

Printing date 03/29/2019 Version Number 4 Reviewed on 03/29/2019

1 Identification

· Product identifier

· Trade name: ICP Calibration Standard (125 mL)

· Part number: ICM-103

· Application of the substance / the mixture Reagents and Standards for Analytical Chemical Laboratory Use

· Details of the supplier of the safety data sheet

• Manufacturer/Supplier: Agilent Technologies, Inc. 5301 Stevens Creek Blvd.

Santa Clara, CA 95051 USA

· Information department:

Telephone: 800-227-9770

e-mail: pdl-msds_author@agilent.com

· Emergency telephone number: CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

Repr. 1A H360 May damage fertility or the unborn child.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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





GHS05

5 GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

nitric acid

Nitric acid, nickel(2+) salt, hexahydrate

lead dinitrate

· Hazard statements

Causes skin irritation.

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Causes serious eye damage.

May cause cancer.

May damage fertility or the unborn child.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wash thoroughly after handling.

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

If on skin: Wash with plenty of water.

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.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- NFPA ratings (scale 0 4)



Health = 3 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *3Fire = 0

Reactivity = 0

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

3 Composition/information on ingredients

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

· Dangerous	Dangerous components:						
7697-37-2	7697-37-2 nitric acid						
7789-02-8	7789-02-8 chromium (III) nitrate nonahydrate						
10043-35-3	boric acid	0.572%					
13478-00-7	Nitric acid, nickel(2+) salt, hexahydrate	0.496%					
10026-22-9	cobalt (II) nitrate hexahydrate	0.494%					
10022-68-1	Nitric acid, cadmium salt, tetrahydrate	0.274%					

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| 10099-74-8 | lead dinitrate | (Contd. of page 2) | 0.1598% |

4 First-aid measures

- · 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: If symptoms persist consult doctor.
- · Information for doctor:
- · 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

Wear protective equipment. Keep unprotected persons away.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· 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.

· Protective Action Criteria for Chemicals

I Totective Action Criteria	ioi Chemicais	
· PAC-1:		
7697-37-2 nitric acid		0.16 ppm
7784-27-2 aluminium nitra	nte	83 mg/m ³
13446-18-9 magnesium nitr	ate hexahydrate	16 mg/m ³
7782-61-8 iron (III) nitrate	e nonahydrate	22 mg/m ³
10043-35-3 boric acid		6 mg/m³
554-13-2 lithium carbona	ite	3.1 mg/m^3
13478-00-7 Nitric acid, nicl	kel(2+) salt, hexahydrate	1.5 mg/m ³
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10026-22-9 cobalt (II) nitrate hexahydrate	(Contd. of pa
10196-18-6 zinc(II) nitrate hexahydrate	27 mg/m ³
7631-99-4 sodium nitrate	4.1 mg/m
10377-66-9 manganese dinitrate	9.8 mg/m
6	
3251-23-8 copper dinitrate	8.9 mg/m
10022-68-1 Nitric acid, cadmium salt, tetrahydrate	0.27 mg/r
7757-79-1 potassium nitrate	9 mg/m ³
471-34-1 calcium carbonate	45 mg/m ³
10042-76-9 strontium nitrate	5.7 mg/m
10022-31-8 barium nitrate	2.9 mg/m
10099-74-8 lead dinitrate	0.24 mg/r
7761-88-8 silver nitrate	0.047 mg
10102-45-1 thallium nitrate	0.078 mg
1312-43-2 diindium trioxide	0.36 mg/r
7440-69-9 bismuth	15 mg/m ³
7440-55-3 gallium	30 mg/m ³
PAC-2:	·
7697-37-2 nitric acid	24 ppm
7784-27-2 aluminium nitrate	920 mg/
13446-18-9 magnesium nitrate hexahydrate	180 mg
7782-61-8 iron (III) nitrate nonahydrate	110 mg
10043-35-3 boric acid	23 mg/r
554-13-2 lithium carbonate	34 mg/r
13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate	53 mg/r
10026-22-9 cobalt (II) nitrate hexahydrate	23 mg/r
10196-18-6 zinc(II) nitrate hexahydrate	300 mg
7631-99-4 sodium nitrate	45 mg/r
10377-66-9 manganese dinitrate	16 mg/r
3251-23-8 copper dinitrate	31 mg/r
10022-68-1 Nitric acid, cadmium salt, tetrahydrate	2.1 mg/s
7757-79-1 potassium nitrate	100 mg
471-34-1 calcium carbonate	210 mg
10042-76-9 strontium nitrate	62 mg/r
10022-31-8 barium nitrate	350 mg
10099-74-8 lead dinitrate	180 mg.
7761-88-8 silver nitrate	0.9 mg/s
10102-45-1 thallium nitrate	4.3 mg/s
1312-43-2 diindium trioxide	4.8 mg/s
7440-69-9 bismuth	170 mg/
7440-55-3 gallium	330 mg/



