

SECTION 1 Identification**Product Name:** PlasmaCAL calibration solution SCP-33-MS**Matrix:** 5% Nitric acid, Tr. Hydrofluoric acid

containing the following elements:

0-10 µg/ml: Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, Pb, Rb, Sb, Se, Sn, Sr, Ti, Tl, U, V, Zn

Catalogue Number: 140-130-32x**Recommended Use:** Laboratory Chemical

Instrument Calibration. This product is intended for laboratory testing. This product shall be used by trained personnel only.

Restriction on use:

Do not use this product outside of a laboratory. This product should not be used by untrained personnel.

Manufacturer/ Supplier:**Canada/ International**21 800 Clark-Graham
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Québec, H9X 4B6
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In the event of a transport emergency, call Chemtrec (24 h): 1-703-527-3887

In the event of medical emergency, call your local poison centre or equivalent.

SECTION 2 Hazards Identification**Emergency Overview****GHS****Harmonized Classification – Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation)****Classification:** Corrosive- Category 1B
(Nitric Acid)**Pictograms:****Signal Word:** Danger**Hazard Statements****H314:** Causes severe skin burns and eye damage.**Precautionary Statements****P260:** Do not breathe dust/fume/gas/mist/vapours/spray.**P264:** Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P363: Wash contaminated clothing before reuse.
P405: Store locked up.
P501: Dispose of contents/container to an approved waste disposal site and according to federal, regional and local government requirements.

Other Hazards: No information available

SECTION 3 Composition and Information on Ingredients

CAS No.	Chemical Name	Percent	Classification ((EC) No 1272/2008)
7697-37-2	Nitric acid	5%	Oxid. Liq. 2 - H 272 Skin Corr. 1° - H314
7664-39-3	Hydrofluoric acid	Tr.	Acute Tox. 2 * - H300 (Oral) Acute Tox. 2 * - H310 (Dermal) Skin Corr. 1° - H314 Acute Tox. 2 * - H330 (Inhalation)
7732-18-5	Water	95-100%	Not Classified

SECTION 4 First Aid Measures

In case of contact:

Eye: Immediately flush eyes with plenty of water for at least 15 minutes, holding the eyelids open. Neutral saline may be used as soon as it is available. Do NOT interrupt flushing. If irritation persists, repeat flushing. Get medical aid immediately.

Skin: Immediately flush skin with plenty of water for at least 30 minutes while removing contaminated clothing and shoes. Apply a 2.5% calcium gluconate gel to burn. Do NOT interrupt flushing. Get medical aid immediately.

Ingestion: For a precaution: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical aid immediately.

Inhalation: Take proper precautions to ensure your own safety before attempting rescue (e.g., wear appropriate protective equipment). If breathing, move person into fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid immediately.

Notes: Always have calcium gluconate gel on hand and replace with fresh material at least annually.

Most important Symptoms: May cause severe skin burns and eye damage.
Harmful if swallowed, if in contact with skin and if inhaled.

Notes to Physician/Doctor: Treat symptomatically and supportively.

SECTION 5 Fire-fighting Measures

Fire Hazard Summary:

Product does not burn. May react with many metals. Generates heat when mixed with water. Firefighters should wear self-contained respirator and full protective gear. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Whichever is most appropriate for the surrounding fire. Use flooding quantities of water spray or fog.

Media:**Extinguishing Media** ...
to be Avoided:**Combustion and Thermal Decomposition Products:** Acid vapors.**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained respirator and full protective gear.**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD IDENTIFICATION**Health: 3 – Short exposure could cause serious temporary or moderate residual injury.
Flammability: 0
Reactivity: 0
Special Hazard:**SECTION 6 Accidental Release Measures****Spill Precautions:**

Personal precautions: Use personal protective equipment.

Protective equipment and emergency procedures: Ensure adequate ventilation. Evacuate personnel to safe areas.

Clean-up:

SMALL SPILLS: Soak up spill with absorbent material which does not react with spilled chemical. Put material in suitable, covered, labeled containers. Flush area with large quantities of water. Contaminated absorbent material will pose the same hazards as the spilled product.

LARGE SPILLS: Evacuate area. Contact fire and emergency services and supplier for advice.

