### Kit components

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5184-3564(Kit)</td>
<td>ICP-MS Checkout Solutions for 7500s</td>
</tr>
</tbody>
</table>

**Components:**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5184-3566</td>
<td>Tuning Solution</td>
</tr>
<tr>
<td>G1820-60258</td>
<td>Wash-Nitric Acid Blank</td>
</tr>
<tr>
<td>G1820-60259</td>
<td>Wash-Water Blank</td>
</tr>
<tr>
<td>G1820-60372</td>
<td>Dual Mode 1 Solution</td>
</tr>
<tr>
<td>G1820-60410</td>
<td>Dual Mode 2 Solution</td>
</tr>
<tr>
<td>ZHP-18-100</td>
<td>Abundance Sensitivity (1)</td>
</tr>
<tr>
<td>ZHP-19-100</td>
<td>Abundance Sensitivity (2)</td>
</tr>
<tr>
<td>ZHP-20-100</td>
<td>Detection Limit (1)</td>
</tr>
<tr>
<td>ZHP-21-500</td>
<td>High Sensitivity Tune</td>
</tr>
</tbody>
</table>
1 Identification

- Product Name: Tuning Solution, Part Number 5184-3566
- Part Number: 5184-3566
- Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.
- Application of the substance / the mixture
  Reagents and Standards for Analytical Chemistry Laboratory Use
  2 x 500 mL Solution
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Agilent Technologies Australia Pty Ltd
  679 Springvale Road
  Mugrave
  Victoria 3170, Australia
- Further information obtainable from: product safety department
- 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
  H315 Causes skin irritation.
  H319 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 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.
  Take off contaminated clothing and wash before reuse.
- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

AU
(Contd. on page 2)
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
  - 10102-45-1 thallium nitrate
  - 7440-45-1 cerium
  - 7440-48-4 cobalt
  - 7440-65-5 yttrium
  - 554-13-2 lithium carbonate
  - 7732-18-5 water, distilled, conductivity or of similar purity

- CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION
  - 10102-45-1 thallium nitrate: Acute Tox. 2, H300; Acute Tox. 2, H330; STOT RE 2, H373 <0.0001%
  - 7440-45-1 cerium: Ox. Liq. 2, H272; Eye Dam. 1, H318 <0.0001%
  - 7440-48-4 cobalt: Resp. Sens. 1, H334; Skin Sens. 1, H317 <0.0001%
  - 7440-65-5 yttrium <0.0001%
  - 554-13-2 lithium carbonate: Acute Tox. 4, H302; Eye Irrit. 2A, H319 <0.0001%
  - 7732-18-5 water, distilled, conductivity or of similar purity 97.9995%

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

4 First Aid Measures

- Description of first aid measures
  - 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: Do not give anything to eat or drink - Do not induce vomiting

- 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: No special measures required.

- 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.

7 Handling and Storage

- Handling:
  - Precautions for safe handling
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.

- Information about fire - and explosion protection: No special measures required.
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>CAS Number</th>
<th>WES Short-term value</th>
<th>WES Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2 nitric acid</td>
<td>10 mg/m³, 4 ppm</td>
<td>5.2 mg/m³, 2 ppm</td>
</tr>
</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:
    In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- Protection of hands:

  Protective gloves

  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

  - Material of gloves
    Nitrile Glove
    Thickness: ≥0.11 mm
    Breakthrough time: > 480 minutes

  - Eye protection:

    Tightly sealed goggles

9 Physical and Chemical Properties

- Information on basic physical and chemical properties

- General Information

- Appearance:
  - Form: Liquid
  - Colour: Colourless
  - Odour: Odourless
47. Odour threshold: Not applicable.
   *pH*-value: <1

- Change in condition
  Melting point/freezing point: 0°C (32°F)
  Initial boiling point and boiling range: 100°C (212°F)

- Flash point: Not applicable.
- Flammability (solid, gas): Not applicable.
- Decomposition temperature: Not applicable.
- Auto-ignition temperature: Product is not self-igniting.
- Explosive properties: Product does not present an explosion hazard.

- Explosion limits:
  Lower: Not applicable.
  Upper: Not applicable.

- Vapour pressure at 20 °C: 23 hPa

- Density: 1.0 g/mL @ 20°C
- Relative density: Not applicable.
- Vapour density: Not applicable.
- Evaporation rate: Not applicable.

- Solubility in / Miscibility with water: Miscible
- Partition coefficient: n-octanol/water: Not applicable.

- Viscosity:
  Dynamic: Not applicable.
  Kinematic: Not applicable.

- Solvent content:
  Water: 98.0 %
  VOC (EC): 0.00 %

- Solids content: 0.0 %
- 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
- 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:
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.
- **Additional ecological information:**
  - **General notes:** Generally not hazardous for water
- **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 SOLUTION)
  - **IMDG, IATA** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)
- **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**
  - **Danger code (Kemler):** Warning: Corrosive substances.
  - **EMS Number:** F-A.S-B
  - **Segregation groups** Acids
  - **Stowage Category** A
  - **Stowage Code** SW2 Clear of living quarters.
- **Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
Transport/Additional information:

- **ADG**
  - Limited quantities (LQ): 5L
  - Excepted quantities (EQ): Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml
- **IMDG**
  - Limited quantities (LQ): 5L
  - Excepted 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 SOLUTION), 8, III

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: $S5, S6$
  - 7440-48-4 cobalt: $S4$
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

Signal word **Warning**

- **Hazard statements**
  - H315 Causes skin irritation.
  - H319 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 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.
  - Take off contaminated clothing and wash before reuse.
- **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.