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· PAC-3:	
7697-37-2 nitric acid	92 ppm
7784-27-2 aluminium nitrate	5,500 mg/m
13446-18-9 magnesium nitrate hexahydrate	1,100 mg/m
7782-61-8 iron (III) nitrate nonahydrate	640 mg/m³
10043-35-3 boric acid	830 mg/m³
554-13-2 lithium carbonate	210 mg/m³
13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate	320 mg/m ³
10026-22-9 cobalt (II) nitrate hexahydrate	140 mg/m³
10196-18-6 zinc(II) nitrate hexahydrate	1,800 mg/m
7631-99-4 sodium nitrate	270 mg/m³
10377-66-9 manganese dinitrate	96 mg/m ³
3251-23-8 copper dinitrate	190 mg/m³
10022-68-1 Nitric acid, cadmium salt, tetrahydrate	13 mg/m ³
7757-79-1 potassium nitrate	600 mg/m^3
471-34-1 calcium carbonate	1,300 mg/m
10042-76-9 strontium nitrate	370 mg/m ³
10022-31-8 barium nitrate	2,100 mg/n
10099-74-8 lead dinitrate	1,100 mg/n
7761-88-8 silver nitrate	5.4 mg/m ³
10102-45-1 thallium nitrate	26 mg/m ³
1312-43-2 diindium trioxide	29 mg/m³
7440-69-9 bismuth	990 mg/m³
7440-55-3 gallium	2,000 mg/n

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

- Information about protection against explosions and fires: Keep respiratory protective device available.
- $\cdot \ Conditions \ for \ safe \ storage, \ including \ any \ incompatibilities$
- · 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

· Additional information about design of technical systems: No further data; see item 7.

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· Control parameters

Cont	Control purumeters						
· Com	· Components with limit values that require monitoring at the workplace:						
7697-	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: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm						
10043	3-35-3 boric acid						
TLV	Short-term value: 6* mg/m³ Long-term value: 2* mg/m³ *as inhalable fraction						
10022	10022-68-1 Nitric acid, cadmium salt, tetrahydrate						
PEL	Long-term value: 0.005 mg/m ³ as Cd; see 29 CFR 1910.1027						
REL	See Pocket Guide App. A						
TLV	Long-term value: 0.01 0.002* mg/m³ as Cd; *respirable fraction; BEI						
10099	9-74-8 lead dinitrate						
PEL	Long-term value: 0.05 mg/m³ as Pb; See 29 CFR 1910.1025						
REL	Long-term value: 0.05* mg/m³ as Pb;*8-hr TWA; See Pocket Guide App. C						
TLV	Long-term value: 0.05 mg/m³ as Pb; BEI						

· Ingredients with biological limit values:

10099-74-8 lead dinitrate

BEI 30 μg/100 ml Medium: blood Time: not critical Parameter: Lead

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · 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.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· Breathing equipment:

When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.

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· Protection of hands:

Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

$\cdot \ Penetration \ time \ of \ glove \ material$

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: >4 hours

· Eye protection:



Tightly sealed goggles

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9 Phys	ical and	cham	nical	nranar	otios
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· Information on	basic physical	and chemical	properties
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· General Information

· Appearance:

Form: Fluid

Color: According to product specification

Odor: CharacteristicOdor threshold: Not determined.

• pH-value: Not determined.

 $\cdot \ Change \ in \ condition$

Melting point/Melting range: Undetermined. Boiling point/Boiling range: 100 °C (212 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

• Decomposition temperature: Not determined.

· **Auto igniting:** Product is not selfigniting.

• **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined. Upper: Not determined.

· Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)

· Density: Not determined.

Relative density

Not determined.

Vapor density

Not determined.

• **Evaporation rate**Not determined.

Not determined.

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· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octano	ol/water): Not determined.
· Viscosity: Dynamic: Kinematic:	Not determined. Not determined.
· Solvent content: Water: VOC content:	85.3 % 0.00 % 0.0 g/l / 0.00 lb/gal
Solids content: Other information	9.7 % No further relevant information available.

