  - Specific treatment (see on this label).
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - If skin irritation occurs: Get medical advice/attention.
  - Take off contaminated clothing and wash it before reuse.
  - If eye irritation persists: Get medical advice/attention.
  - In case of fire: Use for extinction: CO2, powder or water spray.
  - Store in a well-ventilated place. Keep cool.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

Date of preparation / last revision 08/13/2018 / 1

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

* Data compared to the previous version altered.
1 Identification

- **Product identifier**
- **Trade name:** LC/MS Pesticide Standard 6
- **Part number:** 5190-0551-6
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Agilent Technologies, Inc.
    5301 Stevens Creek Blvd.
    Santa Clara, CA 95051 USA
- **Information department:**
  - Telephone: 800-227-9770
  - e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS02 Flame
    Flam. Liq. 2 H225 Highly flammable liquid and vapor.
  - GHS07
    Acute Tox. 4 H302 Harmful if swallowed.
    Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - acetonitrile

- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes serious eye irritation.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.

(Contd. on page 2)
Trade name: LC/MS Pesticide Standard 6

Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
NFPA ratings (scale 0 - 4)
- Health = 2
- Fire = 3
- Reactivity = 0

HMIS-ratings (scale 0 - 4)
- HEALTH: Health = 2
- FIRE: Fire = 3
- REACTIVITY: Reactivity = 0

Other hazards
Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients
Chemical characterization: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:
75-05-8 acetonitrile

4 First-aid measures
Description of first aid measures
General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Generally the product does not irritate the skin.
After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: Immediately call a doctor.
Information for doctor:
Most important symptoms and effects, both acute and delayed No further relevant information available.
Trade name: LC/MS Pesticide Standard 6

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>13 ppm</td>
</tr>
<tr>
<td>63-25-2 carbaryl (ISO)</td>
<td>1.5 mg/m³</td>
</tr>
<tr>
<td>52-68-6 trichlorfon (ISO)</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>114-26-1 propoxur (ISO)</td>
<td>1.5 mg/m³</td>
</tr>
<tr>
<td>732-11-6 phosmet (ISO)</td>
<td>0.049 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>50 ppm</td>
</tr>
<tr>
<td>63-25-2 carbaryl (ISO)</td>
<td>100 mg/m³</td>
</tr>
<tr>
<td>52-68-6 trichlorfon (ISO)</td>
<td>13 mg/m³</td>
</tr>
<tr>
<td>114-26-1 propoxur (ISO)</td>
<td>6.7 mg/m³</td>
</tr>
<tr>
<td>732-11-6 phosmet (ISO)</td>
<td>0.549 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>150 ppm</td>
</tr>
<tr>
<td>63-25-2 carbaryl (ISO)</td>
<td>600 mg/m³</td>
</tr>
<tr>
<td>52-68-6 trichlorfon (ISO)</td>
<td>57 mg/m³</td>
</tr>
<tr>
<td>114-26-1 propoxur (ISO)</td>
<td>40 mg/m³</td>
</tr>
<tr>
<td>732-11-6 phosmet (ISO)</td>
<td>77 mg/m³</td>
</tr>
</tbody>
</table>
7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: Store in a cool location.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions:
      Keep receptacle tightly sealed.
      Store in cool, dry conditions in well sealed receptacles.
  - Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
  - Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Substance</th>
<th>PEL Long-term value</th>
<th>REL Long-term value</th>
<th>TLV Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>70 mg/m³, 40 ppm</td>
<td>34 mg/m³, 20 ppm</td>
<td>34 mg/m³, 20 ppm</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    Keep away from foodstuffs, beverages and feed.
    Immediately remove all soiled and contaminated clothing.
    Wash hands before breaks and at the end of work.
    Avoid contact with the eyes.
    Avoid contact with the eyes and skin.
  - Breathing equipment:
    When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
    Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.
  - Protection of hands:
    Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
  - Material of gloves
    For normal use: nitrile rubber, 11-13 mil thickness
    For direct contact with the chemical: butyl rubber, 12-15 mil thickness
**Trade name: LC/MS Pesticide Standard 6**

- Penetration time of glove material
  - For normal use: nitrile rubber: 1 hour
  - For direct contact with the chemical: butyl rubber: >4 hours

- Eye protection:
  - Tightly sealed goggles

### 9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
  - Appearance:
    - Form: Fluid
    - Color: Colorless
  - Odor: Aromatic
  - Odor threshold: Not determined.
- pH-value: Not determined.