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.
  H300 Fatal if swallowed.
  H302 Harmful if swallowed.
  H314 Causes severe skin burns and eye damage.
  H317 May cause an allergic skin reaction.
  H318 Causes serious eye damage.
  H319 Causes serious eye irritation.
  H330 Fatal if inhaled.
  H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** product safety department

· **Contact:**
  
  Agilent Technologies Australia Pty Ltd
  1800 802 402

· **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
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  VOC: Volatile Organic Compounds (USA, EU)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Ox. Liq. 2: Oxidizing liquids – Category 2
  Skin Corr. 1A: Skin corrosion/irritation – Category 1A
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
1 Identification

- English additional compounds
- Product identifier
- Product Name: Wash-Nitric Acid Blank, Part Number G1820-60258
- Part Number: G1820-60258
- Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.
- Application of the substance / the mixture
  Reagents and Standards for Analytical Chemistry Laboratory Use
  A 250 mL Solution
- Details of the supplier of the safety data sheet
  Manufacturer/Supplier: Agilent Technologies Australia Pty Ltd
  679 Springvale Road
  Mugrave
  Victoria 3170, Australia
- Further information obtainable from: product safety department
- Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  
  Skin Corr. 1B  H314  Causes severe skin burns and eye damage.
  Eye Dam. 1     H318  Causes serious eye damage.

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

  GHS05

- Signal word: Danger
- Hazard-determining components of labelling:
  - nitric acid

- Hazard statements
  H314 Causes severe skin burns and eye damage.

- Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.
  Read label before use.
  IF ON SKIN (or hair): Remove/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.
  Immediately call a POISON CENTER/doctor.
  Specific treatment (see on this label).
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

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

(Contd. on page 2)
3 Composition and Information on Ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:
  - 7697-33-2 nitric acid Ox. Liq. 2, H272; Skin Corr. 1A, H314 5.0%

· CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION
  - 7732-18-3 water, distilled, conductivity or of similar purity 95.0%

· 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. Then consult a doctor.
· After swallowing: Do not give anything to eat or drink - Do not induce vomiting
· 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 Wear protective equipment. Keep unprotected persons away.
· Environmental precautions: Dilute with plenty of water.
· Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Use neutralising agent.
  - Dispose contaminated material as waste according to item 13.
  - 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.

7 Handling and Storage

· Handling:
· Precautions for safe handling
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
· 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.

(Contd. on page 3)
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>Ingredient</th>
<th>WES Short-term value</th>
<th>WES Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2 nitric acid</td>
<td>10 mg/m³, 4 ppm</td>
<td>5.2 mg/m³, 2 ppm</td>
</tr>
</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:

    In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

  - Protection of hands:

    Protective gloves

    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

  - Material of gloves

    Nitrile Glove
    Thickness: ≥ 0.11 mm
    Breakthrough time: > 480 minutes

  - Penetration time of glove material

    The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:

  Tightly sealed goggles

9 Physical and Chemical Properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

- pH-value:

  < 1

(Contd. on page 4)
Product Name: Wash-Nitric Acid Blank, Part Number G1820-60258

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
- Primary irritant effect:
- Skin corrosion/irritation: Caustic effect on skin and mucous membranes.
- Serious eye damage/irritation: Strong caustic 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:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

### 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.
- Additional ecological information:
  - General notes:
    - Generally not hazardous for water
    - Must not reach sewage water or drainage ditch undiluted or unneutralised.
- 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.
  - **Recommended cleansing agents**: Water, if necessary together with cleansing agents.

### 14 Transport information

- **UN-Number**
  - ADG, IMDG, IATA: UN3264
- **UN proper shipping name**
  - ADG: 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)
  - IMDG, IATA: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)
- **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.
Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

Transport/Additional information:
- ADG
- Limited quantities (LQ): 5L
  Code: E1
  Maximum net quantity per inner packaging: 30 ml
  Maximum net quantity per outer packaging: 1000 ml
- Excepted quantities (EQ): 3
- Transport category: 3
- Tunnel restriction code: E
- IMDG
- Limited quantities (LQ): 5L
  Code: E1
  Maximum net quantity per inner packaging: 30 ml
  Maximum net quantity per outer packaging: 1000 ml
- Excepted quantities (EQ): Code: E1
- UN "Model Regulation":
  UN 3264 CORROSIVE LIQUID. ACIDIC, INORGANIC. N.O.S. (NITRIC ACID SOLUTION), 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
  S5, S6
- GHS label elements
  The product is classified and labelled according to the Globally Harmonised System (GHS).
- Hazard pictograms
  GHS05
- Signal word Danger
- Hazard-determining components of labelling:
  nitric acid
- Hazard statements
  H314 Causes severe skin burns and eye damage.
- Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.
  Read label before use.
  IF ON SKIN (or hair): Remove/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.
  Immediately call a POISON CENTER/doctor.
  Specific treatment (see on this label).
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
- 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.
### Other information

Disclaimer: 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.
  - H314 Causes severe skin burns and eye damage.