SECTION 7 Handling and Storage**Handling:**

Use only with adequate ventilation and/or personal protective equipment. Wash thoroughly after using. Avoid contact with skin and eyes. Avoid generating vapors or mists. Avoid contact with all incompatible materials. When diluting, always add acid to cold water slowly and in small amounts. Never use hot water and never add water to the acid.

Storage:

Store in a tightly closed container in a cool, well ventilated and dry area.

Store at room temperature, unless stated otherwise.

Store away from incompatible materials, heated areas, sparks, and flames. Do not store in metal or glass containers.

Additional Information:

The mixture is intended for use in a laboratory. The mixture as supplied is stable under normal laboratory conditions.

SECTION 8 Exposure Controls and Personal Protection**EXPOSURE GUIDELINES****Nitric Acid**NIOSH: 2 ppm TWA (5 mg/m³ TWA); 4 ppm STEL (10 mg/m³ STEL)ACGIH: 2 ppm TWA (5.2 mg/m³ TWA); 4 ppm STEL (10 mg/m³ STEL)OSHA Final PEL: 2 ppm TWA (5 mg/m³ TWA)**Hydrofluoric Acid**NIOSH: 3 ppm TWA (2.5 mg/m³ TWA); 6 ppm STEL (5 mg/m³ STEL)ACGIH: 3 ppm TLV (2.3 mg/m³ TLV)OSHA Final PEL: 3 ppm TWA (2 mg/m³ TWA)

Preventive Measures:

Eye / Face protection:	Eye-wash station in proximity. Avoid contact with skin and eyes.
Skin protection:	Wear suitable clothing and gloves. Refer to OSHA's protection regulations in 29 CFR 1910.133 or European Standard EN166.
Inhalation / Ventilation:	Use in a chemical fume hood.
Personal Hygiene:	Do not eat or drink in work areas. Wash hands thoroughly after handling this material. Maintain good housekeeping. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Appropriate Engineering Controls:	Use laboratory fumehoods in case of insufficient ventilation.

SECTION 9 Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear / Colorless
Odor	Odorless
<u>Property Values</u>	
pH VALUE	<1
Melting Point/Range	No data available
Boiling Point/Range	c. 100 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative Density	c. 1.024
Specific Gravity	No data available
Water Solubility	Soluble
Partition coefficient: n-octanol/water	No data available
Auto ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available

SECTION 10 Stability and Reactivity

Reactivity:	No data available.
Chemical stability:	Stable at room temperature and conditions of use.
Incompatible Materials:	Reacts with metals and bases.
Conditions to avoid:	High temperatures.
Hazardous Decomposition Products:	Possibility of toxic gas.
Hazardous Polymerization:	Do not occur.

SECTION 11 Toxicological Information

Potential Health Effects

Eye:	Causes severe eye burns.
Skin:	Causes severe skin burns.
Ingestion:	Harmful or fatal if ingested.
Inhalation:	Hydrofluoric acid is corrosive to the respiratory tract. HF gas may cause pulmonary edema which may be delayed. Exposure above the OEL may result in death.

Note: Contact with dilute solutions of HF may result in symptoms which may not become apparent for several hours and which may continue for several days.

Effects of Short-Term (Acute) Exposure

Nitric acid

LD50/LC50:	Fatal dose for humans: 5-10 ml conc. HNO ₃ LC50 (lethal concentration, 50% kill) Inhalation, rat – 260 mg/m ³ /30M
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Hydrofluoric acid

LD50/LC50:	LC50 (lethal concentration, 50% kill) Inhalation, mouse – 171 ppm HF/4 h.
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Effects of Long-Term (Chronic) Exposure

Respiratory or skin sensitization:	No information found.
Germ Cell Mutagenicity:	No component of this product at levels greater than 0.1% is classified as a mutagen.
Reproductive Toxicity:	No component of this product at levels greater than 0.1% is classified for reproductive toxicity.
STOT- Single exposure	Causes severe skin burns and eye damage (Nitric Acid).
STOT- Repeated exposure	No definitive information available on target organs toxicity, repeated exposure.
Aspiration Hazard:	No information found.
Carcinogenicity:	Not listed as a carcinogen by NTP, or CA Prop 65. Component(s) of this preparation listed in the National Toxicology Program ARC (12th Report on carcinogens): Arsenic Compounds, Inorganic, Beryllium and Beryllium Compounds, Cadmium and Cadmium Compounds, Cobalt and Cobalt Compounds, Nickel Compounds. Component(s) of this preparation appearing in the list (June 22, 2012) of chemicals known to the state of California to cause cancer or reproductive toxicity (California Proposition 65): Arsenic (Inorganic arsenic compounds), Beryllium and Beryllium Compounds, Cadmium and cadmium compounds, Cobalt and Cobalt Compounds, Nickel compounds, Lead and lead compounds, Antimony oxide (antimony trioxide), Radionuclide. No evidence of cancer has been demonstrated for this product.