- Change in condition
  - Melting point/Melting range: -46 °C (-50.8 °F)
  - Boiling point/Boiling range: 81 °C (177.8 °F)

- Flash point: 2 °C (35.6 °F)

- Flammability (solid, gaseous): Not applicable.

- Ignition temperature: 525 °C (977 °F)

- Decomposition temperature: Not determined.

- Auto igniting: Product is not selfigniting.

- Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- Explosion limits:
  - Lower: 4.4 Vol %
  - Upper: 16 Vol %

- Vapor pressure at 20 °C (68 °F): 0 hPa (0 mm Hg)

- Density at 20 °C (68 °F): 0.786 g/cm³ (6.55917 lbs/gal)
  - Relative density: Not determined.
  - Vapor density: Not determined.
  - Evaporation rate: Not determined.

- Solubility in / Miscibility with
  - Water: Not miscible or difficult to mix.

- Partition coefficient (n-octanol/water): Not determined.

- Viscosity:
  - Dynamic at 20 °C (68 °F): 0.39 mPas
  - Kinematic: Not determined.
Trade name: LC/MS Pesticide Standard 6

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - ATE (Acute Toxicity Estimate)
      | Route  | LD50  | Parameter         |
      |--------|-------|-------------------|
      | Oral   | 1,324 mg/kg (rat)  |
      | Dermal | 2,005 mg/kg (rabbit)  |
      | Inhalative | 3,597 mg/L (mouse) |
    - 75-05-8 acetonitrile
      | Oral   | 1,320 mg/kg (rat)  |
      | Dermal | 2,000 mg/kg (rabbit)  |
      | Inhalative | 3,587 mg/L (mouse) |
    - 52-68-6 trichlorfon (ISO)
      | Oral   | 882 mg/kg (rat)  |
      | Dermal | 2,000 mg/kg (rat)  |
    - 65907-30-4 furathiocarb
      | Oral   | 53 mg/kg (rat)  |
    - 103361-09-7 flumioxazin (ISO)
      | Oral   | >5,000 mg/kg (rat)  |
    - 156052-68-5 zoxamide (ISO)
      | Oral   | >5,000 mg/kg (rat)  |
      | Dermal | >2,000 mg/kg (rat)  |
    - 732-11-6 phosmet (ISO)
      | Oral   | 92.5 mg/kg (rat)  |
      | Dermal | 1,150 mg/kg (rat)  |
Trade name: LC/MS Pesticide Standard 6

(Contd. of page 6)

<table>
<thead>
<tr>
<th>Inhalative</th>
<th>LC50/4 h</th>
<th>&gt;3,160 mg/kg (rabbit)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>54 mg/L (rat)</td>
</tr>
</tbody>
</table>

- **Primary irritant effect:**
  - on the skin: No irritant effect.
  - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.

- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
  - Harmful
  - Irritant

- **Carcinogenic categories**
  - IARC (International Agency for Research on Cancer)
    - 63-25-2 carbaryl (ISO) 3
    - 52-68-6 trichlorfon (ISO) 3
  - NTP (National Toxicology Program)
    - None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - None of the ingredients is listed.

**12 Ecological information**

- **Toxicity**
  - Aquatic toxicity: No further relevant information available.
- **Persistence and degradability**
  - No further relevant information available.
- **Behavior in environmental systems:**
  - Bioaccumulative potential No further relevant information available.
  - Mobility in soil No further relevant information available.
- **Additional ecological information:**
  - General notes:
    - Water hazard class 2 (Self-assessment): hazardous for water
    - Do not allow product to reach ground water, water course or sewage system.
    - Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.
  - Other adverse effects No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
  - Recommendation:
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
  - Recommendation: Disposal must be made according to official regulations.
### 14 Transport information