- **Department issuing SDS:** product safety department

- **Contact:**
  - Agilent Technologies Australia Pty Ltd
  - 1800 802 402

**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
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Ox. Liq. 2: Oxidizing liquids – Category 2
- Skin Corr. 1A: Skin corrosion/irritation – Category 1A
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- EyeDam. 1: Serious eye damage/eye irritation – Category 1
1 Identification

- English additional compounds
- Product identifier
  - **Product Name:** Wash-Water Blank, Part Number G1820-60259
  - **Part Number:** G1820-60259
  - **CAS Number:** 7732-18-5
  - **EC number:** 231-791-2
- Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.
- Application of the substance / the mixture
  - Reagents and Standards for Analytical Chemistry Laboratory Use
  - A 250 mL Solution
- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier: Agilent Technologies Australia Pty Ltd
    - 679 Springvale Road
    - Mugrave
    - Victoria 3170, Australia

2 Hazard(s) Identification

- Classification of the substance or mixture: The substance is not classified, according to the Globally Harmonised System (GHS).
- Label elements
  - GHS label elements: Not Regulated
  - Hazard pictograms: Not Regulated
  - Signal word: Not Regulated
  - Hazard statements: Not Regulated
  - Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition and Information on Ingredients

- Chemical characterisation: Substances
  - **CAS No. Description:** 7732-18-5 water, distilled, conductivity or of similar purity
- Identification number(s)
  - **EC number:** 231-791-2

4 First Aid Measures

- Description of first aid measures
  - General information: No special measures required.
  - 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.
  - After swallowing: Do not give anything to eat or drink - Do not induce vomiting
  - Information for doctor
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
Product Name: Wash-Water Blank, Part Number G1820-60259

47.0.8 · 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: Dilute with plenty of 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.
  See Section 13 for disposal information.

7 Handling and Storage

· Handling:
  · Precautions for safe handling
    No special measures required.
    Follow good laboratory practices.
  · 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: None.
· 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: Not required.
· Additional information: The lists valid during the making were used as basis.
· Exposure controls
· Personal protective equipment:
  · General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.
  · Respiratory protection: Not required.
· Protection of hands:
  · The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  · Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  · Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· Material of gloves
  Nitrile Glove
  Thickness: \( \geq 0.11 \text{ mm} \)
  Breakthrough time: > 480 minutes
· Penetration time of glove material
  The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
9 Physical and Chemical Properties

- **General Information**
  - Form: Liquid
  - Colour: Colourless
  - Odour: Odourless
  - Odour threshold: Not applicable.
- **pH-value:** 5
- **Change in condition**
  - Melting point/freezing point: 0°C (32°F)
  - Initial boiling point and boiling range: 100°C (212°F)
- **Flash point:** Not applicable.
- **Flammability (solid, gas):** Not applicable.
- **Decomposition temperature:** Not applicable.
- **Auto-ignition temperature:** Not determined.
- **Explosive properties:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower: Not applicable.
  - Upper: Not applicable.
- **Vapour pressure at 20 °C:** 23 hPa
- **Density:** 1.0 g/mL @ 20°C
  - Relative density: Not applicable.
  - Vapour density: Not applicable.
  - Evaporation rate: Not applicable.
- **Solubility in / Miscibility with water:** Miscible
  - Partition coefficient: n-octanol/water: Not applicable.
- **Viscosity:**
  - Dynamic at 20 °C: 0.952 mPas
  - Kinematic: Not applicable.
- **Solvent content:**
  - Water: 100.0 %
  - VOC (EC): 0.00 %
- **Solids content:**
  - 0.0 %
  - 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
- Primary irritant effect:
  - Skin corrosion/irritation: No irritant effect.
  - Serious eye damage/irritation: No irritating effect.
- Respiratory or skin sensitisation: No sensitising effects known.
- Additional toxicological information:
  When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us. The substance is not subject to classification according to the latest version of the EU lists.

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.
  - Additional ecological information:
    - General notes: Generally not hazardous for water
    - 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: Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.
  - Recommended cleansing agents: Water, if necessary together with cleansing agents.

14 Transport information

- UN-Number
  - ADG, ADN, IMDG, IATA: Not Regulated
- UN proper shipping name
  - ADG, ADN, IMDG, IATA: Not Regulated
- Transport hazard class(es)
  - ADG, ADN, IMDG, IATA
  - Class: Not Regulated
- Packing group
  - ADG, IMDG, IATA: Not Regulated
- Environmental hazards:
  Not applicable.
- Special precautions for user:
  Not applicable.
- Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.
- UN "Model Regulation": Not Regulated
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Australian Inventory of Chemical Substances
  Substance is listed.
- Standard for the Uniform Scheduling of Medicines and Poisons
  Substance is not listed.
- GHS label elements Not Regulated
- Hazard pictograms Not Regulated
- Signal word Not Regulated
- Hazard statements Not Regulated
- Directive 2012/18/EU
  Named dangerous substances - ANNEX I Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer: 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.

- Department issuing SDS: product safety department
- Contact:
  Agilent Technologies Australia Pty Ltd
  1800 802 402
- 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
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  VOC: Volatile Organic Compounds (USA, EU)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
Not classified as hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

- English additional compounds
- Product identifier
- Product Name: Dual Mode 1 Solution, Part Number G1820-60372
- Part Number: G1820-60372
- Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.
- Application of the substance / the mixture
Reagents and Standards for Analytical Chemistry Laboratory Use
A 100mL Solution
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mugrave
Victoria 3170, Australia
- Further information obtainable from: product safety department
- Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture: The product is not classified, according to the Globally Harmonised System (GHS).
- Label elements
- GHS label elements: Not Regulated
- Hazard pictograms: Not Regulated
- Signal word: Not Regulated
- Hazard statements: Not Regulated
- 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: Not Regulated

<table>
<thead>
<tr>
<th>CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2 nitric acid</td>
</tr>
<tr>
<td>7440-52-0 Erbium from Erbium(III) oxide</td>
</tr>
<tr>
<td>7732-18-5 water, distilled, conductivity or of similar purity</td>
</tr>
</tbody>
</table>
- 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: No special measures required.
- 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.
- After swallowing: Do not give anything to eat or drink - Do not induce vomiting
- 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**: 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**: No special measures required.
- **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.
  - See Section 13 for disposal information.