Signs and symptoms of exposure:

Eye:	In contact with the eyes, nitric acid produces severe burns. Depending on the concentration and duration of contact with the eye, these burns may result in adhesions between tarsal and bulbar conjunctivae, permanent corneal opacification, and visual impairment leading to blindness.
Skin:	Dilute solutions of nitric acid produced mild epidermal irritation and can harden the epithelium without producing corrosion seen after contact with more concentrated solutions.

Inhalation: Symptoms from breathing in (inhaling) concentrated nitric acid may include: bluish colored lips and fingernails, chest tightness, choking, coughing, coughing up blood, dizziness, low blood pressure, rapid pulse, shortness of breath, and weakness.

Ingestion: Symptoms from swallowing nitric acid may include: severe abdominal pain, burns to skin or mouth, fever, severe mouth pain, rapid drop in blood pressure, throat swelling (which leads to breathing difficulty), severe throat pain, and bloody vomiting.

Note: Contact with dilute solutions of HF may result in symptoms which may not become apparent for several hours and which may continue for several days.

SECTION 12 Ecological Information

Eco- toxicity: Concentrations >60 ppm HF are fatal to fish. Avoid release to the environment.

Mobility in soil: no information about this preparation is available.

Persistence and degradability: no information about this preparation is available.

Bioaccumulative potential: no information about this preparation is available.

SECTION 13 Disposal Considerations

Product disposal:

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material, run off and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Contact a licensed professional waste disposal service to dispose of this material.

Review federal, provincial and local government requirements prior to disposal. Store material for disposal as indicated in Storage Conditions.

Contaminated packaging: Dispose of as unused product.

SECTION 14 Transport Information

IDMG (sea):

UN-Number:	3264	Class:	8
Packing group:	III		
Proper shipping name:	Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid)		
Marine pollutant:	No		

ADR/DOT (road):

UN-Number:	3264	Class:	8
Packing group:	III		
Proper shipping name:	Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid)		
Marine pollutant:	No		

ICAO/IATA (air):

UN-Number:	3264	Class:	8
Packing group:	III		
Proper shipping name:	Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid)		
Marine pollutant:	No		

SECTION 15 Regulatory Information

US Federal:

TSCA Listed on the TSCA Inventory (Hydrofluoric Acid).

US State:

California Prop. 65

See Section 11.

EU

Classifications:

C – Corrosive

Risk Phrase(s):

R34- Causes severe burns.

R36/38- Irritating to eyes and skin.

SECTION 16 Other Information

Revised:

September 26, 2018

Date of previous revision (s):

January 20, 2017

Hazard Indications (H) Regulation (EC) No 1272/2008 quoted in Sections 3.

Oxid. Liq. 2

Oxidizing Liquids, Oxidizing Solids

Skin Corr. 1A

Skin Corrosion/ Irritation

Acute Tox. 2 *

Acute Toxicity Oral

Acute Tox. 2 *

Acute Toxicity Dermal

Acute Tox. 2 *

Acute Toxicity Inhalation

H272

May intensify fire; oxidizer.

H300

Fatal if swallowed.

H310

Fatal in contact with skin.

H314

Causes severe skin burns and eye damage.

H330

Fatal if inhaled.

The statements contained herein are offered for informational purposes only and are based upon technical data. SCP SCIENCE believes them to be accurate but does not purport to be all-inclusive. The above-stated product is intended for use only by persons having the necessary technical skills and facilities for handling the product at their discretion and risk. Since conditions and manner of use are outside our control, we make no warranty of merchantability or any such warranty, express or implied with respect to information and we assume no liability resulting from the above product or its use. Users should make their own investigations to determine suitability of information and product for their particular purposes.

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