<table>
<thead>
<tr>
<th><strong>UN-Number</strong></th>
<th>UN1648</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOT, IMDG, IATA</strong></td>
<td>A C E T O N I T R I L E solution</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>ACETONITRILE solution, MARINE POLLUTANT</td>
</tr>
<tr>
<td><strong>DOT</strong></td>
<td>A C E T O N I T R I L E solution</td>
</tr>
<tr>
<td><strong>IMDG</strong></td>
<td>A C E T O N I T R I L E solution</td>
</tr>
<tr>
<td><strong>IATA</strong></td>
<td>A C E T O N I T R I L E solution</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td><strong>DOT</strong></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>IMDG</strong></td>
<td><strong>IMDG</strong></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>IATA</strong></td>
<td><strong>IATA</strong></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td><strong>DOT, IMDG, IATA</strong></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>Environmental hazards:</strong></td>
<td>Product contains environmentally hazardous substances: carbaryl (ISO), trichlorfon (ISO)</td>
</tr>
<tr>
<td><strong>Marine pollutant:</strong></td>
<td>Symbol (fish and tree)</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Warning: Flammable liquids</td>
</tr>
<tr>
<td><strong>Danger code (Kemler):</strong></td>
<td>33</td>
</tr>
<tr>
<td><strong>EMS Number:</strong></td>
<td>F-E-S-D</td>
</tr>
<tr>
<td><strong>Stowage Category</strong></td>
<td>B</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport/Additional information:</strong></td>
<td><strong>DOT</strong></td>
</tr>
<tr>
<td><strong>Quantity limitations</strong></td>
<td>On passenger aircraft/rail: 5 L</td>
</tr>
<tr>
<td></td>
<td>On cargo aircraft only: 60 L</td>
</tr>
</tbody>
</table>
Trade name: LC/MS Pesticide Standard 6

- IMDG
- Limited quantities (LQ) 1L
- Exempted quantities (EQ) Code: E2
- Maximum net quantity per inner packaging: 30 ml
- Maximum net quantity per outer packaging: 500 ml

- UN "Model Regulation": UN 1648 ACETONITRILE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

- Section 355 (extremely hazardous substances):
  732-11-6 phosmet (ISO)

- Section 313 (Specific toxic chemical listings):
  75-05-8 acetonitrile
  63-25-2 carbaryl (ISO)
  52-68-6 trichlorfon (ISO)
  114-26-1 propoxur (ISO)
  2655-15-4 2,3,5-trimethacarb
  72490-01-8 ethyl[2-(4-phenoxyphenoxy)ethyl]carbamate

- TSCA (Toxic Substances Control Act):
  75-05-8 acetonitrile
  63-25-2 carbaryl (ISO)
  1912-26-1 trietazine

- Proposition 65

- Chemicals known to cause cancer:
  63-25-2 carbaryl (ISO)
  114-26-1 propoxur (ISO)
  72490-01-8 ethyl[2-(4-phenoxyphenoxy)ethyl]carbamate

- Chemicals known to cause reproductive toxicity for females:
  63-25-2 carbaryl (ISO)

- Chemicals known to cause reproductive toxicity for males:
  63-25-2 carbaryl (ISO)

- Chemicals known to cause developmental toxicity:
  63-25-2 carbaryl (ISO)

- Carcinogenic categories

- EPA (Environmental Protection Agency)
  75-05-8 acetonitrile CBD, D

- TLV (Threshold Limit Value established by ACGIH)
  75-05-8 acetonitrile A4
  63-25-2 carbaryl (ISO) A4

(Contd. on page 10)
Trade name: LC/MS Pesticide Standard 6

- **52-68-6** trichlorfon (ISO) A4
- **114-26-1** propoxur (ISO) A3

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**

- GHS02
- GHS07

**Signal word** Danger

**Hazard-determining components of labeling:**

- Acetonitrile

**Hazard statements**

- Highly flammable liquid and vapor.
- Harmful if swallowed.
- Causes serious eye irritation.