### 7 Handling and Storage

- **Handling**:
  - No special measures required.
  - Follow good laboratory practices.
- **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**: None.
  - **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**:
    - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - **Additional information**: The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment**:
  - **General protective and hygienic measures**: The usual precautionary measures are to be adhered to when handling chemicals.
  - **Respiratory protection**: Not required.
  - **Protection of hands**:
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - **Material of gloves**
    - Nitrile Glove
    - Thickness: ≥ 0.11 mm
    - Breakthrough time: > 480 minutes
  - **Penetration time of glove material**
    - The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
### 9 Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Form</strong>:</td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Colour</strong>:</td>
<td>Colourless</td>
</tr>
<tr>
<td><strong>Odour</strong>:</td>
<td>Odourless</td>
</tr>
<tr>
<td><strong>Odour threshold</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>pH-value</strong>:</td>
<td>&lt;1</td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong>:</td>
<td>0°C (32°F)</td>
</tr>
<tr>
<td><strong>Initial boiling point and boiling range</strong>:</td>
<td>100°C (212°F)</td>
</tr>
<tr>
<td><strong>Flash point</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong>:</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Explosion limits</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Vapour pressure at 20 °C</strong>:</td>
<td>23 hPa</td>
</tr>
<tr>
<td><strong>Density</strong>:</td>
<td>1.0 g/mL @ 20°C</td>
</tr>
<tr>
<td><strong>Relative density</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Vapour density</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with water</strong>:</td>
<td>Miscible</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Viscosity</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Dynamic</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Kinematic</strong>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Solvent content</strong>:</td>
<td></td>
</tr>
<tr>
<td><strong>Water</strong>:</td>
<td>99.8 %</td>
</tr>
<tr>
<td><strong>VOC (EC)</strong></td>
<td>0.00 %</td>
</tr>
<tr>
<td><strong>Solids content</strong>:</td>
<td>0.0 %</td>
</tr>
<tr>
<td><strong>Other information</strong>:</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 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
- Primary irritant effect:
  - Skin corrosion/irritation: No irritant effect.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.
- Additional toxicological information:
  - The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
  - When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

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.
- Additional ecological information:
  - General notes: Generally not hazardous for water
  - 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: Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADG, ADN, IMDG, IATA: Not Regulated
- UN proper shipping name
  - ADG, ADN, IMDG, IATA: Not Regulated
- Transport hazard class(es)
  - ADG, ADN, IMDG, IATA
    - Class: Not Regulated
- Packing group
  - ADG, IMDG, IATA: Not Regulated
- Environmental hazards:
  - Not applicable.
- Special precautions for user
  - Not applicable.
- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.
- UN “Model Regulation”:
  - Not Regulated
### 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 S5, S6
  - **GHS label elements**
    - Not Regulated
  - **Hazard pictograms**
    - Not Regulated
  - **Signal word**
    - Not Regulated
  - **Hazard statements**
    - Not Regulated
  - **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

**Disclaimer:** 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.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H335 May cause respiratory irritation.

- **Department issuing SDS:** product safety department
- **Contact:**
  - Agilent Technologies Australia Pty Ltd
  - 1800 802 402

**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
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
Not classified as hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

· English additional compounds
· Product identifier
· Product Name: Dual Mode 2 Solution, Part Number G1820-60410
· Part Number: G1820-60410
· Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
· Application of the substance / the mixture
Reagents and Standards for Analytical Chemistry Laboratory Use
A 100mL Solution
· Details of the supplier of the safety data sheet
· Manufacturer/Supplier: Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mugrave
Victoria 3170, Australia
· Further information obtainable from: product safety department
· Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· Classification of the substance or mixture The product is not classified, according to the Globally Harmonised System (GHS).
· Label elements
· GHS label elements Not Regulated
· Hazard pictograms Not Regulated
· Signal word Not Regulated
· Hazard statements Not Regulated
· 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: Not Regulated

<table>
<thead>
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<tr>
<td>7732-18-5 water, distilled, conductivity or of similar purity</td>
</tr>
</tbody>
</table>

· 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: No special measures required.
· 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.
· After swallowing: Do not give anything to eat or drink - Do not induce vomiting
· Information for doctor:
· Most important symptoms and effects, both acute and delayed No further relevant information available.

(Contd. on page 2)
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: No special measures required.
- 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.
  - See Section 13 for disposal information.

7 Handling and Storage

- Handling:
  - Precautions for safe handling: No special measures required.
  - 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: None.
- 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: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - Additional information: The lists valid during the making were used as basis.
- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.
    - Respiratory protection: Not required.
  - Protection of hands:
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - Material of gloves
    - Nitrile Glove
      - Thickness: ≥ 0.11 mm
      - Breakthrough time: > 480 minutes
    - Penetration time of glove material
      - The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
### 9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Form:** Liquid
    - **Colour:** Colourless
    - **Odour:** Odourless
    - **Odour threshold:** Not applicable.
  - **pH-value:** <1

- **Change in condition**
  - **Melting point/freezing point:** 0°C (32°F)
  - **Initial boiling point and boiling range:** 100°C (212°F)

- **Flash point:** Not applicable.

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

- **Decomposition temperature:** Not applicable.

- **Auto-ignition temperature:** Product is not self-igniting.