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:

Acute tox	icity.					
· LD/LC50	· LD/LC50 values that are relevant for classification:					
ATE (Acu	ite Toxicit	y Estimate)				
Oral	LD50	12,831 mg/kg				
Inhalative	LC50/4 h	25.6 mg/L				
7697-37-2	nitric acio	d				
Inhalative	LC50/4 h	67 mg/L (rat)				
7789-02-8	chromiun	n (III) nitrate nonahydrate				
Oral LD50 3,250 mg/kg (rat)						
10043-35-	3 boric aci	id				
Oral	LD50	2,660 mg/kg (rat)				
Dermal	LD50	>2,000 mg/kg (rabbit)				
Inhalative	Inhalative LC50/4 h 0.16 mg/L (rat)					
13478-00-	13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate					
Oral	LD50	1,620 mg/kg (rat)				
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		(Contd. of page 8)				
10026-22	-9 cobalt (1	II) nitrate hexahydrate				
Oral	LD50	691 mg/kg (rat)				
10022-68	-1 Nitric a	cid, cadmium salt, tetrahydrate				
Oral	Oral LD50 300 mg/kg (rat)					
7761-88-8	3 silver nit	rate				
Oral	Oral LD50 50 mg/kg (mouse)					
		1,173 mg/kg (rat)				
10102-45	10102-45-1 thallium nitrate					
Oral	LD50	33 mg/kg (mouse)				

- Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Strong irritant with the danger of severe eye injury.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

· IARC (Inte	· IARC (International Agency for Research on Cancer)					
13478-00-7	Nitric acid, nickel(2+) salt, hexahydrate	1				
10026-22-9	cobalt (II) nitrate hexahydrate	2B				
10022-68-1	Nitric acid, cadmium salt, tetrahydrate	1				
10099-74-8	lead dinitrate	2A				
	nal Toxicology Program)					
13478-00-7	Nitric acid, nickel(2+) salt, hexahydrate	K				
10022-68-1	Nitric acid, cadmium salt, tetrahydrate	K				
10099-74-8	lead dinitrate	R				
· OSHA-Ca (Occupational Safety & Health Administration)					
None of the	ingredients is listed.					

12 Ecological information

- Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.

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· **vPvB:** Not applicable.

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· Other adverse effects No further relevant information available.

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.

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· UN-Number · DOT, IMDG, IATA	UN3264
UN proper shipping nameDOTIMDG, IATA	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

- · Transport hazard class(es)
- · DOT, IMDG, IATA



olicable. g: Corrosive substances
g: Corrosive substances
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ear of living quarters.

MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

 \cdot DOT

On passenger aircraft/rail: 5 L · Quantity limitations On cargo aircraft only: 60 L

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· IMDG
· Limited quantities (LQ)
· Excepted quantities (EQ)

SL
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.
(NITRIC ACID), 8, III

15 Regulatory information

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

	(extremely hazardous substances):
7697-37-2	nitric acid
Section 313	(Specific toxic chemical listings):
7697-37-2	nitric acid
7784-27-2	aluminium nitrate
13446-18-9	magnesium nitrate hexahydrate
	chromium (III) nitrate nonahydrate
	iron (III) nitrate nonahydrate
554-13-2	lithium carbonate
	Nitric acid, nickel(2+) salt, hexahydrate
	cobalt (II) nitrate hexahydrate
	zinc(II) nitrate hexahydrate
	manganese dinitrate
	copper dinitrate
10022-68-1	Nitric acid, cadmium salt, tetrahydrate
7757-79-1	potassium nitrate
10042-76-9	strontium nitrate
	barium nitrate
10099-74-8	lead dinitrate
	silver nitrate
10102-45-1	thallium nitrate
TSCA (Tox	ic Substances Control Act):
7697-37-2	nitric acid
10043-35-3	boric acid
554-13-2	lithium carbonate
7631-99-4	sodium nitrate
	manganese dinitrate
3251-23-8	copper dinitrate
7757-79-1	potassium nitrate

