

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 1 of 11

1. Identification**Product identifier**

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Reagents and laboratory chemicals
Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household).

Details of the supplier of the safety data sheet**Details of the supplier of the safety data sheet**

Company name: AnalytiChem Services, Unipessoal, Lda
Street: Rua de Júlio Dinis 676 7º
Place: P-4050-320 Porto
Telephone: +351 226002917
E-mail: info@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Internet: www.analytichem.com
Responsible Department: SDS service department

Supplier or manufacturer details

Company name: AnalytiChem Canada Inc.
Street: Québec, CANADA
21800 Clark Graham Ave
Place: CDN-H9X 4B6 Baie-D'Urfé
Telephone: +1 (800) 361-6820 Telefax: +1 (800) 253-5549
E-mail: info@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Internet: www.analytichem.com
Responsible Department: AnalytiChem:
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333
Emergency telephone number: +1 703-741-5970 (CHEMTREC)

Further Information

No data available

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 2 of 11

2. Hazard identification**Classification of the substance or mixture****WHMIS 2015**

- Corrosive to metals: Met. Corr. 1
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Hazardous to the aquatic environment: Aquatic Acute 1
Hazardous to the aquatic environment: Aquatic Chronic 2

Label elements**WHMIS 2015****Signal word:** Danger**Pictograms:****Hazard statements**

- May be corrosive to metals.
Causes skin irritation.
Causes serious eye damage.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Precautionary statements

- Keep only in original packaging.
Wash hands thoroughly after handling.
Wear protective gloves/protective clothing and eye protection/face protection.
IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
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.
Absorb spillage to prevent material damage.
Store in a corrosion resistant container with a resistant inner liner.

Other hazards

No data available

3. Composition/information on ingredients**Mixtures****Chemical characterization**

Mixtures in aqueous solution

Relevant ingredients

| CAS No | Chemical name | Quantity |
|-----------|----------------|-----------------|
| 7697-37-2 | nitric acid | 3 - < 7 % (*) |
| 7761-88-8 | silver nitrate | 0.1 - < 1 % (*) |

(*) The actual concentration is withheld as a trade secret.

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 3 of 11

Further Information

No data available

4. First-aid measures**Description of first aid measures****General information**

No data available

After inhalation

Provide fresh air.

Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk.

Call a physician immediately.

Most important symptoms and effects, whether acute or delayed

Irritant

Methaemoglobinaemia

Indication of immediate medical attention and special treatment needed

No data available

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

No data available

Specific hazards arising from the hazardous product

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO_x)**Special protective equipment and precautions for fire-fighters**

In case of fire: Wear self-contained breathing apparatus.

In case of fire and/or explosion do not breathe fumes.

Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 4 of 11

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures****General advice**

- Corrosive to metals.
- Do not breathe vapour/aerosol.

For non-emergency personnel

- Provide adequate ventilation.
- Use personal protection equipment.
- Avoid contact with skin, eyes and clothes.
- Remove persons to safety.
- Emergency procedures
- Consult an expert
- Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

- Precautionary statements For emergency responders : Personal protection equipment: see section 8

Environmental precautions

- Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up**For containment**

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
- Collect in closed and suitable containers for disposal.

For cleaning up

- Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

7. Handling and storage**Precautions for safe handling****Advice on safe handling**

- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Use personal protection equipment.
- Provide adequate ventilation. Avoid contact with skin, eyes and clothes.
- Do not breathe vapour/aerosol.

Advice on protection against fire and explosion

- Usual measures for fire prevention.

Advice on general occupational hygiene

- Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.
- Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 5 of 11

Further information on handling

- Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary.
- Take off immediately all contaminated clothing and wash it before reuse.

Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

- Corrosive to metals.
- Unsuitable container/equipment material: Metal
- The product develops hydrogen in an aqueous solution in contact with metals.

Hints on joint storage

- Take national regulations into account.

Further information on storage conditions

- Keep container tightly closed.

8. Exposure controls/Personal protection**Control parameters****Exposure limits (ACGIH)**

| CAS No | Chemical name | ppm | mg/m ³ | Category | Origin |
|-----------|---------------|-----|-------------------|---------------|------------|
| 7697-37-2 | Nitric acid | 2 | 5.2 | TWA (8 h) | ACGIH-2025 |
| | | 4 | 10 | STEL (15 min) | ACGIH-2025 |

Exposure controls**Appropriate engineering controls**

- Technical measures and the application of suitable work processes have priority over personal protection equipment.
- If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment**Eye/face protection**

- goggles
- Wear eye/face protection.