- **Explosive properties:** Product does not present an explosion hazard.
  - **Explosion limits:**
    - **Lower:** Not applicable.
    - **Upper:** Not applicable.
  - **Vapour pressure at 20 °C:** 23 hPa
  - **Density:** 1.0 g/mL @ 20°C
  - **Relative density:** Not applicable.
  - **Evaporation rate:** Not applicable.

- **Solubility in / Miscibility with water:** Miscible

- **Partition coefficient: n-octanol/water:** Not applicable.

- **Viscosity**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.

- **Solvent content**
  - **Water:** 99.8 %
  - **VOC (EC):** 0.00 %

- **Solids content:** 0.0 %

- **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
- Primary irritant effect:
  - Skin corrosion/irritation: No irritant effect.
  - Serious eye damage/irritation: No irritating effect.
- Respiratory or skin sensitisation: No sensitising effects known.
- Additional toxicological information:
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

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.
- Additional ecological information:
  - General notes: Generally not hazardous for water
  - 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: Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADG, ADN, IMDG, IATA: Not Regulated
- UN proper shipping name
  - ADG, ADN, IMDG, IATA: Not Regulated
- Transport hazard class(es)
  - ADG, ADN, IMDG, IATA: Not Regulated
  - Class: Not Regulated
- Packing group
  - ADG, IMDG, IATA: Not Regulated
- Environmental hazards:
  - Not applicable.
- Special precautions for user
  - Not applicable.
- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.
- UN “Model Regulation”:
  - Not Regulated
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 S5, S6
  - GHS label elements Not Regulated
  - Hazard pictograms Not Regulated
  - Signal word Not Regulated
  - Hazard statements Not Regulated
  - 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

Disclaimer: 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.
  H314 Causes severe skin burns and eye damage.
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H335 May cause respiratory irritation.

- Department issuing SDS: product safety department
- Contact:
  Agilent Technologies Australia Pty Ltd
  1800 802 402
- 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
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

- English additional compounds
- Product identifier
- Product Name: Abundance Sensitivity (1), Part Number ZHP-18-100
- Part Number: ZHP-18-100
- Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.
- Application of the substance / the mixture
  - Reagents and Standards for Analytical Chemistry Laboratory Use
  - A 100mL Solution
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Agilent Technologies Australia Pty Ltd
  - 679 Springvale Road
  - Mugrave
  - Victoria 3170, Australia
- Further information obtainable from: product safety department
- 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
  - H315 Causes skin irritation.
  - H319 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 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.
  - Take off contaminated clothing and wash before reuse.
- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

(Contd. on page 2)
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. 1A, H314 2.0%
  - 7440-46-2 Cesium from Cesium nitrate Ox. Sol. 3, H272 <0.0001%
  - 7732-18-5 water, distilled, conductivity or of similar purity 97.9999%
- Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- Description of first aid measures
  - 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: Do not give anything to eat or drink - Do not induce vomiting.
- 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).
  - 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.

7 Handling and Storage

- Handling:
  - Precautions for safe handling:
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
  - 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.
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>Chemical</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2 nitric acid</td>
<td>10 mg/m³, 4 ppm</td>
<td>5.2 mg/m³, 2 ppm</td>
</tr>
</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:
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

  - Protection of hands:
    - Protective gloves
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
    - Material of gloves
      - Nitrile Glove
        - Thickness: ≥ 0.11 mm
        - Breakthrough time: > 480 minutes
    - Penetration time of glove material
      - The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

  - Eye protection:
    - Tightly sealed goggles

9 Physical and Chemical Properties

- Information on basic physical and chemical properties

  - General Information

  - Appearance:
    - Form: Liquid
    - Colour: Colourless
    - Odour: Odourless
    - Odour threshold: Not applicable.

  - pH-value: <1

- Change in condition

  - Melting point/freezing point: 0°C (32°F)
  - Initial boiling point and boiling range: 100°C (212°F)
Safety Data Sheet
according to WHS Regulations

Product Name: Abundance Sensitivity (1), Part Number ZHP-18-100

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
- Primary irritant effect:
  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.
### 47.0.8 Persistence and degradability
No further relevant information available.

### Behaviour in environmental systems:
- **Equipment in soil**
  No further relevant information available.
- **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 SOLUTION)
  - **IMDG, IATA**
    CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)
- **Transport hazard class(es)**
  - **ADG, IMDG, IATA**
    - **Class:** 8 Corrosive substances.
    - **Label:** 8
- **Environmental hazards:**
  Not applicable.
- **Special precautions for user**
  - **Danger code (Kemler):** Warning: Corrosive substances.
    80
  - **EMS Number:** F-A.S-B
  - **Segregation groups**
    - **Acids**
    - **Stowage Category:** A
    - **Stowage Code:** SW2 Clear of living quarters.
- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  Not applicable.
- **Transport/Additional information:**
  - **ADG**
    - **Limited quantities (LQ)**
      5L
      Code: E1
      Maximum net quantity per inner packaging: 30 ml
      Maximum net quantity per outer packaging: 1000 ml
## 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

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

- **Hazard pictograms**

  GHS07

- **Signal word** Warning

- **Hazard statements**
  - H315 Causes skin irritation.
  - H319 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 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.
  - If contaminated clothing and wash before reuse.

- **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

Disclaimer: 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.
  - H314 Causes severe skin burns and eye damage.

