according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

*
SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: STD-2 ICPMS MULTIELEMENT CAL**
· **Article number:** N9300232
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

PerkinElmer, Inc.
710 Bridgeport Avenue
Shelton, Connecticut 06484 USA
CustomerCareUS@perkinelmer.com
203-925-4600
PerkinElmer, Inc.
Chalfont Road Buckinghamshire
Seer Green HP9 2FX
cc.uk@perkinelmer.com
United Kingdom
P: 0800 896 046
F: 0800-89 17 14

PerkinElmer, Inc.
Llantrisant Business Park, Unit A
Llantrisant CF72 8YW
United Kingdom
cc.uk@perkinelmer.com
P: 44 1443 234005
· **1.4 Emergency telephone number:**
CHEMTREC (within US) 800-424-9300
CHEMTREC (from outside US) +1 703-527-3887 (call collect)
CHEMTREC (within AU) +(61)-290372994

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**


corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms** GHS05
· **Signal word** Danger

(Contd. on page 2)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 1)

· **Hazard-determining components of labelling:**
nitric acid
· **Hazard statements**
H314 Causes severe skin burns and eye damage.
· **Precautionary statements**
P260 Do not breathe dusts or mists.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
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/doctor.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Additional information:**
Product contains: Restricted explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 5 (1) and (3).
· **2.3 Other hazards**
The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

*
SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7697-37-2 EINECS: 231-714-2	nitric acid Ox. Liq. 3, H272 Acute Tox. 3, H331 Skin Corr. 1A, H314 EUH071 ATE: LC50/4 h inhalative: 2.65 mg/l Specific concentration limits: Ox. Liq. 3; H272: C ≥ 65 % Skin Corr. 1A; H314: C ≥ 20 % Skin Corr. 1B; H314: 5 % ≤ C < 20 %	5.0%

· **Additional Components**

CAS: 7732-18-5 EINECS: 231-791-2	Water		94.983%
CAS: 1312-81-8 EINECS: 215-200-5	lanthanum oxide		0.001%
CAS: 1314-36-9 EINECS: 215-233-5	yttrium oxide		0.001%

(Contd. on page 3)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 2)

CAS: 7429-91-6 EINECS: 231-073-9	dysprosium		0.001%
CAS: 7439-94-3	LUTETIUM		0.001%
CAS: 7440-00-8 EINECS: 231-109-3	neodymium		0.001%
CAS: 7440-10-0	Praseodymium		0.001%
CAS: 7440-19-9 EINECS: 231-128-7	samarium		0.001%
CAS: 7440-29-1 EINECS: 231-139-7	thorium		0.001%
CAS: 7440-30-4	THULIUM		0.001%
CAS: 7440-45-1 EINECS: 231-154-9	cerium	Water-react. 2, H261	0.001%
CAS: 7440-52-0 EINECS: 231-160-1	erbium		0.001%
CAS: 7440-53-1 EINECS: 231-161-7	europium		0.001%
CAS: 7440-54-2 EINECS: 231-162-2	gadolinium		0.001%
CAS: 7440-60-0 EINECS: 231-169-0	holmium		0.001%
CAS: 7440-64-4 EINECS: 231-173-2	ytterbium		0.001%
CAS: 12037-01-3	TERBIUM OXIDE		0.001%
CAS: 12060-08-1 EINECS: 235-042-0	scandium oxide		0.001%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

*

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** 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:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

*

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

(Contd. on page 4)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 3)

· **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **5.3 Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

*
SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **6.4 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.

*
SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:**
The product is not flammable.
Keep respiratory protective device available.

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

*
SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 5)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 4)

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see item 7.
· **Individual protection measures, such as 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:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· **Hand protection**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye/face protection**

Tightly sealed goggles

*

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Fluid
· **Colour:**	Transparent
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	0 °C
· **Boiling point or initial boiling point and boiling range**	100 °C (7732-18-5 Water)
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable.

(Contd. on page 6)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 5)

· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Fully miscible.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	23 hPa (7732-18-5 Water)
· **Density and/or relative density**	
· **Density at 20 °C:**	1.00079 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Liquid
· **Important information on protection of health and environment, and on safety.**	
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard. Not determined.
· **Solvent content:**	
· **Water:**	95.0 %
· **Solids content:**	0.0 %
· **Change in condition**	
· **Evaporation rate**	Not determined.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

(Contd. on page 7)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 6)

SECTION 10: Stability and reactivity

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

*

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity**

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

· **Skin corrosion/irritation** Causes severe skin burns and eye damage.
· **Serious eye damage/irritation** Causes serious eye damage.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

*

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

(Contd. on page 8)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 7)

*

SECTION 13: Disposal considerations

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

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

*

SECTION 14: Transport information

· ***14.1 UN number or ID number***	
· ***ADR, IMDG, IATA***	*UN3264*
· ***14.2 UN proper shipping name***	
· ***ADR***	*3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.*
· ***IMDG, IATA***	*CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.*
· ***14.3 Transport hazard class(es)***	
· ***ADR***	

· ***Class***	*8 (C1) Corrosive substances.*
· ***Label***	*8*
· ***IMDG, IATA***	

· ***Class***	*8 Corrosive substances.*
· ***Label***	*8*
· ***14.4 Packing group***	
· ***ADR, IMDG, IATA***	*III*
· ***14.5 Environmental hazards:***	
· ***Marine pollutant:***	*No*
· ***14.6 Special precautions for user***	*Warning: Corrosive substances.*
· ***Hazard identification number (Kemler code):***	*80*
· ***EMS Number:***	*F-A,S-B*
· ***Segregation groups***	*Acids*
· ***Stowage Category***	*A*
· ***Stowage Code***	*SW2 Clear of living quarters.*

(Contd. on page 9)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 8)

· **Segregation Code**	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **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
· **Transport category**	3
· **Tunnel restriction code**	E
· **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
· **UN "Model Regulation":**	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III

*

SECTION 15: Regulatory information

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

CAS: 7732-18-5 EINECS: 231-791-2	Water	94.983%
CAS: 7697-37-2 EINECS: 231-714-2	nitric acid Ox. Liq. 3, H272 Acute Tox. 3, H331 Skin Corr. 1A, H314 EUH071 ATE: LC50/4 h inhalative: 2.65 mg/l Specific concentration limits: Ox. Liq. 3; H272: C ≥ 65 % Skin Corr. 1A; H314: C ≥ 20 % Skin Corr. 1B; H314: 5 % ≤ C < 20 %	5.0%
CAS: 1312-81-8 EINECS: 215-200-5	lanthanum oxide	0.001%

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

(Contd. on page 10)

according to 1907/2006/EC, Article 31

Printing date 20.06.2022 *Version number 1* *Revision: 20.06.2022*

Trade name: STD-2 ICPMS MULTIELEMENT CAL

(Contd. of page 9)

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

*

SECTION 16: Other information

Disclaimer
The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· ***Relevant phrases***
H261 In contact with water releases flammable gases.
H272 May intensify fire; oxidiser.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
EUH071 Corrosive to the respiratory tract.

· ***Department issuing SDS:***
Environmental, Health and Safety
PerkinElmer
Chalfont Road
Buckinghamshire
Seer Green
HP9 2FX
United Kingdom
Telephone : 0800-89 60 46
FAX : 0800-89 17 14

· ***Contact:***
Within the USA: 1-(800)-762-4000
Outside the USA: 1-(203)-712-8488

· ***Abbreviations and acronyms***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
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
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 3: Oxidizing liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

· **** Data compared to the previous version altered.***