Section 1. Identification

Product identifier: QuEChERS Extract Tubes - EN Method
Part no.: 5982-5650, 5982-5650CH

Relevant identified uses of the substance or mixture and uses advised against
Material uses: Reagents and Standards for Analytical Chemistry Laboratory Use
50 foil pack

Supplier/Manufacturer: Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation): CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P319</td>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A</td>
</tr>
<tr>
<td>H401</td>
<td>SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2</td>
</tr>
<tr>
<td>H412</td>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3</td>
</tr>
</tbody>
</table>

Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 10 - 30%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: > 60%
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 10 - 30%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 8%

GHS label elements

Hazard pictograms: !

Signal word: WARNING

Hazard statements: P319 - Causes serious eye irritation.
H401 - Toxic to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention: P280 - Wear eye or face protection.
P273 - Avoid release to the environment.
P264 - Wash hands thoroughly after handling.

Response: P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical attention.

Storage: Not applicable.

Disposal: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

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Version: 5
Section 2. Hazard(s) identification

Supplemental label elements
Additional warning phrases : Not applicable.

Other hazards which do not result in classification : None known.

Section 3. Composition and ingredient information

Substance/mixture : Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium sulphate</td>
<td>≥60 - ≤75</td>
<td>7487-88-9</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>≥10 - ≤30</td>
<td>7647-14-5</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms
Section 4. First aid measures

Eye contact: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

Inhalation: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing

Skin contact: No specific data.

Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: This material is toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- sulfur oxides
- halogenated compounds
- metal oxide/oxides

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spill material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Section 6. Accidental release measures

Environmental precautions:
Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

Methods for cleaning up:
Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures:
Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene:
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities:
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits
None.

Appropriate engineering controls
Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. If operating conditions cause high dust concentrations to be produced, use dust goggles.

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Section 8. Exposure controls and personal protection

**Skin protection**

**Respiratory protection:**

- Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Use a respirator according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Body protection:**

- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection:**

- Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Hand protection:**

- Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Section 9. Physical and chemical properties**

**Appearance**

- **Physical state:** Solid. [Powder.]
- **Colour:** White.
- **Odour:** Odourless.
- **Odour threshold:** Not available.
- **pH:** Not available.
- **Melting point:** Not available.
- **Boiling point:** Not available.
- **Flash point:** Not available.
- **Evaporation rate:** Not available.
- **Flammability (solid, gas):** Not available.
- **Lower and upper explosive (flammable) limits:** Not available.
- **Vapour pressure:** Not available.
- **Vapour density:** Not available.
- **Relative density:** Not available.
- **Solubility:** Easily soluble in the following materials: cold water and hot water.
- **Partition coefficient: n-octanol/water:** Not available.
- **Auto-ignition temperature:** Not available.
- **Decomposition temperature:** Not available.
- **Viscosity:** Not available.

**Section 10. Stability and reactivity**

- **Reactivity:** No specific test data related to reactivity available for this product or its ingredients.
- **Chemical stability:** The product is stable.
- **Possibility of hazardous reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.
- **Conditions to avoid:** No specific data.

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Section 10. Stability and reactivity

**Incompatible materials**
- May react or be incompatible with oxidising materials.

**Hazardous decomposition products**
- Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Irritation/Corrosion**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

**Sensitisation**
- Not available.

**Mutagenicity**
- **Conclusion/Summary**: Not available.

**Carcinogenicity**
- **Conclusion/Summary**: Not available.

**Reproductive toxicity**
- **Conclusion/Summary**: Not available.

**Teratogenicity**
- **Conclusion/Summary**: Not available.

**Specific target organ toxicity (single exposure)**
- Not available.

**Specific target organ toxicity (repeated exposure)**
- Not available.

**Aspiration hazard**
- Not available.

**Information on likely routes of exposure**
- Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**
- **Eye contact**: Causes serious eye irritation.
- **Inhalation**: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**
- **Eye contact**: Adverse symptoms may include the following: pain or irritation, watering, redness.
Section 11. Toxicological information

Inhalation
- Adverse symptoms may include the following: respiratory tract irritation, coughing.

