1 Identification

- Product identifier
  - Trade name: Zinc Standard
  - Part number: ICP-130, ICP-130-25, ICP-130-L

- Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Agilent Technologies Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia
  - Further information obtainable from:
    Telephone: 1800 802 402
    e-mail: pdl-msds_author@agilent.com
  - Emergency telephone number:
    CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  
  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 labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms

  GHS07

- Signal word Warning
- Hazard statements
  Causes skin irritation.
  Causes serious eye irritation.

- Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.
  Read label before use.
  Wash thoroughly after handling.
  Wear protective gloves / eye protection / face protection.
  IF ON SKIN: Wash with plenty of water.
  Specific treatment (see on this label).
  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.
  If eye irritation persists: Get medical advice/attention.

(Contd. on page 2)
Take off contaminated clothing and wash before reuse.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition and Information on Ingredients

Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

- 7697-37-2 nitric acid Ox. Liq. 2, H272; Skin Corr. 1, H314 2%
- 10196-18-6 zinc(II) nitrate hexahydrate Ox. Sol. 2, H272; Acute Tox. 4, H302 1%

Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

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.

After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
If symptoms persist consult 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: Use fire extinguishing methods suitable to surrounding conditions.

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 Not required.

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).

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
7 Handling and Storage

- Handling:
- Precautions for safe handling: No special precautions are necessary if used correctly.
- Information about fire - and explosion protection: No special measures required.
- Conditions for safe storage, including any incompatibilities
  - Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

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

<table>
<thead>
<tr>
<th>7697-37-2 nitric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NES</strong></td>
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<tr>
<td></td>
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<tr>
<td><strong>WES</strong></td>
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</tbody>
</table>

- Additional information: The lists valid during the making 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.
- Respiratory protection:
  - 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 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil 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
9 Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>
| Appearance: 
  Form                           | Fluid                                      |
| Colour                           | Colourless                                  |
| Odour                            | Odourless                                   |
| Odour threshold                  | Not determined                              |
| pH-value                         | Not determined                              |
| Melting point/freezing point     | Undetermined                                |
| Initial boiling point and boiling range | 100 °C                                     |
| Flash point                      | Not applicable                              |
| Flammability (solid, gas)        | Not applicable                              |
| Decomposition temperature       | Not determined                              |
| Auto-ignition temperature       | Product is not selfigniting                 |
| Explosive properties            | Product does not present an explosion hazard |
| Explosion limits: 
  Lower                           | Not determined                              |
| Upper                            | Not determined                              |
| Vapour pressure at 20 °C:        | 23 hPa                                     |
| Density at 20 °C:               | 1.0171 g/cm³                                |
| Relative density                | Not determined                              |
| Vapour 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                        | Not determined                              |
| Kinematic                        | Not determined                              |
| Solvent content: 
  Water                          | 97.0 %                                      |
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 relevant for classification**:
    - **ATE (Acute Toxicity Estimates)**
      - Oral LD50: 119,000 mg/kg (rat)
      - Inhalative LC50/4 h: 3,350 mg/L (rat)
    - 7697-37-2 nitric acid
      - Inhalative LC50/4 h: 67 mg/L (rat)
    - 10196-18-6 zinc(II) nitrate hexahydrate
      - Oral LD50: 1,190 mg/kg (rat)
  - **Primary irritant effect**:
    - **Skin corrosion/irritation**: Irritant to skin and mucous membranes.
    - **Serious eye damage/irritation**: Irritating effect.
    - **Respiratory or skin sensitisation**: No sensitising effects known.
  - **Additional toxicological information**:
    - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    - Irritant

12 Ecological Information

- **Toxicity**
  - **Aquatic toxicity**: No further relevant information available.
  - **Persistence and degradability**: No further relevant information available.
  - **Behaviour in environmental systems**:
  - **Bioaccumulative potential**: No further relevant information available.
  - **Mobility in soil**: No further relevant information available.
Trade name: Zinc Standard

· Additional ecological information:
  · General notes:
    Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  · 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 together with household garbage. Do not allow product to reach sewage system.
  · Uncleaned packaging:
    · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number
  · ADG, IMDG, IATA UN3264
· UN proper shipping name
  · ADG 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
  · IMDG, IATA CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
· Transport hazard class(es)
  · ADG, IMDG, IATA
  · Class 8 Corrosive substances.
  · Label 8
· Packing group
  · ADG, IMDG, IATA III
· Environmental hazards:
  · Not applicable.
· Special precautions for user
  · Warning: Corrosive substances.
· Danger code (Kemler):
  · 80
· EMS Number:
  · F-A,S-B
· Segregation groups
  · Acids
· Stowage Category
  · A
· Stowage Code
  · SW2 Clear of living quarters.
Trade name: Zinc Standard

Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable.

Transport/Additional information:

- ADG
  - Limited quantities (LQ) 5L
  - Exempt quantities (EQ) Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- Transport category
  - 3

- Tunnel restriction code
  - E

IMDG

- Limited quantities (LQ) 5L
- Exempt quantities (EQ) Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation":
UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID), 8, III

15 Regulatory information

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

- Australian Inventory of Chemical Substances
  All ingredients are listed.

- Standard for the Uniform Scheduling of Medicines and Poisons
  7697-37-2 nitric acid

- Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - 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.

- Relevant phrases
  H272 May intensify fire; oxidiser.
  H302 Harmful if swallowed.
  H314 Causes severe skin burns and eye damage.

- Department issuing SDS: Document Control / Regulatory
- Contact: regulatory@ultrasci.com
- 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
  - IATA: International Air Transport Association
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
<table>
<thead>
<tr>
<th>Health and Safety Classification</th>
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<tbody>
<tr>
<td>CAS: Chemical Abstracts Service (division of the American Chemical Society)</td>
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<tr>
<td>VOC: Volatile Organic Compounds (USA, EU)</td>
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<td>LC50: Lethal concentration, 50 percent</td>
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<tr>
<td>LD50: Lethal dose, 50 percent</td>
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<tr>
<td>PBT: Persistent, Bioaccumulative and Toxic</td>
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<tr>
<td>vPvB: very Persistent and very Bioaccumulative</td>
</tr>
<tr>
<td>Ox. Liq. 2: Oxidizing liquids – Category 2</td>
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<tr>
<td>Ox. Sol. 2: Oxidizing solids – Category 2</td>
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<tr>
<td>Acute Tox. 4: Acute toxicity – Category 4</td>
</tr>
<tr>
<td>Skin Corr. 1: Skin corrosion/irritation – Category 1</td>
</tr>
<tr>
<td>Skin Irrit. 2: Skin corrosion/irritation – Category 2</td>
</tr>
<tr>
<td>Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A</td>
</tr>
</tbody>
</table>