Hand protection

- When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Tested protective gloves must be worn. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Skin protection

- Wear suitable protective clothing. Take off immediately all contaminated clothing.
- Wash hands before breaks and after work.
- The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Respiratory protection

- Respiratory protection necessary at: aerosol or mist formation
- The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Thermal hazards

- No data available

Environmental exposure controls

- Do not allow to enter into surface water or drains.

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 6 of 11

9. Physical and chemical properties**Information on basic physical and chemical properties**

| | | |
|---|-------------------|------------------------|
| Physical state: | Liquid | |
| Colour: | colourless | |
| Odour: | odourless | |
| Odour threshold: | No data available | |
| Melting point/freezing point: | | No data available |
| Boiling point or initial boiling point and boiling range: | | No data available |
| Flammability: | | No data available |
| Lower explosive limits: | | No data available |
| Upper explosive limits: | | No data available |
| Flash point: | | No data available |
| Auto-ignition temperature: | | No data available |
| Decomposition temperature: | | No data available |
| pH-Value: | | No data available |
| Viscosity / kinematic: | | No data available |
| Water solubility: | | No data available |
| Solubility in other solvents | | |
| No data available | | |
| Dissolution rate: | | No data available |
| Partition coefficient n-octanol/water: | | No data available |
| Dispersion stability: | | No data available |
| Vapour pressure: | | No data available |
| Vapour pressure: | | No data available |
| Density (at 20.9 °C): | | 1,02 g/cm ³ |
| Relative density: | | No data available |
| Bulk density: | | No data available |
| Relative vapour density: | | No data available |
| Particle characteristics: | | No data available |

Other information**Information with regard to physical hazard classes**

| | |
|---------------------------|-------------------|
| Explosive properties | |
| No data available | |
| Sustained combustibility: | No data available |
| Self-ignition temperature | |
| Solid: | No data available |
| Gas: | No data available |
| Oxidizing properties | |
| No data available | |

Other safety characteristics

| | |
|--------------------------|-------------------|
| Evaporation rate: | No data available |
| Solvent separation test: | No data available |
| Solvent content: | No data available |
| Solid content: | No data available |
| Sublimation point: | No data available |
| Softening point: | No data available |
| Pour point: | No data available |
| No data available: | |

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 7 of 11

Viscosity / dynamic:

No data available

Flow time:

No data available

Further Information

Corrosive to metals.

10. Stability and reactivity**Reactivity**

Corrosive to metals.

Chemical stability

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

Alkali (lye)

Conditions to avoid

No data available

Incompatible materials

Cellulose

Metal

The product develops hydrogen in an aqueous solution in contact with metals.

Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Firefighting measures

Further information

No data available

11. Toxicological information**Information on toxicological effects****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg

| CAS No | Chemical name | | | | |
|-----------|-------------------|-------------------|------------|--|--------------------|
| | Route of exposure | Dose | Species | Source | Method |
| 7697-37-2 | nitric acid | | | | |
| | inhalation vapour | ATE 2,65 mg/l | | | |
| 7761-88-8 | silver nitrate | | | | |
| | oral | LD50 > 2000 mg/kg | Rat | Study report (1993) | OECD Guideline 401 |
| | dermal | LD50 > 348 mg/kg | Guinea pig | J. Vet. Med. Sci.73: 1417 - 1423. (2011) | OECD Guideline 434 |

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye damage.

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 8 of 11

Sensitizing effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Information on likely routes of exposure

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

Information on other hazards**Endocrine disrupting properties**

There are no data available on the mixture itself.

Other information

There are no data available on the mixture itself.

Further information

There are no data available on the mixture itself.