Skin contact
- No specific data.

Ingestion
- No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure
- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

Long term exposure
- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

Potential chronic health effects
- General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
- Carcinogenicity: No known significant effects or critical hazards.
- Mutagenicity: No known significant effects or critical hazards.
- Teratogenicity: No known significant effects or critical hazards.
- Developmental effects: No known significant effects or critical hazards.
- Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates
- Not available.

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium sulphate</td>
<td>Acute EC50 704 mg/l Fresh water</td>
<td>Crustaceans - Cypris subglobosha</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 343.56 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 1215 mg/l Fresh water</td>
<td>Algae - Chlorella sp.</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 4.4 mg/l Fresh water</td>
<td>Aquatic plants - Lemna aequinoctialis</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 40 mg/l Fresh water</td>
<td>Fish - Mogurnda mogurnda - Larvae</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic IC10 43 mg/l Fresh water</td>
<td>Algae - Chlorella sp.</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic IC10 1.9 mg/l Fresh water</td>
<td>Aquatic plants - Lemna aequinoctialis</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 360 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>Acute EC50 4.74 g/L Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 519.6 mg/l Fresh water</td>
<td>Crustaceans - Cypris subglobosha</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 402.6 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 6.87 g/L Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1000000 μg/l Fresh water</td>
<td>Fish - Morone saxatilis - Larvae</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic LC10 781 mg/l Fresh water</td>
<td>Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling,</td>
<td>3 weeks</td>
</tr>
</tbody>
</table>

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Section 12. Ecological information

**Bioaccumulative potential**
Not available.

**Other adverse effects**
No known significant effects or critical hazards.

**Persistence and degradability**
Not available.

**Mobility in soil**
- Soil/water partition coefficient ($K_{oc}$)
  - Not available.

**Persistence and degradability**
- Not available.

**Section 13. Disposal considerations**

**Disposal methods**
- The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

**ADG / IMDG / IATA**
- Not regulated as Dangerous Goods according to the ADG Code.

**Special precautions for user**
- Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of Marpol and the IBC Code**
- Not available.

**Section 15. Regulatory information**

**Standard Uniform Schedule of Medicine and Poisons**
- Not regulated.

**Model Work Health and Safety Regulations - Scheduled Substances**
- No listed substance

**International regulations**
- Chemical Weapon Convention List Schedules I, II & III Chemicals
  - Not listed.

**Montreal Protocol (Annexes A, B, C, E)**
- Not listed.

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Section 15. Regulatory information

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNEP Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list

- **Australia**: Not determined.
- **Canada**: All components are listed or exempted.
- **China**: Not determined.
- **Europe**: All components are listed or exempted.
- **Japan**:
  - Japan inventory (ENCS): Not determined.
  - Japan inventory (ISHL): Not determined.
- **Malaysia**: Not determined.
- **New Zealand**: Not determined.
- **Philippines**: Not determined.
- **Republic of Korea**: Not determined.
- **Taiwan**: All components are listed or exempted.
- **Thailand**: Not determined.
- **Turkey**: Not determined.
- **United States**: All components are listed or exempted.
- **Viet Nam**: Not determined.

Section 16. Any other relevant information

**History**

- **Date of issue/Date of revision**: 21/11/2018
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**Key to abbreviations**

- ADG = Australian Dangerous Goods
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- NOHSC = National Occupational Health and Safety Commission
- SUSMP = Standard Uniform Schedule of Medicine and Poisons
- UN = United Nations

**Procedure used to derive the classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2A, H319</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Acute 2, H401</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

**References**

- Not available.

**Notice to reader**

- Indicates information that has changed from previously issued version.
Section 16. Any other relevant information

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