SECTION 1: Identification of the substance/mixture and of the company/undertaking

- English additional compounds
- 1.1 Product identifier
- Product Name: ICP-MS Stock Tuning Solution (100 mL), Part Number 5188-6564
- Part Number: 5188-6564
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- No further relevant information available.
- Application of the substance / the mixture
  Analytical Chemistry
  A 100mL Solution
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str. 8
  76337 Waldbronn
  Germany
- Further information obtainable from: product safety department
- 1.4 Emergency telephone number:
  CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
  GHS07
  Skin Irrit. 2 H315 Causes skin irritation.
  Eye Irrit. 2 H319 Causes serious eye irritation.
  Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  Xi; Irritant
  R36/38: Irritating to eyes and skin.
- Information concerning particular hazards for human and environment:
  The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- Classification system: The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
- Hazard pictograms
  GHS07
- Signal word Warning
- Hazard statements
  Causes skin 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.
  Wear protective gloves/protective clothing/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.
  Specific treatment (see on this label).
  Take off contaminated clothing and wash before reuse.
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.

(Contd. on page 2)
Product Name: ICP-MS Stock Tuning Solution (100 mL), Part Number 5188-6564

(Contd. of page 1)

SECTION 3: Composition/information on ingredients

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

- Dangerous components:
  
  | CAS: 7697-37-2 | nitric acid | R35; R8; Ox. Liq. 3, H272; Skin Corr. 1A, H314 | 2.0% |
  | CAS: 7439-93-2 | Lithium from Lithium carbonate | R22; R36; Acute Tox. 4, H302; Eye Irrit. 2, H319 | 0.001% |
  | CAS: 7440-28-0 | Thallium from Thallium nitrate | R3; Acute Tox. 2, H306; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Chronic 2, H411 | 0.001% |
  | CAS: 7440-45-1 | Cerium from Cerium(III) nitrate hexahydrate | R3; Acute Tox. 2, H306; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Chronic 2, H411 | 0.001% |
  | CAS: 7440-48-4 | cobalt | R3; Resp. Sens. 1, H334; Skin Sens. 1, H317; Aquatic Chronic 4, H413 | 0.001% |
  | CAS: 7440-65-5 | Yttrium from Yttrium oxide | 0.001% |
  | CAS: 7732-18-5 | water, distilled, conductivity or of similar purity | 97.995% |

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

SECTION 4: First aid measures

- 4.1 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: If symptoms persist consult doctor.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

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

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

(Contd. on page 3)
Safety data sheet according to 1907/2006/EC, Article 31

Printing date 13.05.2015 Revision: 13.05.2015

Product Name: ICP-MS Stock Tuning Solution (100 mL), Part Number 5188-6564

(Contd. of page 2)

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

6.4 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.

SECTION 7: Handling and storage

7.1 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.

7.2 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.
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
7697-37-2 nitric acid
WEL Short-term value: 2.6 mg/m³, 1 ppm

Additional information: The lists valid during the making were used as basis.

8.2 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
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)
### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</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>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
<td>0 °C (32°F)</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</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, gaseous)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Ignition temperature</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Self-igniting</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Danger of explosion</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper</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></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Solvent content</strong></td>
<td></td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Water</td>
<td>98.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>0.00 %</td>
</tr>
<tr>
<td><strong>9.2 Other information</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10.1 Reactivity</strong></td>
<td></td>
</tr>
<tr>
<td><strong>10.2 Chemical stability</strong></td>
<td></td>
</tr>
<tr>
<td>Thermal decomposition / conditions to be avoided:</td>
<td>No decomposition if used according to specifications.</td>
</tr>
<tr>
<td><strong>10.3 Possibility of hazardous reactions</strong></td>
<td>No dangerous reactions known.</td>
</tr>
</tbody>
</table>
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:
- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.
- 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

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability
No further relevant information available.
12.3 Bioaccumulative potential
No further relevant information available.
12.4 Mobility in soil
No further relevant information available.
12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
12.6 Other adverse effects
No further relevant information available.

SECTION 13: Disposal considerations

13.1 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.

SECTION 14: Transport information

14.1 UN-Number
- ADR, IMDG, IATA UN3264

14.2 UN proper shipping name
- ADR 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)
- IMDG, IATA CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)
Safety data sheet
according to 1907/2006/EC, Article 31

Product Name: ICP-MS Stock Tuning Solution (100 mL), Part Number 5188-6564

14.3 Transport hazard class(es)
- ADR, IMDG, IATA

- Class 8 Corrosive substances.
- Label 8

14.4 Packing group
- ADR, IMDG, IATA III

14.5 Environmental hazards:
- Marine pollutant: No

14.6 Special precautions for user
- Danger code (Kemler): Warning: Corrosive substances. 80
- EMS Number: F-A,S-B
- Segregation groups Acids

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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No further relevant information available.

A Chemical Safety Assessment has not been carried out.

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

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

- Transport category
- Tunnel restriction code 3 E

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

- UN "Model Regulation": UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION), 8, III

SECTION 15: Regulatory information

SECTION 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.
  R35 Causes severe burns.
  R8 Contact with combustible material may cause fire.

- Department issuing SDS: product safety department
- Contact:
  Agilent Technologies Manufacturing GmbH & Co. KG
  0800 603 1000

(Contd. on page 7)
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
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- VOC: Volatile Organic Compounds (USA, EU)
- Ox. Liq. 3: Oxidising Liquids, Hazard Category 3
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2