**Precautionary statements**

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Call a poison center/doctor if you feel unwell.
- Rinse mouth.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
- Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
- In case of fire: Use for extinction: CO2, powder or water spray.
- Store in a well-ventilated place. Keep cool.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*16 Other information*

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

**Date of preparation / last revision** 08/13/2018 / 1

**Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
Trade name: LC/MS Pesticide Standard 6

-- (Contd. of page 10) --

ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

* Data compared to the previous version altered.
1 Identification

- Product identifier
- **Trade name:** LC/MS Pesticide Standard 7
- **Part number:** 5190-0551-7
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Agilent Technologies, Inc.
  - 5301 Stevens Creek Blvd.
  - Santa Clara, CA  95051  USA
- **Information department:**
  - Telephone: 800-227-9770
  - e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS02 Flame
  - Flam. Liq. 2  H225  Highly flammable liquid and vapor.
- GHS07
  - Acute Tox. 4  H302  Harmful if swallowed.
  - Eye Irrit. 2A  H319  Causes serious eye irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS02  GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - acetonitrile
- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Harmful if swallowed.
  - Causes serious eye irritation.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.

(Contd. on page 2)
47.0

Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - NFPA ratings (scale 0 - 4)
    
    Health = 2  
    Fire = 3  
    Reactivity = 0  
  
  - HMIS-ratings (scale 0 - 4)
    
    HEALTH 2  
    FIRE 3  
    REACTIVITY 0  

- **Other hazards**
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
</tr>
</tbody>
</table>

4 First-aid measures

- **Description of first aid measures**
- **General information:**
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
  **Most important symptoms and effects, both acute and delayed** No further relevant information available.
5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>13 ppm</td>
</tr>
<tr>
<td>83-79-4 rotenone</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td>315-18-4 mexacarbate (ISO)</td>
<td>1.3 mg/m³</td>
</tr>
<tr>
<td>1982-47-4 chloroxuron</td>
<td>0.91 mg/m³</td>
</tr>
<tr>
<td>2032-65-7 mercaptodimethur (ISO)</td>
<td>1.4 mg/m³</td>
</tr>
<tr>
<td>2631-37-0 promecarb (ISO)</td>
<td>1.5 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>50 ppm</td>
</tr>
<tr>
<td>83-79-4 rotenone</td>
<td>420 mg/m³</td>
</tr>
<tr>
<td>315-18-4 mexacarbate (ISO)</td>
<td>14 mg/m³</td>
</tr>
<tr>
<td>1982-47-4 chloroxuron</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>2032-65-7 mercaptodimethur (ISO)</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td>2631-37-0 promecarb (ISO)</td>
<td>16 mg/m³</td>
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<table>
<thead>
<tr>
<th>PAC-3:</th>
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</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>150 ppm</td>
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<tr>
<td>83-79-4 rotenone</td>
<td>2,500 mg/m³</td>
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<td>315-18-4 mexacarbate (ISO)</td>
<td>84 mg/m³</td>
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<tr>
<td>1982-47-4 chloroxuron</td>
<td>68 mg/m³</td>
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<tr>
<td>2032-65-7 mercaptodimethur (ISO)</td>
<td>90 mg/m³</td>
</tr>
</tbody>
</table>
7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities

- Storage:
  - Requirements to be met by storerooms and receptacles: Store in a cool location.
  - Information about storage in one common storage facility: Not required.

- Further information about storage conditions:
  - Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>PEL Long-term value: 70 mg/m³, 40 ppm</td>
</tr>
<tr>
<td></td>
<td>REL Long-term value: 34 mg/m³, 20 ppm</td>
</tr>
<tr>
<td></td>
<td>TLV Long-term value: 34 mg/m³, 20 ppm</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls

- Personal protective equipment:
  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes.
    - Avoid contact with the eyes and skin.

- Breathing equipment:
  - When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
    - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.

