Safety Data Sheet
according to WHS Regulations

Printing date 17.04.2025 Revision: 17.04.2025

*
1 Identification

· **Product identifier**

· **Trade name: ICP-MS Calibration Standard**

· **Part number:** IMS-102
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

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2 Hazard(s) Identification

· **Classification of the substance or mixture**


corrosion

Corrosive to metals – Category 1	H290 May be corrosive to metals.
Eye damage/irritation – Category 1	H318 Causes serious eye damage.

Skin corrosion/irritation – Category 2	H315 Causes skin irritation.

· **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 (<10 %)
· **Hazard statements**
H290 May be corrosive to metals.
H315 Causes skin irritation.
H318 Causes serious eye damage.
· **Precautionary statements**
P280 Wear protective gloves / eye protection / face protection.
P234 Keep only in original container.

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 17.04.2025 Revision: 17.04.2025

Trade name: ICP-MS Calibration Standard

(Contd. of page 1)

P264	Wash thoroughly after handling.
P310	Immediately call a POISON CENTER/doctor.
P321	Specific treatment (see on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water.
P390	Absorb spillage to prevent material damage.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364	Take off contaminated clothing and wash it before reuse.
P406	Store in corrosive resistant container with a resistant inner liner.

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

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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 Oxidising liquids - Category 2, H272; Skin corrosion/irritation – Category 1A, H314	<10%

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

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4 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:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire Fighting Measures

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Protective equipment:** No special measures required.

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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.

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 17.04.2025 Revision: 17.04.2025

Trade name: ICP-MS Calibration Standard

(Contd. of page 2)

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).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
· **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.

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7 Handling and Storage

· **Handling:**
· **Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about fire - and explosion protection:** No special measures required.
· **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.

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8 Exposure controls and personal protection

· **Additional information about design of technical facilities:** No further data; see section 7.

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

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 17.04.2025 Revision: 17.04.2025

Trade name: ICP-MS Calibration Standard

(Contd. of page 3)

· **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
· **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
· **Eye protection:**

Tightly sealed goggles

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9 Physical and Chemical Properties

· **General Information**	
· **Appearance:**	
· **Form:**	Fluid
· **Colour:**	According to product specification
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
· **Melting point/freezing point:**	Undetermined.
· **Initial boiling point and boiling range:**	100 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Vapour pressure at 20 °C:**	23 hPa
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
· **water:**	Fully miscible.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
· **Dynamic at 20 °C:**	0.952 mPas
· **Kinematic:**	Not determined.
· **Solvent content:**	
· **Water:**	95.0 %
· **VOC (EC)**	0.00 %
· **Solids content:**	0.0 %

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 17.04.2025 Revision: 17.04.2025

Trade name: ICP-MS Calibration Standard

(Contd. of page 4)

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

10 Stability and Reactivity

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

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11 Toxicological Information

· **Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
7697-37-2 nitric acid		
Inhalative	LC50/4 h	67 mg/L (rat)

· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation** Causes serious eye damage.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

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 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 17.04.2025 Revision: 17.04.2025

Trade name: ICP-MS Calibration Standard

(Contd. of page 5)

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

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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.

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14 Transport information

· **UN-Number**	
· **ADG, IMDG, IATA**	UN3264
· **UN proper shipping name**	
· **ADG**	3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
· **IMDG, IATA**	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
· **Transport hazard class(es)**	
· **ADG, IMDG, IATA**	
· **Class**	8 Corrosive substances.
· **Label**	8
· **Packing group**	
· **ADG, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Corrosive substances.
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG1) Acids
· **Stowage Category**	B
· **Stowage Code**	SW2 Clear of living quarters.
· **Segregation Code**	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 17.04.2025 Revision: 17.04.2025

Trade name: ICP-MS Calibration Standard

(Contd. of page 6)

· **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
· **Transport category**	3
· **Tunnel restriction code**	E
· **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), 8, III

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15 Regulatory information

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

· **Australian Inventory of Industrial Chemicals**	
7732-18-5	water
7697-37-2	nitric acid
7664-39-3	hydrogen fluoride
471-34-1	calcium carbonate
554-13-2	lithium carbonate
1327-53-3	diarsenic trioxide
7440-55-3	gallium
7440-69-9	bismuth
7440-74-6	indium
7446-08-4	selenium dioxide
7631-99-4	sodium nitrate
7757-79-1	potassium nitrate
7761-88-8	silver nitrate
7782-61-8	iron (III) nitrate nonahydrate
7784-27-2	aluminium nitrate
7789-02-8	chromium (III) nitrate nonahydrate
7789-18-6	cesium nitrate
7803-55-6	ammonium trioxovanadate
10022-31-8	barium nitrate
10022-68-1	Nitric acid, cadmium salt, tetrahydrate
10026-22-9	cobalt (II) nitrate hexahydrate
10031-43-3	cupric nitrate

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 17.04.2025 Revision: 17.04.2025

Trade name: ICP-MS Calibration Standard

(Contd. of page 7)

10042-76-9	strontium nitrate
10099-74-8	lead dinitrate
10102-45-1	thallium nitrate
10196-18-6	zinc(II) nitrate hexahydrate
10377-66-9	manganese dinitrate
13126-12-0	rubidium nitrate
13446-18-9	magnesium nitrate hexahydrate
13478-00-7	Nitric acid, nickel(2+) salt, hexahydrate

· **Standard for the Uniform Scheduling of Medicines and Poisons**		
7697-37-2	nitric acid	S5, S6
7664-39-3	hydrogen fluoride	S5, S6, S7
7761-88-8	silver nitrate	S6

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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

· **Relevant phrases**
H272 May intensify fire; oxidizer.
H314 Causes severe skin burns and eye damage.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** pdl-acg-regulatory-cq@agilent.com
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international 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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Oxidising liquids - Category 2: Oxidizing liquids – Category 2
Corrosive to metals – Category 1: Corrosive to metals – Category 1
Skin corrosion/irritation – Category 1A: Skin corrosion/irritation – Category 1A
Skin corrosion/irritation – Category 2: Skin corrosion/irritation – Category 2
Eye damage/irritation – Category 1: Serious eye damage/eye irritation – Category 1
· *** Data compared to the previous version altered.**