- **Department issuing SDS:** product safety department

- **Contact:**
  - Agilent Technologies Australia Pty Ltd
  - 1800 802 402

- **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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 2: Oxidizing liquids – Category 2
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
1 Identification

- English additional compounds
- Product identifier
- Product Name: Abundance Sensitivity (2), Part Number ZHP-19-100
- Part Number: ZHP-19-100
- Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.
- Application of the substance / the mixture
  Reagents and Standards for Analytical Chemistry Laboratory Use
  A 100mL Solution
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Agilent Technologies Australia Pty Ltd
  679 Springvale Road
  Mugrave
  Victoria 3170, Australia
- Further information obtainable from: product safety department
- Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture: The product is not classified, according to the Globally Harmonised System (GHS).
- GHS label elements: Not Regulated
- Hazard pictograms: Not Regulated
- Signal word: Not Regulated
- Hazard statements: Not Regulated
- Other hazards: Not Regulated
- 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: Not Regulated

<table>
<thead>
<tr>
<th>CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2 nitric acid</td>
</tr>
<tr>
<td>7440-46-2 Cesium from Cesium nitrate</td>
</tr>
<tr>
<td>7732-18-5 water, distilled, conductivity or of similar purity</td>
</tr>
</tbody>
</table>

- 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: No special measures required.
- 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.
- After swallowing: Do not give anything to eat or drink - Do not induce vomiting
- 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: 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.
  - See Section 13 for disposal information.

7 Handling and Storage

- Handling:
  - Precautions for safe handling: No special measures required.
    - Follow good laboratory practices.
  - 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: None.
- 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:
    - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - Additional information: The lists valid during the making were used as basis.
- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.
  - Respiratory protection: Not required.
  - Protection of hands:
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - Material of gloves
    - Nitrile Glove
    - Thickness: ≥ 0.11 mm
    - Breakthrough time: > 480 minutes
  - Penetration time of glove material
    - The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
9 Physical and Chemical Properties

- Information on basic physical and chemical properties
- General Information
  - Form: Liquid
  - Appearance:
    - Colour: Colourless
    - Odour: Odourless
    - Odour threshold: Not applicable.
  - pH-value: <1
- Change in condition
  - Melting point/freezing point: 0°C (32°F)
  - Initial boiling point and boiling range: 100°C (212°F)
- Flash point: Not applicable.
- Flammability (solid, gas): Not applicable.
- Decomposition temperature: Not applicable.
- Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product does not present an explosion hazard.
- Explosion limits:
  - Lower: Not applicable.
  - Upper: Not applicable.
- Vapour pressure at 20 °C: 23 hPa
- Density: 1.0 g/mL @ 20°C
  - Relative density: Not applicable.
  - Vapour density: Not applicable.
  - Evaporation rate: Not applicable.
- Solubility in / Miscibility with water: Miscible
  - Partition coefficient: n-octanol/water: Not applicable.
- Viscosity:
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.
- Solvent content:
  - Water: 99.5 %
  - VOC (EC): 0.00 %
- Solids content: 0.0 %
  - 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
- Primary irritant effect:
  - Skin corrosion/irritation: No irritant effect.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.
- Additional toxicological information:
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

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.
- 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: Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADG, ADN, IMDG, IATA: Not Regulated
- UN proper shipping name
  - ADG, ADN, IMDG, IATA: Not Regulated
- Transport hazard class(es)
  - ADG, ADN, IMDG, IATA: Not Regulated
- Class
- Packing group
  - ADG, IMDG, IATA: Not Regulated
- Environmental hazards:
  - Not applicable.
- Special precautions for user
  - Not applicable.
- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.
Safety Data Sheet
according to WHS Regulations

Product Name: Abundance Sensitivity (2), Part Number ZHP-19-100

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 S5, S6
  · GHS label elements Not Regulated
  · Hazard pictograms Not Regulated
  · Signal word Not Regulated
  · Hazard statements Not Regulated
  · 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

Disclaimer: 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.
  H314 Causes severe skin burns and eye damage.

· Department issuing SDS: product safety department

· Contact:
  Agilent Technologies Australia Pty Ltd
  1800 802 402

· 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
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  VOC: Volatile Organic Compounds (USA, EU)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
1 Identification

- English additional compounds
- Product identifier
  - Product Name: Detection Limit (1), Part Number ZHP-20-100
  - Part Number: ZHP-20-100
  - Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.
  - Application of the substance / the mixture
    Reagents and Standards for Analytical Chemistry Laboratory Use
    A 100mL Solution
  - Details of the supplier of the safety data sheet
    - Manufacturer/Supplier:
      Agilent Technologies Australia Pty Ltd
      679 Springvale Road
      Mugga
      Victoria 3170, Australia
  - Further information obtainable from: product safety department
  - 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
  H315 Causes skin irritation.
  H319 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 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.
  - Take off contaminated clothing and wash before reuse.
- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

(Contd. on page 2)
3 Composition and Information on Ingredients

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

- Dangerous components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazard Class</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2 nitric acid</td>
<td>Ox. Liq. 2, H272; Skin Corr. 1A, H314</td>
<td>2.0%</td>
</tr>
<tr>
<td>7440-69-9 bismuth</td>
<td></td>
<td>&lt;0.0001%</td>
</tr>
<tr>
<td>7440-74-6 indium</td>
<td></td>
<td>&lt;0.0001%</td>
</tr>
<tr>
<td>7440-41-7 Beryllium from Beryllium Acetate</td>
<td>Acute Tox. 2, H300; Acute Tox. 2, H310; Acute Tox. 2, H330</td>
<td>&lt;0.0001%</td>
</tr>
<tr>
<td>7732-18-5 water, distilled, conductivity or of similar purity</td>
<td></td>
<td>97.9997%</td>
</tr>
</tbody>
</table>

- CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-69-9 bismuth</td>
<td>&lt;0.0001%</td>
</tr>
<tr>
<td>7440-74-6 indium</td>
<td>&lt;0.0001%</td>
</tr>
<tr>
<td>7440-41-7 Beryllium from Beryllium Acetate</td>
<td>&lt;0.0001%</td>
</tr>
<tr>
<td>7732-18-5 water, distilled, conductivity or of similar purity</td>
<td>97.9997%</td>
</tr>
</tbody>
</table>

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

4 First Aid Measures

- Description of first aid measures
  - 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: Do not give anything to eat or drink - Do not induce vomiting

- 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: No special measures required.
- 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.