- Protection of hands:
  - Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
· Material of gloves
  For normal use: nitrile rubber, 11-13 mil thickness
  For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material
  For normal use: nitrile rubber: 1 hour
  For direct contact with the chemical: butyl rubber: >4 hours

· Eye protection:
  Tightly sealed goggles

---

**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - Form: Fluid
      - Color: Colorless
    - **Odor:** Aromatic
    - **Odor threshold:** Not determined.
    - **pH-value:** Not determined.
    - **Change in condition**
      - Melting point/Melting range: -46 °C (-50.8 °F)
      - Boiling point/Boiling range: 81 °C (177.8 °F)
    - **Flash point:** 2 °C (35.6 °F)
    - **Flammability (solid, gaseous):** Not applicable.
    - **Ignition temperature:** 525 °C (977 °F)
    - **Decomposition temperature:** Not determined.
    - **Auto igniting:** Product is not selfigniting.
    - **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
    - **Explosion limits:**
      - Lower: 4.4 Vol %
      - Upper: 16 Vol %
    - **Vapor pressure at 20 °C (68 °F):** 0 hPa (0 mm Hg)
    - **Density at 20 °C (68 °F):** 0.786 g/cm³ (6.55917 lbs/gal)
    - **Relative density** Not determined.
    - **Vapor density** Not determined.
    - **Evaporation rate** Not determined.
    - **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
    - **Partition coefficient (n-octanol/water):** Not determined.
Trade name: LC/MS Pesticide Standard 7

- **Viscosity:**
  - Dynamic at 20 °C (68 °F): 0.39 mPas
  - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: 0.0 %
  - VOC content:
    - 0.01 %
    - 0.1 g/l / 0.00 lb/gl

- **Solids content:**
  - 0.3 %

- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.

- **Chemical stability**

- **Thermal decomposition / conditions to be avoided:**
  - No decomposition if used according to specifications.

- **Possibility of hazardous reactions**
  - No dangerous reactions known.

- **Conditions to avoid**
  - No further relevant information available.

- **Incompatible materials**
  - No further relevant information available.

- **Hazardous decomposition products**
  - No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

  - **ATE (Acute Toxicity Estimate)**
    - Oral LD50 1,325 mg/kg (rat)
    - Dermal LD50 >2,008 mg/kg (rabbit)
    - Inhalative LC50/4 h 3,601 mg/L (mouse)

  - **75-05-8 acetonitrile**
    - Oral LD50 1,320 mg/kg (rat)
    - Dermal LD50 >2,000 mg/kg (rabbit)
    - Inhalative LC50/4 h 3,587 mg/L (mouse)

  - **71751-41-2 abamectin (combination of avermectin B1a and avermectin B1b) (ISO)**
    - Oral LD50 1.5 mg/kg (rat)
    - Dermal LD50 >2,000 mg/kg (rabbit)
    - Inhalative LC50/4 h 1,100 mg/L (rat)

- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** Irritating effect.

- **Sensitization:**
  - No sensitizing effects known.

- **Additional toxicological information:**
  - The product shows the following dangers according to internally approved calculation methods for preparations:
    - Harmful
    - Irritant
12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
    - Bioaccumulative potential: No further relevant information available.
    - Mobility in soil: No further relevant information available.
  - Additional ecological information:
  - General notes:
    - Water hazard class 2 (Self-assessment): hazardous for water
    - Do not allow product to reach ground water, water course or sewage system.
    - Danger to drinking water if even small quantities leak into the ground.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - Uncleaned packagings:
    - Recommendation: Disposal must be made according to official regulations.

*14 Transport information

- UN-Number
  - DOT, IMDG, IATA: UN1648
- UN proper shipping name
  - DOT: Acetonitrile solution
  - IMDG: ACETONITRILE solution, MARINE POLLUTANT
  - IATA: ACETONITRILE solution
Transport hazard class(es)

- DOT
  - Class 3 Flammable liquids
  - Label 3

- IMDG
  - Class 3 Flammable liquids
  - Label 3

- IATA
  - Class 3 Flammable liquids
  - Label 3

Packing group

- DOT, IMDG, IATA II

Environmental hazards:
Product contains environmentally hazardous substances: rotenone, abamectin (combination of avermectin B1a and avermectin B1b) (ISO)

Marine pollutant:
Symbol (fish and tree)

Special precautions for user
Warning: Flammable liquids
Danger code (Kemler): 33
EMS Number: F-E,S-D
Stowage Category B

