

## SAFETY DATA SHEET

Revision Date 01-April-2024

Revision Number 4

### 1. Identification

**Product Name** ICP-MS Tuning Standard solution for HP®, Specpure®

**Cat No. :** 42586

**Synonyms** No information available

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

##### Company

##### **Importer/Distributor**

Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

##### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11

Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99

**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

**WHMIS 2015 Classification** Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

|   |              |
|---|--------------|
| <b>Corrosive to metals</b>                              | Category 1   |
| <b>Skin Corrosion/Irritation</b>                        | Category 1 A |
| <b>Serious Eye Damage/Eye Irritation</b>                | Category 1   |
| <b>Specific target organ toxicity (single exposure)</b> | Category 3   |
| Target Organs - Respiratory system.                     |              |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

May be corrosive to metals

Causes severe skin burns and eye damage

May cause respiratory irritation

**Precautionary Statements****Prevention**

Keep only in original container

Do not breathe dust/fumes/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower

IF INHALED: Remove person to fresh air and keep comfortable for breathing

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

Wash contaminated clothing before reuse

Absorb spillage to prevent material damage

**Storage**

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Store in corrosive resistant polypropylene container with a resistant inliner

Store in a dry place

**Disposal**

Dispose of contents/container to an approved waste disposal plant

### 3. Composition/Information on Ingredients

| Component   | CAS-No    | Weight % |
|-------------|-----------|----------|
| Water       | 7732-18-5 | 95       |
| Nitric acid | 7697-37-2 | 5.00     |

### 4. First-aid measures

**General Advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

**Inhalation**

If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

**Ingestion**

Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

|  |   |
|--|---|
| <b>Most important symptoms/effects</b> | Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |
| <b>Notes to Physician</b>              | Treat symptomatically   |

## 5. Fire-fighting measures

**Suitable Extinguishing Media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available  
**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

### Hazardous Combustion Products

None known.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### NFPA

**Health**  
3

**Flammability**  
0

**Instability**  
0

**Physical hazards**  
-

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental Precautions** Should not be released into the environment. See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## 7. Handling and storage

**Handling** Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

**Storage.** Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls / personal protection

### Exposure Guidelines

| Component   | Alberta    | British Columbia | Ontario TWAEV | Quebec     | ACGIH TLV  | OSHA PEL       | NIOSH        |
|-------------|------------|------------------|---------------|------------|------------|----------------|--------------|
| Nitric acid | TWA: 2 ppm | TWA: 2 ppm       | TWA: 2 ppm    | TWA: 2 ppm | TWA: 2 ppm | (Vacated) TWA: | IDLH: 25 ppm |

|  |   |             |             |   |             |  |   |
|--|---|-------------|-------------|---|-------------|--|---|
|  | TWA: 5.2 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 10 mg/m <sup>3</sup> | STEL: 4 ppm | STEL: 4 ppm | TWA: 5.2 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 10 mg/m <sup>3</sup> | STEL: 4 ppm | 2 ppm<br>(Vacated) TWA: 5 mg/m <sup>3</sup><br>(Vacated) STEL: 4 ppm<br>(Vacated) STEL: 10 mg/m <sup>3</sup><br>TWA: 2 ppm<br>TWA: 5 mg/m <sup>3</sup> | TWA: 2 ppm<br>TWA: 5 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 10 mg/m <sup>3</sup> |
|--|---|-------------|-------------|---|-------------|--|---|

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment****Eye Protection**

Goggles

**Hand Protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

| Glove material | Breakthrough time | Glove thickness | Glove comments         |
|----------------|-------------------|-----------------|------------------------|
| Natural rubber | See manufacturers | -               | Splash protection only |
| Nitrile rubber | recommendations   |                 |                        |
| Neoprene       |                   |                 |                        |
| PVC            |                   |                 |                        |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Recommended Filter type:** Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**

No information available.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

|                     |                          |
|---------------------|--------------------------|
| Physical State      | Liquid                   |
| Appearance          | No information available |
| Odor                | Characteristic           |
| Odor Threshold      | No information available |
| pH                  | No information available |
| Melting Point/Range | No data available        |

|  |                          |
|--|--------------------------|
| Boiling Point/Range                    | approx 100 °C / 212 °F   |
| Flash Point                            | No information available |
| Evaporation Rate                       | No information available |
| Flammability (solid,gas)               | Not applicable           |
| Flammability or explosive limits       |                          |
| Upper                                  | No data available        |
| Lower                                  | No data available        |
| Vapor Pressure                         | No information available |
| Vapor Density                          | No information available |
| Specific Gravity                       | 1 g/cm3                  |
| Solubility                             | No information available |
| Partition coefficient; n-octanol/water | No data available        |
| Autoignition Temperature               | No information available |
| Decomposition Temperature              | No information available |
| Viscosity                              | No information available |
| Molecular Formula                      | Matrix: 5% HN O3         |

## 10. Stability and reactivity

|                                  |  |
|----------------------------------|--|
| Reactive Hazard                  | None known, based on information available |
| Stability                        | Stable under normal conditions.            |
| Conditions to Avoid              | Incompatible products.                     |
| Incompatible Materials           | Strong oxidizing agents                    |
| Hazardous Decomposition Products | None under normal use conditions           |
| Hazardous Polymerization         | Hazardous polymerization does not occur.   |
| Hazardous Reactions              | None under normal processing.              |

## 11. Toxicological information

### Acute Toxicity

#### Product Information

**Oral LD50** Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

**Dermal LD50** Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

**Vapor LC50** Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

#### Component Information

| Component   | LD50 Oral  | LD50 Dermal | LC50 Inhalation           |
|-------------|------------|-------------|---------------------------|
| Water       | -          | -           | -                         |
| Nitric acid | Not listed | Not listed  | LC50 = 2500 ppm. (Rat) 1h |

