Safety Data Sheet
acc. to OSHA HCS

Date of issue: 10/20/2026 *Reviewed on 10/20/2026*

1 Identification

· **Product identifier**

· **Product Name: ICP-MS Tuning Solution 10 ppm**
· **Other means of identification**

· **Part Number:** SPX5190-0465
· **Application of the substance / the mixture** For Laboratory Use Only
· **Uses advised against** Not for Human or Animal Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Spex CertiPrep, LLC.
203 Norcross Ave, Metuchen,
NJ 08840 USA
732-549-7144
USMet-CRMSales@antylia.com

· **Information department:** product safety department
· **Emergency telephone number:**
Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazard(s) identification

· **Classification of the substance or mixture**



GHS07

Skin irritation 2 H315 Causes skin irritation.

Eye irritation 2A H319 Causes serious eye irritation.
· **Additional information:** The full text of the classification and labeling elements mentioned is given in Section 16.

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



GHS07

· **Signal word** Warning
· **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
· **Precautionary statements**

P264	Wash thoroughly after handling.
P280	Wear protective gloves / eye protection / face protection.
P302+P352	If on skin: Wash with plenty of water.
P321	Specific treatment (see on this label).
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.

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



Health = 2
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 0

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

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· **Classification according to (d)(1)(ii) of § 1910.1200**
The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.
· **Hazards not otherwise classified**
There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/information on ingredients

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

· **Dangerous components:**		
7697-37-2	nitric acid	2.0%

· **Chemical identification of the substance/preparation**		
7732-18-5	water, distilled, conductivity or of similar purity	97.994%
7439-93-2	lithium	0.001%
7439-95-4	magnesium	0.001%
7440-28-0	thallium	0.001%
7440-45-1	cerium	0.001%
7440-48-4	cobalt	0.001%
7440-65-5	yttrium	0.001%

4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Immediately rinse with water.
· **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 vomitting
· **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 fighting measures that suit the environment.
· **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).
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
7697-37-2	nitric acid	0.16 ppm
7439-93-2	lithium	0.20 mg/m3
7439-95-4	magnesium	12 mg/m3
7440-28-0	thallium	0.06 mg/m3
7440-45-1	cerium	30 mg/m3
7440-48-4	cobalt	0.060 mg/m3
7440-65-5	yttrium	3.0 mg/m3

· **PAC-2:**		
7697-37-2	nitric acid	24 ppm
7439-93-2	lithium	0.50 mg/m3
7439-95-4	magnesium	130 mg/m3
7440-28-0	thallium	3.3 mg/m3
7440-45-1	cerium	330 mg/m3
7440-48-4	cobalt	2.0 mg/m3
7440-65-5	yttrium	83 mg/m3

· **PAC-3:**		
7697-37-2	nitric acid	92 ppm
7439-93-2	lithium	3.0 mg/m3

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7439-95-4	magnesium	790 mg/m3
7440-28-0	thallium	20 mg/m3
7440-45-1	cerium	2000 mg/m3
7440-48-4	cobalt	20 mg/m3
7440-65-5	yttrium	500 mg/m3

· **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

· **Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about protection against explosions and fires:** 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 receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
7697-37-2 nitric acid	
PEL	Long-term value: 5 mg/m³, 2 ppm
REL	Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm
TLV	Short-term value: (4) ppm Long-term value: (2) ppm

· **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.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· **Respiratory protection:** Not required
· **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.
· **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
· **Odour Threshold:**	Not applicable.
· **Melting point/Melting range:**	Undetermined
· **Boiling point/Boiling range:**	100 °C (212 °F)
· **Flammability:**	Not applicable
· **Explosion limits:**	
· **Lower:**	Not applicable.
· **Upper:**	Not applicable.
· **Flash point:**	Not applicable
· **Decomposition temperature:**	Not applicable.
· **pH-value:**	Not applicable.
· **Viscosity:**	
· **Kinematic:**	Not applicable.
· **Dynamic:**	Not applicable.
· **Solubility in / Miscibility with**	
· **Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not applicable.
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17.3 mm Hg)
· **Vapor pressure:**	
· **Density**	Not applicable.
· **Relative density**	Not applicable.
· **Vapor density**	Not applicable.
· **Particle characteristics**	Not applicable

· **Other information**	
· **Appearance:**	
· **Form:**	Liquid
· **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.
· **Solvent content:**	
· **Water:**	98.0 %
· **VOC content:**	0.00 %
· **Solids content:**	0.0 %
· **Change in condition**	
· **Evaporation rate**	Not applicable.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

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

· **LD/LC50 values that are relevant for classification:**		
7697-37-2 nitric acid		
Inhalative	LC50/4 h	2.65 mg/l (ATE)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
· **Interactive effects** No interactive effects between components are known.

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· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
7440-48-4	cobalt	2A

· **NTP (National Toxicology Program)**		
7440-48-4	cobalt	R

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Alternative sources for toxicological information** No non-standard sources for toxicological information where used.

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:** Not hazardous for water.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN3264
· **UN proper shipping name**	
· **DOT**	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)
· **ADR**	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)**

· **DOT**



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

· **ADR, IMDG, IATA**



· **Class**	8 Corrosive substances
· **Label**	8
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable

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

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· Transport/Additional information:	
· 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	A
· Stowage Code	SW2 Clear of living quarters.
· Segregation Code	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· UN "Model Regulation":	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID), 8, III

15 Regulatory information

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

· Section 313 (Specific toxic chemical listings):	
7697-37-2	nitric acid
7439-93-2	lithium
7440-28-0	thallium
7440-48-4	cobalt

· **TSCA (Toxic Substances Control Act):**
All components have the value ACTIVE.

· Hazardous Air Pollutants	
7440-48-4	cobalt

· **Proposition 65**

· Chemicals known to cause cancer:	
7440-48-4	cobalt

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:	
7439-93-2	lithium

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· TLV (Threshold Limit Value)		
7440-48-4	cobalt	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

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



GHS07

· **Signal word** Warning
· **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.

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Safety Data Sheet
acc. to OSHA HCS

Date of issue: 10/20/2026 *Reviewed on 10/20/2026*

Product Name: ICP-MS Tuning Solution 10 ppm

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· ***Precautionary statements***

P264	*Wash thoroughly after handling.*
P280	*Wear protective gloves / eye protection / face protection.*
P302+P352	*If on skin: Wash with plenty of water.*
P321	*Specific treatment (see on this label).*
P305+P351+P338	*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
P332+P313	*If skin irritation occurs: Get medical advice/attention.*
P362+P364	*Take off contaminated clothing and wash it before reuse.*
P337+P313	*If eye irritation persists: Get medical advice/attention.*

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

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· ***Department issuing SDS:*** *product safety department*
· ***Contact:***
Spex CertiPrep, LLC.
1-732-549-7144
· ***Date of preparation*** *10/20/2026*
· ***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
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)
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
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin irritation 2: Skin corrosion/irritation – Category 2
Eye irritation 2A: Serious eye damage/eye irritation – Category 2A