7 Handling and Storage

- Handling:
  - Precautions for safe handling
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  - 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.
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>CAS Number</th>
<th>Substance</th>
<th>WES Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2</td>
<td>nitric acid</td>
<td>10 mg/m³, 4 ppm</td>
<td>5.2 mg/m³, 2 ppm</td>
</tr>
</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:
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - Protection of hands:
    - Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- Material of gloves
  - Nitrile Glove
    - Thickness: ≥ 0.11 mm
    - Breakthrough time: > 480 minutes

- Penetration time of glove material
  - The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:
  - Tightly sealed goggles

9 Physical and Chemical Properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Colour: Colourless
      - Odour: Odourless
      - Odour threshold: Not applicable.
    - pH-value: <1

- Change in condition
  - Melting point/freezing point: 0°C (32°F)
  - Initial boiling point and boiling range: 100°C (212°F)
### 47. Flash point:
Not applicable.

### 48. Flammability (solid, gas):
Not applicable.

### 49. Decomposition temperature:
Not applicable.

### 50. Auto-ignition temperature:
Product is not self-igniting.

### 51. Explosive properties:
Product does not present an explosion hazard.

### 52. Explosion limits:
- Lower: Not applicable.
- Upper: Not applicable.

### 53. Vapour pressure at 20 °C:
23 hPa

### 54. Density:
1.0 g/mL @ 20°C

### 55. Relative density:
Not applicable.

### 56. Vapour density:
Not applicable.

### 57. Evaporation rate:
Not applicable.

### 58. Solubility in / Miscibility with water:
Miscible

### 59. Partition coefficient: n-octanol/water:
Not applicable.

### 60. Viscosity:
- Dynamic: Not applicable.
- Kinematic: Not applicable.

### 61. Solvent content:
- Water: 98.0 %
- VOC (EC): 0.00 %

### 62. Solids content:
0.0 %

### 63. 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:**
- **Primary irritant effect:** Irritant to skin and mucous membranes.
- **Skin corrosion/irritation:** Irritating effect.
- **Serious eye damage/irritation:**
- **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.
47. Persistence and degradability
No further relevant information available.

48. Behaviour in environmental systems:
49. Bioaccumulative potential
No further relevant information available.

50. Mobility in soil
No further relevant information available.

51. Additional ecological information:
52. General notes: Generally not hazardous for water

53. Results of PBT and vPvB assessment
54. PBT: Not applicable.
55. vPvB: Not applicable.

56. Other adverse effects
No further relevant information available.

13 Disposal considerations

57. Waste treatment methods

58. Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

59. Uncleaned packaging:

60. Recommendation: Disposal must be made according to official regulations.

14 Transport information

61. UN-Number

62. ADG, IMDG, IATA UN3264

63. UN proper shipping name

64. ADG 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)

65. IMDG, IATA CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)

66. Transport hazard class(es)

67. ADG, IMDG, IATA

68. Class 8 Corrosive substances.

69. Label 8

70. Packing group

71. ADG, IMDG, IATA III

72. Environmental hazards:

73. Not applicable.

74. Special precautions for user

75. Warning: Corrosive substances.

76. Danger code (Kemler): 80

77. EMS Number: F-A-S-B

78. Segregation groups Acids

79. Stowage Category A

80. Stowage Code SW2 Clear of living quarters.

81. Transport in bulk according to Annex II of Marpol and the IBC Code

82. Not applicable.

83. Transport/Additional information:

84. ADG

85. Limited quantities (LQ)

86. 5L Code: E1 Maximum net quantity per inner packaging: 30 ml

87. Excepted quantities (EQ)

88. Maximum net quantity per outer packaging: 1000 ml

89. Transport category 3

90. Tunnel restriction code E
Product Name: Detection Limit (1), Part Number ZHP-2 0-100

- IMDG
- Limited quantities (LQ) 5L
- Exempted 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 SOLUTION), 8, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Australian Inventory of Chemical Substances
    - 7697-37-2 nitric acid
    - 7440-69-9 bismuth
    - 7440-74-6 indium
    - 7732-18-5 water, distilled, conductivity or of similar purity
  - Standard for the Uniform Scheduling of Medicines and Poisons
    - 7697-37-2 nitric acid S5, S6
    - 7440-41-7 Beryllium from Beryllium Acetate S6
  - GHS label elements
  - The product is classified and labelled according to the Globally Harmonised System (GHS).
- Hazard pictograms
  
  !
  GHS07

- Signal word Warning
- Hazard statements
  - H315 Causes skin irritation.
  - H319 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 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.
  - Take off contaminated clothing and wash before reuse.