**Toxicologically Synergistic** No information available

#### Products

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                 |  |
|-----------------|--|
| Irritation      | No information available   |
| Sensitization   | No information available   |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component   | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------|-----------|------------|------------|------------|------------|------------|
| Water       | 7732-18-5 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Nitric acid | 7697-37-2 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

|   |  |
|---|--|
| <b>Developmental Effects</b>                      | No information available.  |
| <b>Teratogenicity</b>                             | No information available.  |
| <b>STOT - single exposure</b>                     | Respiratory system   |
| <b>STOT - repeated exposure</b>                   | None known   |
| <b>Aspiration hazard</b>                          | No information available   |
| <b>Symptoms / effects, both acute and delayed</b> | Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |
| <b>Endocrine Disruptor Information</b>            | No information available   |
| <b>Other Adverse Effects</b>                      | The toxicological properties have not been fully investigated.   |

## 12. Ecological information

### Ecotoxicity

|                                      |                           |
|--------------------------------------|---------------------------|
| <b>Persistence and Degradability</b> | No information available  |
| <b>Bioaccumulation/ Accumulation</b> | No information available. |
| <b>Mobility</b>                      | No information available. |

| Component   | log Pow |
|-------------|---------|
| Nitric acid | -2.3    |

## 13. Disposal considerations

|                               |   |
|-------------------------------|---|
| <b>Waste Disposal Methods</b> | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
|-------------------------------|---|

## 14. Transport information

### DOT

|                             |   |
|-----------------------------|---|
| <b>UN-No</b>                | UN3264                                      |
| <b>Proper Shipping Name</b> | Corrosive liquid, acidic, inorganic, n.o.s. |
| <b>Technical Name</b>       | (Nitric acid solution)                      |
| <b>Hazard Class</b>         | 8   |
| <b>Packing Group</b>        | III   |

### TDG

|                             |   |
|-----------------------------|---|
| <b>UN-No</b>                | UN3264                                      |
| <b>Proper Shipping Name</b> | Corrosive liquid, acidic, inorganic, n.o.s. |
| <b>Hazard Class</b>         | 8   |
| <b>Packing Group</b>        | III   |

### IATA

|                             |   |
|-----------------------------|---|
| <b>UN-No</b>                | UN3264                                      |
| <b>Proper Shipping Name</b> | Corrosive liquid, acidic, inorganic, n.o.s. |
| <b>Hazard Class</b>         | 8   |
| <b>Packing Group</b>        | III   |

### IMDG/IMO

|                             |   |
|-----------------------------|---|
| <b>UN-No</b>                | UN3264                                      |
| <b>Proper Shipping Name</b> | Corrosive liquid, acidic, inorganic, n.o.s. |
| <b>Hazard Class</b>         | 8   |
| <b>Packing Group</b>        | III   |

## 15. Regulatory information

### International Inventories

| Component   | CAS-No    | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS    | ELINCS | NLP |
|-------------|-----------|-----|------|------|---|-----------|--------|-----|
| Water       | 7732-18-5 | X   | -    | X    | ACTIVE  | 231-791-2 | -      | -   |
| Nitric acid | 7697-37-2 | X   | -    | X    | ACTIVE  | 231-714-2 | -      | -   |

| Component   | CAS-No    | IECSC | KECL     | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|-------------|-----------|-------|----------|------|------|------|------|-------|-------|
| Water       | 7732-18-5 | X     | KE-35400 | X    | -    | X    | X    | X     | X     |
| Nitric acid | 7697-37-2 | X     | KE-25911 | X    | X    | X    | X    | X     | X     |

#### Legend:

X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

| Component   | Canada - National Pollutant Release Inventory (NPRI) | Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances | Canada's Chemicals Management Plan (CEPA) |
|-------------|--|--|---|
| Nitric acid | Part 1, Group A Substance                            |  |   |

#### Legend

NPRI - National Pollutant Release Inventory

### Other International Regulations

#### Authorisation/Restrictions according to EU REACH

| Component   | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------|---|---|---|
| Nitric acid | -   | Use restricted. See item 75. (see link for restriction details)               | -   |

#### REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

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

| Component   | CAS-No    | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|-------------|-----------|----------|------------------------------|---------------------------|--|
| Water       | 7732-18-5 | Listed   | Not applicable               | Not applicable            | Not applicable                             |
| Nitric acid | 7697-37-2 | Listed   | Not applicable               | Not applicable            | Not applicable                             |

| Component | CAS-No | Seveso III Directive (2012/18/EC) - Qualifying Quantities | Seveso III Directive (2012/18/EC) - Qualifying Quantities | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-----------|--------|---|---|----------------------------|------------------------------------|
|-----------|--------|---|---|----------------------------|------------------------------------|

|             |           | for Major Accident Notification | for Safety Report Requirements |                |                |
|-------------|-----------|---------------------------------|--------------------------------|----------------|----------------|
| Water       | 7732-18-5 | Not applicable                  | Not applicable                 | Not applicable | Not applicable |
| Nitric acid | 7697-37-2 | Not applicable                  | Not applicable                 | Not applicable | Annex I - Y34  |

## 16. Other information

**Prepared By**

Product Safety Department  
Email: chem.techinfo@thermofisher.com  
www.thermofisher.com

**Revision Date**

01-April-2024

**Print Date**

01-April-2024

**Revision Summary**

New emergency telephone response service provider.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**