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

Transport/Additional information:

- DOT
  - Quantity limitations On passenger aircraft/rail: 5 L
                          On cargo aircraft only: 60 L

- IMDG
  - Limited quantities (LQ) 1L
    Code: E2
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 500 ml
## 15 Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

- **Sara**
  - **Section 355 (extremely hazardous substances):**
    - 315-18-4 mexacarbate (ISO)
    - 1982-47-4 chloroxuron
    - 2032-65-7 mercaptodimethur (ISO)
    - 2631-37-0 promecarb (ISO)

- **Section 313 (Specific toxic chemical listings):**
  - 75-05-8 acetonitrile
  - 2032-65-7 mercaptodimethur (ISO)
  - 3383-96-8 temephos
  - 71751-41-2 abamectin (combination of avermectin B1a and avermectin B1b) (ISO)
  - 67485-29-4 hydramethylnon
  - 34014-18-1 tebuthiuron (ISO)

- **TSCA (Toxic Substances Control Act):**
  - 75-05-8 acetonitrile
  - 101-42-8 fenuron
  - 3383-96-8 temephos
  - 15545-48-9 chlorotoluron
  - 26259-45-0 secbumeton (ISO)

### Proposition 65

- **Chemicals known to cause cancer:**
  - 123312-89-0 pymetrozine (ISO)

- **Chemicals known to cause reproductive toxicity for females:**
  - None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**
  - 67485-29-4 hydramethylnon

- **Chemicals known to cause developmental toxicity:**
  - 71751-41-2 abamectin (combination of avermectin B1a and avermectin B1b) (ISO)
  - 67485-29-4 hydramethylnon

### Carcinogenic categories

- **EPA (Environmental Protection Agency)**
  - 75-05-8 acetonitrile CBD, D

- **TLV (Threshold Limit Value established by ACGIH)**
  - 75-05-8 acetonitrile A4
  - 83-79-4 rotenone A4
  - 3383-96-8 temephos A4
Safety Data Sheet
acc. to OSHA HCS

Printing date 08/13/2018
Version Number 2
Reviewed on 08/13/2018

Trade name: LC/MS Pesticide Standard 7

- NIOSH-Ca (National Institute for Occupational Safety and Health)
  None of the ingredients is listed.
- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms
  GHS02  GHS07
- Signal word Danger
- Hazard-determining components of labeling: acetonitrile
- Hazard statements
  Highly flammable liquid and vapor.
  Harmful if swallowed.
  Causes serious eye irritation.
- Precautionary statements
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  Keep container tightly closed.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting/equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.
  Wear protective gloves/protective clothing/eye protection/face protection.
  If swallowed: Call a poison center/doctor if you feel unwell.
  Rinse mouth.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
  Continue rinsing.
  If eye irritation persists: Get medical advice/attention.
  In case of fire: Use for extinction: CO2, powder or water spray.
  Store in a well-ventilated place. Keep cool.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

* 16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation.
No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Date of preparation / last revision 08/13/2018 / 1
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
Trade name: LC/MS Pesticide Standard 7

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Hazardous Materials Identification System (USA)</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds (USA, EU)</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal concentration, 50 percent</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal dose, 50 percent</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>REL</td>
<td>Recommended Exposure Limit</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids – Category 2</td>
</tr>
<tr>
<td>Acute Tox. 4</td>
<td>Acute toxicity – Category 4</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation – Category 2A</td>
</tr>
</tbody>
</table>

* Data compared to the previous version altered.
# 1 Identification

- **Product identifier**
  
- **Trade name:** LC/MS Pesticide Standard 8
- **Part number:** 5190-0551-8
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use

- **Details of the supplier of the safety data sheet**
  
- **Manufacturer/Supplier:** Agilent Technologies, Inc.
  5301 Stevens Creek Blvd.
  Santa Clara, CA  95051  USA
  
- **Information department:**
  Telephone: 800-227-9770
  e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

# 2 Hazard(s) identification

- **Classification of the substance or mixture**
  
- GHS02 Flame
  
  Flam. Liq. 2  H225  Highly flammable liquid and vapor.