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10022-31-8 barium nitrate 10099-74-8 lead dinitrate	4		(Contd. of page
10022-31-8 lead dinitrate			
10099-74-8 lead dinitrate			
7761-88-8 silver nitrate 10102-45-1 thallium nitrate 1312-43-2 diindium trioxide 7440-69-9 bismuth 7440-59-3 gallium 7732-18-5 water 7732-18-5 water 7732-18-5 water 7732-18-5 mainty			
10102-45-1			
1312-43-2 diindium trioxide 7440-69-9 bismuth 7440-69-9 bismuth 7440-69-9 bismuth 7440-69-9 bismuth 7440-69-9 bismuth 7440-69-8 chromium (III) nitrate nonahydrate 7780-02-8 chromium (III) nitrate nonahydrate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 7780-02-8 Nitric acid, cadmium salt, tetrahydrate 7780-02-8 Nitric acid, nickel(2+) salt, hexahydrate 7780-02-8 Nitric acid, nickel(2+) salt, hexahydrate 7780-02-7 Nitric acid, nickel(2+) salt, hexahydrate 7780-02-02-02-02-02-02-02-02-02-02-02-02-02			
7440-69-9 bismuth 7440-55-3 gallium 7732-18-5 water			
7440-55-3 gallium 7732-18-5 water			
TSCA new 21st Century Act): (Substances not listed) T89-02-8 chromium (III) nitrate nonahydrate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate 10022-68-1 Nitric acid, nickel(2+) salt, hexahydrate 10029-74-8 lead dinitrate			
TSCA new 21st Century Act): (Substances not listed)		I ~	
7789-02-8 chromium (III) nitrate nonahydrate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate 10026-22-9 cobalt (II) nitrate hexahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate Proposition 65 Chemicals known to cause cancer: 13478-00-7 Nitric acid, cadmium salt, tetrahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 10099-74-8 lead dinitrate Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. Chemicals known to cause reproductive toxicity for males: 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Chemicals known to cause developmental toxicity: 554-13-2 lithium carbonate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Carcinogenic categories EPA (Environmental Protection Agency) 10043-35-3 boric acid I (oral) 10377-66-9 manganese dinitrate D 10022-31-8 barium nitrate D, CBD(inh), NL(oral) 10099-74-8 lead dinitrate B2 10102-45-1 thallium nitrate II TLV (Threshold Limit Value established by ACGIH) 10043-35-3 boric acid Soric	7732-18-5	water	
13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate	TSCA new	(21st Century Act): (Substances not listed)	
10026-22-9 cobalt (II) nitrate hexahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 10029-74-8 lead dinitrate	7789-02-8	chromium (III) nitrate nonahydrate	
10022-68-1 Nitric acid, cadmium salt, tetrahydrate	13478-00-7	Nitric acid, nickel(2+) salt, hexahydrate	
Proposition 65 Chemicals known to cause cancer: 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 10099-74-8 lead dinitrate Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. Chemicals known to cause reproductive toxicity for males: 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Chemicals known to cause developmental toxicity: 554-13-2 lithium carbonate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Carcinogenic categories EPA (Environmental Protection Agency) 10043-35-3 boric acid I (oral) 10377-66-9 manganese dinitrate D 10022-31-8 barium nitrate D, CBD(inh), NL(or 10099-74-8 lead dinitrate B2 10102-45-1 thallium nitrate III TLV (Threshold Limit Value established by ACGIH) 10043-35-3 boric acid said	10026-22-9	cobalt (II) nitrate hexahydrate	
Chemicals known to cause cancer: 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate 10022-68-1 Nitric acid, cadmium salt, tetrahydrate 10099-74-8 lead dinitrate Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. Chemicals known to cause reproductive toxicity for males: 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Chemicals known to cause developmental toxicity: 554-13-2 lithium carbonate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Carcinogenic categories EPA (Environmental Protection Agency) 10043-35-3 boric acid I (oral) 10377-66-9 manganese dinitrate D 10022-31-8 barium nitrate D, CBD(inh), NL(oral) 10099-74-8 lead dinitrate B2 10102-45-1 thallium nitrate II TLV (Thresbold Limit Value established by ACGIH) 10043-35-3 barium nitrate	10022-68-1	Nitric acid, cadmium salt, tetrahydrate	
13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate	Proposition	65	
10022-68-1	Chemicals	known to cause cancer:	
10099-74-8 lead dinitrate	13478-00-7	Nitric acid, nickel(2+) salt, hexahydrate	
Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. Chemicals known to cause reproductive toxicity for males: 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Chemicals known to cause developmental toxicity: 554-13-2 lithium carbonate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Carcinogenic categories EPA (Environmental Protection Agency) 10043-35-3 boric acid I (oral) 10377-66-9 manganese dinitrate D 10022-31-8 barium nitrate D, CBD(inh), NL(oral) 10099-74-8 lead dinitrate B2 10102-45-1 thallium nitrate II TLV (Threshold Limit Value established by ACGIH) 10043-35-3 boric acid II 10022-31-8 barium nitrate II TLOUGH-10043-35-3 boric acid II 10043-35-3 boric acid II 10043-35-3 boric acid II 10043-35-3 boric acid II 10043-35-3 boric acid II 10099-74-8 lead dinitrate	10022-68-1	Nitric acid, cadmium salt, tetrahydrate	
None of the ingredients is listed. Chemicals known to cause reproductive toxicity for males: 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Chemicals known to cause developmental toxicity: 554-13-2 lithium carbonate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Carcinogenic categories EPA (Environmental Protection Agency) 10043-35-3 boric acid	10099-74-8	lead dinitrate	
Chemicals known to cause reproductive toxicity for males: 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Chemicals known to cause developmental toxicity: 554-13-2 lithium carbonate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Carcinogenic categories EPA (Environmental Protection Agency) 10043-35-3 boric acid I (oral) 10377-66-9 manganese dinitrate D 10022-31-8 barium nitrate B2 10102-45-1 thallium nitrate II TLV (Threshold Limit Value established by ACGIH) 10043-35-3 boric acid I 10022-31-8 barium nitrate I 10099-74-8 lead dinitrate I	Chemicals	known to cause reproductive toxicity for females:	
13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Chemicals known to cause developmental toxicity: 554-13-2 lithium carbonate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Carcinogenic categories	None of the	ingredients is listed.	
Chemicals known to cause developmental toxicity: 554-13-2 lithium carbonate 13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate Carcinogenic categories EPA (Environmental Protection Agency) 10043-35-3 boric acid I (oral) 10377-66-9 manganese dinitrate D 10022-31-8 barium nitrate D, CBD(inh), NL(oral) 10099-74-8 lead dinitrate B2 10102-45-1 thallium nitrate II TLV (Threshold Limit Value established by ACGIH) 10043-35-3 boric acid barium nitrate II 10049-74-8 lead dinitrate II 10099-74-8 lead dinitrate II	Chemicals	known to cause reproductive toxicity for males:	
13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate	13478-00-7	Nitric acid, nickel(2+) salt, hexahydrate	
13478-00-7 Nitric acid, nickel(2+) salt, hexahydrate	Chemicals	known to cause developmental toxicity:	
Carcinogenic categories EPA (Environmental Protection Agency) 10043-35-3 boric acid I (oral) 10377-66-9 manganese dinitrate D 10022-31-8 barium nitrate D, CBD(inh), NL(oral) 10099-74-8 lead dinitrate B2 10102-45-1 thallium nitrate II TLV (Threshold Limit Value established by ACGIH) 10043-35-3 boric acid Incompany of the property of		<u> </u>	
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EPA (Environmental Protection Agency) 10043-35-3 boric acid I (oral) 10377-66-9 manganese dinitrate D 10022-31-8 barium nitrate D, CBD(inh), NL(oral) 10099-74-8 lead dinitrate B2 10102-45-1 thallium nitrate II TLV (Threshold Limit Value established by ACGIH) 10043-35-3 boric acid 10099-74-8 lead dinitrate	Carainagar	ia aatagarias	
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10022-31-8 barium nitrate D, CBD(inh), NL(or 10099-74-8 lead dinitrate B2			` /
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TLV (Threshold Limit Value established by ACGIH) 10043-35-3 boric acid 10022-31-8 barium nitrate 10099-74-8 lead dinitrate			
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10099-74-8 lead dinitrate			P A
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NIOSH-Ca (National Institute for Occupational Safety and Health)		I	<i>P</i>



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· National regulations:

· Additional classification according to Decree on Hazardous Materials:

Carcinogenic hazardous material group III (dangerous).

· Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

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

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- · Department issuing SDS: Document Control / Regulatory
- · Contact: regulatory@ultrasci.com
- · Date of preparation / last revision 03/29/2019 / 3
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport 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

ACGIH: American Conference of Governmental Industrial Hygienists

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

BEI: Biological Exposure Limit

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Carc. 1A: Carcinogenicity – Category 1A

Repr. 1A: Reproductive toxicity - Category 1A

* * Data compared to the previous version altered.

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