Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

*
1 Identification

· **Product identifier**

· **Product Name: ICP-MS Calibration Standard (125 mL)**

· **Part no. :** IMS-103
· **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA

· **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

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2 Hazard identification

· **Classification of the substance or mixture**


GHS06 Skull and crossbones

Acute Toxicity (Inhalation) - Category 3 H331 Toxic if inhaled.


GHS05 Corrosion

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


GHS07

Skin Irritation - Category 2 H315 Causes skin irritation.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**


GHS05


GHS06

· **Signal word** Danger

· **Hazard-determining components of labeling:**
hydrochloric acid
nitric acid
hydrogen fluoride
· **Hazard statements**
H290 May be corrosive to metals.

(Contd. on page 2)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 1)

H331 Toxic if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.

· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P261	Avoid breathing vapors.
P280	Wear protective gloves / eye protection / face protection.
P234	Keep only in original packaging.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P310	Immediately call a POISON CENTER/doctor.
P321	Specific treatment (see on this label).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Information pertaining to particular dangers for man and environment:**
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *3
Fire = 0
Reactivity = 0

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3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
7647-01-0	hydrochloric acid	4.38% w/w
7697-37-2	nitric acid	1.98% w/w
7664-39-3	hydrogen fluoride	0.1% w/w

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(Contd. on page 3)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 2)

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4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After inhalation:**
Supply fresh air or oxygen; call for doctor.
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.
· **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

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **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).
Use neutralizing agent.
Dispose contaminated material as waste according to section 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.

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7 Handling and storage

· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:** Keep respiratory protective device available.

(Contd. on page 4)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 3)

· **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 receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/ Personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
7647-01-0 hydrochloric acid	
EL	Ceiling: 2 ppm
EV	Ceiling: 2 ppm
7697-37-2 nitric acid	
EL	STEL: 4 ppm TWA: 2 ppm
EV	STEL: 10 mg/m³, 4 ppm TWA: 5 mg/m³, 2 ppm
7664-39-3 hydrogen fluoride	
EL	Ceiling: 2 ppm Skin
EV	TWA: 0.5 ppm Ceiling: 2 ppm as F

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **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.
Store protective clothing separately.
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

(Contd. on page 5)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 4)

· **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

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Liquid
· **Color:**	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined
· **Melting point/Melting range:**	Undetermined
· **Boiling point/Boiling range:**	100 °C
· **Flammability:**	Not applicable
· **Explosion limits:**	
· **Lower:**	Not determined
· **Upper:**	Not determined
· **Flash point:**	Not applicable
· **Decomposition temperature:**	Not determined
· **pH-value:**	Not determined
· **Viscosity:**	
· **Kinematic:**	Not determined
· **Dynamic:**	Not determined
· **Solubility in / Miscibility with**	
· **Water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined
· **Vapor pressure at 20 °C:**	23 hPa
· **Vapor pressure:**	
· **Density:**	Not determined
· **Relative density**	Not determined
· **Vapor density**	Not determined
· **Particle characteristics**	Not applicable

· **Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.

(Contd. on page 6)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 5)

· **Solvent content:**	
· **Water:**	93.3 %
· **Solids content:**	0.2 %
· **Change in condition**	
· **Evaporation rate**	Not determined

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.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	4,021 mg/kg
Dermal	LD50	5,000 mg/kg
Inhalative	LC50/4 h	2.51 mg/L

7647-01-0 hydrochloric acid		
Oral	LD50	900 mg/kg (rabbit)
7697-37-2 nitric acid		
Inhalative	LC50/4 h	67 mg/L (rat)
7664-39-3 hydrogen fluoride		
Oral	LD50	1,276 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
7647-01-0	hydrochloric acid	3

(Contd. on page 7)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 6)

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (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.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Dispose of contents/container in accordance with local/regional/national/international regulations.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· **UN-Number**	
· **DOT/TDG, ADR, IMDG, IATA**	UN3264
· **UN proper shipping name**	
· **DOT/TDG**	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid, Hydrochloric acid)
· **ADR**	3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid, Hydrochloric acid)
· **IMDG, IATA**	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, HYDROCHLORIC ACID)

(Contd. on page 8)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **DOT/TDG (Transport dangerous goods):**

· **Class**	8 Corrosive substances
· **Label**	8

· **ADR, IMDG, IATA**

· **Class**	8 Corrosive substances
· **Label**	8
· **Packing group**	
· **DOT/TDG, ADR, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable

· **Transport/Additional information:**

· **DOT/TDG**

· **Quantity limitations**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

· **ADR**

· **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

· **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

(Contd. on page 9)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 8)

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

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15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**	
7647-01-0	hydrochloric acid
7697-37-2	nitric acid
7664-39-3	hydrogen fluoride

· **Section 313 (Specific toxic chemical listings):**	
7647-01-0	hydrochloric acid
7697-37-2	nitric acid
7664-39-3	hydrogen fluoride
7440-36-0	antimony

· **TSCA (Toxic Substances Control Act):**		
7732-18-5	water	ACTIVE
7647-01-0	hydrochloric acid	ACTIVE
7697-37-2	nitric acid	ACTIVE
87-69-4	(+)-tartaric acid	ACTIVE
7664-39-3	hydrogen fluoride	ACTIVE
7446-07-3	tellurium dioxide	ACTIVE
12055-23-1	hafnium dioxide	ACTIVE
7440-06-4	platinum	ACTIVE
7440-36-0	antimony	ACTIVE
7440-57-5	gold, soluble compounds as Au	ACTIVE

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**	
7732-18-5	water
7647-01-0	hydrochloric acid
7697-37-2	nitric acid
87-69-4	(+)-tartaric acid
7664-39-3	hydrogen fluoride
7446-07-3	tellurium dioxide
12055-23-1	hafnium dioxide
7440-06-4	platinum
7440-36-0	antimony
7440-57-5	gold, soluble compounds as Au

(Contd. on page 10)

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 05/28/2026 Revision: 05/28/2026

Product Name: ICP-MS Calibration Standard (125 mL)

(Contd. of page 9)

· **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

7647-01-0	hydrochloric acid
7697-37-2	nitric acid

· **Per- and polyfluoroalkyl substances (PFAS)**

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.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** pdl-acg-regulatory-cq@agilent.com
· **Date of previous version** 05/30/2021
· **Version number of previous version:** 6
· **Date of preparation** 05/28/2026
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
· *** Data compared to the previous version altered.**