- GHS07
  
  Acute Tox. 4  H302  Harmful if swallowed.
  Eye Irrit. 2A  H319  Causes serious eye irritation.

- **Label elements**
  
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**
  
  GHS02  GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  acetonitrile

- **Hazard statements**
  Highly flammable liquid and vapor.
  Harmful if swallowed.
  Causes serious eye irritation.

- **Precautionary statements**
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  Keep container tightly closed.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting/equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.
3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

| 75-05-8 acetonitrile | 99.759% |

4 First-aid measures

- Description of first aid measures
- General information:
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Immediately call a doctor.
- Information for doctor:
  Most important symptoms and effects, both acute and delayed No further relevant information available.
Trade name: LC/MS Pesticide Standard 8

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

  PAC-1:
<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>13 ppm</td>
</tr>
<tr>
<td>60-51-5 dimethoate (ISO)</td>
<td>2.7 mg/m³</td>
</tr>
<tr>
<td>1563-66-2 carbofuran (ISO)</td>
<td>0.3 mg/m³</td>
</tr>
</tbody>
</table>

  PAC-2:
<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>50 ppm</td>
</tr>
<tr>
<td>60-51-5 dimethoate (ISO)</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td>1563-66-2 carbofuran (ISO)</td>
<td>0.43 mg/m³</td>
</tr>
</tbody>
</table>

  PAC-3:
<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td>150 ppm</td>
</tr>
<tr>
<td>60-51-5 dimethoate (ISO)</td>
<td>170 mg/m³</td>
</tr>
<tr>
<td>1563-66-2 carbofuran (ISO)</td>
<td>3.7 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and storage

- Handling:
- Precautions for safe handling No special precautions are necessary if used correctly.
- Information about protection against explosions and fires:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
 Conditions for safe storage, including any incompatibilities

 • **Storage:**
   - Requirements to be met by storerooms and receptacles: Store in a cool location.
   - Information about storage in one common storage facility: Not required.

 • **Further information about storage conditions:**
   - Keep receptacle tightly sealed.
   - Store in cool, dry conditions in well sealed receptacles.

 Specific end use(s) No further relevant information available.

### Exposure controls/personal protection

8 Exposure controls/personal protection

 • Additional information about design of technical systems: No further data; see item 7.

 • Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
<th>Long-term Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td>70 mg/m³, 40 ppm</td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>34 mg/m³, 20 ppm</td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>34 mg/m³, 20 ppm</td>
<td></td>
</tr>
</tbody>
</table>

 • Additional information: The lists that were valid during the creation were used as basis.

 • Exposure controls

 • Personal protective equipment:

  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes.
    - Avoid contact with the eyes and skin.

  - Breathing equipment:
    - When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
    - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.

 • Protection of hands:

  - Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

  - Material of gloves
    - For normal use: nitrile rubber, 11-13 mil thickness
    - For direct contact with the chemical: butyl rubber, 12-15 mil thickness

  - Penetration time of glove material
    - For normal use: nitrile rubber: 1 hour
    - For direct contact with the chemical: butyl rubber: >4 hours

