Material Safety Data Sheet

Agilent Technologies

Tuning Sample T1 for ICP-MS Agilent Part Number G1820-60491

1 . Product and company identification

Product name : **Tuning Sample T1 for ICP-MS Agilent Part Number G1820-60491**

Part No. : G1820-60491

Manufacturer / Supplier : Agilent Technologies, Inc.
Logistics Center - Americas
500 Ships Landing Way
New Castle, Delaware 19720

Emergency telephone number : 1-302-633-8777
1-877-4 Agilent (Information Telephone Number)

2 . Hazards identification

Physical state : Liquid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : Warning!

Label : CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, MUCOUS MEMBRANES, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA, TEETH.

Routes of entry : Dermal contact. Eye contact.

Potential acute health effects

Eyes : No known significant effects or critical hazards.

Skin : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure : Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
Water	7732-18-5	99
Nitric acid	7697-37-2	1
thallium	7440-28-0	0.000001
cerium	7440-45-1	0.000001
Yttrium	7440-65-5	0.000001
Cobalt	7440-48-4	0.000001
Lithium	7439-93-2	0.000001

Use of the substance/preparation : Analytical reagent.
1 L

4 . First aid measures

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if adverse health effects persist or are severe.

Skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if adverse health effects persist or are severe.

Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if adverse health effects persist or are severe.

Ingestion : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if adverse health effects persist or are severe.

5 . Fire-fighting measures

Flammability of the product : Non-flammable.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Special exposure hazards - Explosibility : No specific hazard.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : Avoid contact with eyes, skin and clothing.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7 . Handling and storage

Handling : Wash thoroughly after handling.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Product name	Exposure limits
Nitric acid	**ACGIH TLV (United States, 1/2004).** STEL: 10 mg/m^3 15 minute/minutes. Form: All forms STEL: 4 ppm 15 minute/minutes. Form: All forms TWA: 5.2 mg/m^3 8 hour/hours. Form: All forms TWA: 2 ppm 8 hour/hours. Form: All forms **NIOSH REL (United States, 12/2001).** STEL: 10 mg/m^3 15 minute/minutes. Form: All forms STEL: 4 ppm 15 minute/minutes. Form: All forms TWA: 5 mg/m^3 10 hour/hours. Form: All forms TWA: 2 ppm 10 hour/hours. Form: All forms **OSHA PEL (United States, 8/1997).** TWA: 5 mg/m^3 8 hour/hours. Form: All forms TWA: 2 ppm 8 hour/hours. Form: All forms

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Not Applicable

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

8 . Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9 . Physical and chemical properties

Physical state : Liquid.

Color : Clear. Colorless.

pH : <1 [Acidic.]

Boiling/condensation point : The lowest known value is 83.89°C (183°F) (Nitric acid). Weighted average: 99.84°C (211.7°F)

Melting/freezing point : May start to solidify at 0°C (32°F) based on data for: Water. Weighted average: -0.41°C (31.3°F)

Relative density : 1.0004 (Water = 1)

Solubility : Soluble in cold water, hot water.

10 . Stability and reactivity

Stability and reactivity : The product is stable.

11 . Toxicological information

Toxicity data

Product/ingredient name	Test	Result	Route	Species
Nitric acid	LDLo	430 mg/kg	Oral	human

Chronic effects on humans : Contains material which causes damage to the following organs: lungs, mucous membranes, upper respiratory tract, skin, eye, lens or cornea, teeth.

Other toxic effects on humans : Hazardous in case of skin contact (irritant), of eye contact (irritant).

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Sensitization

Ingestion : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Skin : No known significant effects or critical hazards.

12 . Ecological information

Environmental precautions : No known significant effects or critical hazards.

Products of degradation : These products are nitrogen oxides (NO, NO_2 etc.).

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

RCRA classification : **Code:** D002

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	3264	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)	8	III		**Packaging instruction** **Passenger aircraft** Quantity limitation: 5 L Packaging instructions: 173.154 **Cargo aircraft** Quantity limitation: 60 L **Remarks** Requires Dangerous Goods BOL
TDG Classification	3264	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)	8	III		-
Mexico Classification	3264	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)	8	III		-
IATA Class	3264	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)	8	III		**Quantity limitation - Passenger aircraft** 5 L **Quantity limitation - Cargo aircraft** 60 L **Packaging instruction** 818 820 **Remarks**Requires Shipper's Declaration

14 . Transport information

						of Dangerous Goods

PG* : Packing group

15 . Regulatory information

HCS Classification : Target organ effects

U.S. Federal regulations : TSCA 8(b) inventory: Water; Nitric acid; thallium; cerium; Yttrium; Cobalt; Lithium

SARA 302/304/311/312 extremely hazardous substances: Nitric acid
SARA 302/304 emergency planning and notification: Nitric acid
SARA 302/304/311/312 hazardous chemicals: Nitric acid
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Nitric acid: Fire hazard, reactive, Immediate (acute) health hazard

Clean Water Act (CWA) 307: thallium

Clean Water Act (CWA) 311: Nitric acid

Clean Air Act (CAA) 112 accidental release prevention: Nitric acid

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: Nitric acid

SARA 313

		Product name	CAS number	Concentration
Form R - Reporting requirements	:	Nitric acid	7697-37-2	1
Supplier notification	:	Nitric acid	7697-37-2	1

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : Pennsylvania RTK: Nitric acid: (environmental hazard, generic environmental hazard); thallium: (environmental hazard, generic environmental hazard); Yttrium: (generic environmental hazard); Cobalt: (environmental hazard, generic environmental hazard); Lithium: (generic environmental hazard)
Massachusetts RTK: Nitric acid; thallium; Yttrium; Cobalt; Lithium
New Jersey: Nitric acid; thallium; cerium; Yttrium; Cobalt; Lithium

State regulations - California Prop. 65 : **WARNING:** This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Cobalt	Yes.	No.	No.	No.

EU regulations

Hazard symbol/symbols : Irritant

Risk phrases : R36/38- Irritating to eyes and skin.

International regulations

International lists : Australia (NICNAS): Water; Nitric acid; thallium; cerium; Cobalt; Lithium

China: Water; Nitric acid; thallium; Yttrium; Cobalt; Lithium

Germany water class: Nitric acid; Cobalt; Lithium

Japan (METI): Water; Nitric acid

Korea (TCCL): Water; Nitric acid; thallium; cerium; Yttrium; Cobalt; Lithium

Philippines (RA6969): Water; Nitric acid; thallium; cerium; Cobalt; Lithium

16 . Other information

Label requirements : CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, MUCOUS MEMBRANES, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA, TEETH.

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