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer: 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.
  - H300 Fatal if swallowed.
  - H310 Fatal in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H330 Fatal if inhaled.
Product Name: Detection Limit (1), Part Number ZHP-20-100

- **Department issuing SDS:** product safety department
- **Contact:**
  Agilent Technologies Australia Pty Ltd
  1800 802 402
- **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
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Ox. Liq. 2: Oxidizing liquids – Category 2
  - Skin Corr. 1A: Skin corrosion/irritation – Category 1A
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

(Contd. of page 6)
## 1 Identification

- **English additional compounds**
- **Product identifier**
  - **Product Name:** High Sensitivity Tune, Part Number ZHP-21-500
  - **Part Number:** ZHP-21-500
  - **Relevant identified uses of the substance or mixture and uses advised against**: No further relevant information available.
  - **Application of the substance / the mixture**
    - Reagents and Standards for Analytical Chemistry Laboratory Use
    - A 500 mL Solution
  - **Details of the supplier of the safety data sheet**
    - **Manufacturer/Supplier:** Agilent Technologies Australia Pty Ltd
    - 679 Springvale Road
    - Mugrave
    - Victoria 3170, Australia
  - **Further information obtainable from:** product safety department
  - **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**
  - H315 Causes skin irritation.
  - H319 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 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.
  - Take off contaminated clothing and wash before reuse.
- **Other hazards**
- **Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.

(Contd. on page 2)
3 Composition and Information on Ingredients

- Chemical characterisation: Mixtures
- Description: Mixtures of substances listed below with nonhazardous additions.

- Dangerous components:
  - 7697-37-2 nitric acid
    - Ox. Liq. 2, H272; Skin Corr. 1A, H314 2.0%
  - CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION
    - 7439-95-4 magnesium
      - Pyr. Sol. 1, H250; Water-react. 1, H260 <0.0001%
    - 10102-45-1 thallium nitrate
      - Acute Tox. 2, H300; Acute Tox. 2, H330; STOT RE 2, H373 <0.0001%
    - 7440-45-1 cerium
      - Ox. Liq. 2, H272; Eye Dam. 1, H318 <0.0001%
    - 7440-65-5 yttrium <0.0001%
    - 554-13-2 lithium carbonate
      - Acute Tox. 4, H302; Eye Irrit. 2A, H319 <0.0001%
    - 7732-18-5 water, distilled, conductivity or of similar purity
      - 97.99995%
  - Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- Description of first aid measures
  - 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: Do not give anything to eat or drink - Do not induce vomiting
  - 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: No special measures required.
  - 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.

7 Handling and Storage

- Handling:
  - Precautions for safe handling
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
  - Information about fire - and explosion protection: No special measures required.
47.0.8

- 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:
  - 7697-37-2 nitric acid
    - WES Short-term value: 10 mg/m³, 4 ppm
    - Long-term value: 5.2 mg/m³, 2 ppm
- 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:
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- Protection of hands:

  Protective gloves

  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

  - Material of gloves
    Nitrile Glove
    Thickness: ≥0.11 mm
    Breakthrough time: > 480 minutes

  - Eye protection:

    Tightly sealed goggles

9 Physical and Chemical Properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Liquid
  - Colour: Colourless
  - Odour: Odourless

(Contd. on page 4)
### Odour threshold
- Not applicable.

### pH-value
- $<1$

### Change in condition
- **Melting point/freezing point:** 0°C (32°F)
- **Initial boiling point and boiling range:** 100°C (212°F)

### Flash point
- Not applicable.

### Flammability (solid, gas)
- Not applicable.

### Decomposition temperature
- Not applicable.

### Auto-ignition temperature
- Product is not self-igniting.

### Explosive properties
- Product does not present an explosion hazard.

### Explosion limits
- **Lower:** Not applicable.
- **Upper:** Not applicable.

### Vapour pressure at 20 °C
- 23 hPa

### Density
- 1.0 g/mL @ 20°C

### Solubility in / Miscibility with water
- Miscible

### Partition coefficient: n-octanol/water
- Not applicable.

### Viscosity
- **Dynamic:** Not applicable.
- **Kinematic:** Not applicable.

### Solvent content
- **Water:** 98.0 %
- **VOC (EC):** 0.00 %

### Solids content
- 0.0 %

### 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

### Primary irritant effect
- Irritant to skin and mucous membranes.

### Skin corrosion/irritation
- Irritating effect.

### 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:
# Safety Data Sheet
according to WHS Regulations

**Product Name:** High Sensitivity Tune, Part Number ZHP-21-500

## 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.
- **Additional ecological information:**
  - **General notes:** Generally not hazardous for water
  - **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 SOLUTION)
  - **IMDG, IATA** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)
- **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**
  - **Danger code (Kemler):** Warning: Corrosive substances.
  - **EMS Number:** F-A.S-B
  - **Segregation groups** Acids
  - **Stowage Category** A
  - **Stowage Code** SW2 Clear of living quarters.
- **Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
Product Name: High Sensitivity Tune, Part Number ZHP-21-500

Transport/Additional information:
- ADG
  - Limited quantities (LQ) 5L
    Code: E1
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 1000 ml
  - Excepted quantities (EQ)
- Tunnel category
  - Tunnel restriction code E
- IMDG
  - Limited quantities (LQ) 5L
    Code: E1
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 1000 ml
  - Excepted quantities (EQ)
- UN "Model Regulation": UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION), 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 S5, S6
- GHS label elements
  The product is classified and labelled according to the Globally Harmonised System (GHS).
- Hazard pictograms

GHS07

Signal word Warning

Hazard statements
H315 Causes skin irritation.
H319 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 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.
Take off contaminated clothing and wash before reuse.

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

Disclaimer: 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
H250 Catches fire spontaneously if exposed to air.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H272 May intensify fire; oxidiser.
H300 Fatal if swallowed.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.

**Department issuing SDS:** Product safety department

**Contact:**
Agilent Technologies Australia Pty Ltd
1800 802-402

**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
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 2: Oxidizing liquids – Category 2
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A