(Contd. on page 5)
# 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form: Fluid
  - Color: Colorless
- **Odor:** Aromatic
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - Melting point/Melting range: -46 °C (-50.8 °F)
  - Boiling point/Boiling range: 81 °C (177.8 °F)
- **Flash point:** 2 °C (35.6 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 525 °C (977 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**
  - Lower: 4.4 Vol %
  - Upper: 16 Vol %
- **Vapor pressure at 20 °C (68 °F):** 0 hPa (0 mm Hg)
- **Density at 20 °C (68 °F):** 0.786 g/cm³ (6.55917 lbs/gal)
- **Relative density**
- **Vapor density**
- **Evaporation rate**
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic at 20 °C (68 °F): 0.39 mPas
  - Kinematic: Not determined.
- **Solvent content:**
  - VOC content: 0.00 %
  - 0.0 g/l / 0.00 lb/gl
10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**
  - **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
  - **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: No further relevant information available.
- **Incompatible materials**: No further relevant information available.
- **Hazardous decomposition products**: No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
  - **LD/LC50 values that are relevant for classification**:
    - **ATE (Acute Toxicity Estimate)**
      - Oral LD50 1,323 mg/kg (rat)
      - Dermal LD50 >2,005 mg/kg (rabbit)
      - Inhalative LC50/4 h 3,596 mg/L (mouse)
    - 75-05-8 acetonitrile
      - Oral LD50 1,320 mg/kg (rat)
      - Dermal LD50 >2,000 mg/kg (rabbit)
      - Inhalative LC50/4 h 3,587 mg/L (mouse)
    - 79622-59-6 fluazinam
      - Oral LD50 >4,100 mg/kg (rat)
      - Dermal LD50 >2,000 mg/kg (rabbit)
      - Inhalative LC50/4 h >1,100 mg/L (rat)
    - 13684-56-5 desmedipham
      - Oral LD50 9,600 mg/kg (rat)
      - Dermal LD50 >2,000 mg/kg (rabbit)
    - 113614-08-7 beflubutamid (ISO)
      - Oral LD50 >5,000 mg/kg (rat)
      - Dermal LD50 >2,000 mg/kg (rabbit)
    - 121552-61-2 cyprodinil (ISO)
      - Oral LD50 2,796 mg/kg (rat)
      - Dermal LD50 >2,000 mg/kg (rat)
  - **Primary irritant effect**:
    - **on the skin**: No irritant effect.
    - **on the eye**: Irritating effect.
    - **Sensitization**: No sensitizing effects known.
Trade name: LC/MS Pesticide Standard 8

- Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Harmful
  Irritant

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    2164-17-2 fluometuron 3
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
  - Additional ecological information:
  - General notes:
    Water hazard class 2 (Self-assessment): hazardous for water
    Do not allow product to reach ground water, water course or sewage system.
    Danger to drinking water if even small quantities leak into the ground.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
    - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, IMDG, IATA: UN1648

- UN proper shipping name
  - DOT: Acetonitrile solution
  - IMDG, IATA: ACETONITRILE solution
Transport hazard class(es)

- DOT
  - Class: 3 Flammable liquids
  - Label: 3

IMDG, IATA

- Class: 3 Flammable liquids
- Label: 3

Packing group

- DOT, IMDG, IATA: II

Environmental hazards:

- Not applicable.

Special precautions for user

- Warning: Flammable liquids
- Danger code (Kemler): 33
- EMS Number: F-E,S-D
- Stowage Category: B

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

- Not applicable.

Transport/Additional information:

- DOT
  - Quantity limitations: On passenger aircraft/rail: 5 L, On cargo aircraft only: 60 L

IMDG

- Limited quantities (LQ): 1L
- Exempted quantities (EQ): Code: E2
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation":

- UN 1648 ACETONITRILE SOLUTION, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

Section 355 (extremely hazardous substances):

- 60-51-5 dimethoate (ISO)
- 1563-66-2 carbofuran (ISO)

Section 313 (Specific toxic chemical listings):

- 75-05-8 acetonitrile
Trade name: LC/MS Pesticide Standard 8

60-51-5 dimethoate (ISO)
1563-66-2 carbofuran (ISO)
2164-17-2 fluometuron
13684-56-5 desmedipham

TSCA (Toxic Substances Control Act):
75-05-8 acetonitrile
60-51-5 dimethoate (ISO)
91-53-2 ethoxyquin
1563-66-2 carbofuran (ISO)
2164-17-2 fluometuron

Proposition 65

Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency)
75-05-8 acetonitrile CBD, D

TLV (Threshold Limit Value established by ACGIH)
75-05-8 acetonitrile A4
1563-66-2 carbofuran (ISO) A4

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS02 GHS07

Signal word Danger

Hazard-determining components of labeling:
acetonitrile

Hazard statements
Highly flammable liquid and vapor.
Harmful if swallowed.
Causes serious eye irritation.

Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Date of preparation / last revision 08/13/2018 / 1
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit
  Flam. Liq. 2: Flammable liquids – Category 2
  Acute Tox. 4: Acute toxicity – Category 4
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
- * Data compared to the previous version altered.