12. Ecological information**Ecotoxicity**

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 9 of 11

| CAS No | Chemical name | | | | | |
|-----------|--------------------------|----------------------|-----------|--|--|--|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 7697-37-2 | nitric acid | | | | | |
| | Acute fish toxicity | LC50 1559 mg/l | 96 h | Topeka shiner | Environmental Toxicology and Chemistry, | other: ASTM E729-26 |
| | Fish toxicity | NOEC 268 mg/l | 30 d | juvenile Topeka shiner and with juvenile Fathead m | Study report (2009) | Growth tests estimated the test chemical |
| | Algae toxicity | NOEC > 419 mg/l | 10 d | several benthic diatoms; see results | Marine Biology 43:307-315 (1977) | Ten cultures of benthic diatoms were iso |
| | Acute bacteria toxicity | EC50 > 1000 mg/l () | 3 h | Activated sludge | Study report (2008) | OECD Guideline 209 |
| 7761-88-8 | silver nitrate | | | | | |
| | Acute fish toxicity | LC50 0,0012 mg/l | 96 h | Pimephales promelas | Environmental Toxicology and Chemistry. | A guideline was not specified. The test |
| | Acute algae toxicity | ErC50 0,0099 mg/l | 96 h | Pseudokirchneriella subcapitata | Environmental Science and Technology. 44 | eline: U.S. Environmental Protection Age |
| | Acute crustacea toxicity | EC50 0,00022 mg/l | 48 h | Daphnia magna | Environmental Toxicology and Chemistry. | The protective effect of reactive sulphi |
| | Fish toxicity | NOEC > 0,00125 mg/l | 73 d | Oncorhynchus mykiss | Environmental Toxicology and Chemistry 2 | other: ASTM 1241-98 |
| | Algae toxicity | NOEC 0,0012 mg/l | 14 d | Champia parvula | in Bishop WE, Cardwell RD Heidolph BB (E | The toxicity tests lasted 11 days for th |
| | Crustacea toxicity | NOEC 0,00031 mg/l | 20 d | Isonychia bicolor | Environmental Toxicology and Chemistry. | 20 day sublethal effects on representati |

Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

There are no data available on the mixture itself.

BCF

| CAS No | Chemical name | BCF | Species | Source |
|-----------|----------------|-----|-----------------|---------------------|
| 7761-88-8 | silver nitrate | 70 | Cyprinus carpio | Water, Air and Soil |

Mobility in soil

There are no data available on the mixture itself.

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Other adverse effects

- Discharge into the environment must be avoided.
- Harmful effect due to pH shift.
- Forms corrosive mixtures with water even if diluted.

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 10 of 11

Further information

Do not allow to enter into surface water or drains.

13. Disposal considerations

Waste treatment methods**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations .

Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

Waste codes/waste designations according to EWC/AVV

14. Transport information

Canadian TDG

| | |
|------------------------------|--|
| UN number: | UN 3264 |
| Proper shipping name: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid) |
| Hazard classes: | 8 |
| Packing group: | III |
| Hazard label: | 8 |
| Special Provisions: | 16 |
| Limited quantity: | 5 L |

Marine transport (IMDG)

| | |
|---|--|
| UN number or ID number: | UN 3264 |
| United Nations proper shipping name: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid) |
| Transport hazard class(es): | 8 |
| Packing group: | III |
| Hazard label: | 8 |
| Special Provisions: | 223 274 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| EmS: | F-A, S-B |
| Segregation group: | 1 - acids |

Air transport (ICAO-TI/IATA-DGR)

| | |
|---|--|
| UN number or ID number: | UN 3264 |
| United Nations proper shipping name: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid) |
| Transport hazard class(es): | 8 |
| Packing group: | III |
| Hazard label: | 8 |
| Special Provisions: | A3 A803 |
| Limited quantity Passenger: | 1 L |
| Passenger LQ: | Y841 |
| Excepted quantity: | E1 |
| IATA-packing instructions - Passenger: | 852 |
| IATA-max. quantity - Passenger: | 5 L |
| IATA-packing instructions - Cargo: | 856 |
| IATA-max. quantity - Cargo: | 60 L |

Safety Data Sheet

according to WHMIS

PlasmaCAL ICP/ICPMS Standard – Silver 1000 µg/ml (Ag)

Revision: 13.11.2025

Product code: AC18.01304

Page 11 of 11

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes
Danger releasing substance: silver nitrate

15. Regulatory information**Canadian regulations****16. Other information****Changes**

This data sheet contains changes from the previous version in section(s): 1,2,5,9,11,13,14.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Provide appropriate information, instructions and training to users

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)