



SAFETY DATA SHEET

This safety data sheet complies with the requirements of:
SS586: 2008 (2014)

Revision date 27-Aug-2021

Revision Number 1.1

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

Product identifier

Product Name UMETS by HPLC Dilution Reagent

Other means of identification

Catalogue Number(s) 1956043

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use In-vitro laboratory reagent or component

Uses advised against No information available

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
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Hercules, CA 94547
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Manufacturer

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Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Singapore: 65-31581349

SECTION 2: Hazards identification

GHS Classification

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS): SS586: 2008 (2014)

Label elements

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS): SS586: 2008 (2014)

Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

Substance

Not applicable

Mixture

The product contains no substances which at their given concentration, are considered to be hazardous to health

Chemical name	EC No	CAS No	Weight-%
Water	231-791-2	7732-18-5	50 - 100
Ammonium boron oxide ((NH ₄)B ₅ O ₈)	234-521-1	12007-89-5	2.5 - 5
Ethylenediaminetetraacetic acid	200-449-4	60-00-4	0.1 - 0.299

Non-hazardous
ingredients

Proprietary

Balance

SECTION 4: First aid measures**Description of first aid measures**

General advice	No hazards which require special first aid measures.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
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For emergency responders

Self-protection of the first aider	No information available.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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SECTION 5: Firefighting measures**Suitable Extinguishing Media**

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Unsuitable extinguishing media	No information available.
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Specific hazards arising from the chemical

Specific hazards arising from the chemical	None known.
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Special protective actions for fire-fighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage**Precautions for safe handling**

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: Exposure controls/personal protection**Control parameters**

Occupational exposure limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	Singapore	ACGIH TLV
Ammonium boron oxide ((NH ₄)B ₅ O ₈) 12007-89-5		STEL: 6 mg/m ³ inhalable particulate matter TWA: 2 mg/m ³ inhalable particulate matter

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls Showers

Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.
Hand protection	Wear suitable gloves.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Environmental exposure controls	No information available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	aqueous solution
Colour	colourless
Odour	Odourless.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.5	
Melting point / freezing point	0 °C	
Boiling point / boiling range	= 100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information No information available

SECTION 10: Stability and reactivity

Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data**Sensitivity to mechanical impact** None.**Sensitivity to static discharge** None.**Possibility of hazardous reactions** None under normal processing.**Conditions to avoid****Conditions to avoid** None known based on information supplied.**Incompatible materials****Incompatible materials** None known based on information supplied.**Hazardous decomposition products****Hazardous decomposition products** None known based on information supplied.**SECTION 11: Toxicological information****Information on likely routes of exposure****Product Information****Inhalation** Specific test data for the substance or mixture is not available.**Eye contact** Specific test data for the substance or mixture is not available.**Skin contact** Specific test data for the substance or mixture is not available.**Ingestion** Specific test data for the substance or mixture is not available.**Symptoms related to the physical, chemical and toxicological characteristics****Symptoms** No information available.**Acute toxicity****Numerical measures of toxicity**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)		
Ethylenediaminetetraacetic acid	> 2000 mg/kg (Rat)		

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitization** Based on available data, the classification criteria are not met.**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	Classification not possible.

SECTION 12: Ecological information

Ecotoxicity

Ecotoxicity

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
Ethylenediaminetetraacetic acid	EC50: =1.01mg/L (72h, <i>Desmodesmus subspicatus</i>)	LC50: 34 - 62mg/L (96h, <i>Lepomis macrochirus</i>) LC50: 44.2 - 76.5mg/L (96h, <i>Pimephales promelas</i>)	EC50: =113mg/L (48h, <i>Daphnia magna</i>)

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation No information available.

Mobility

Mobility in soil No information available.

PBT and vPvB assessment No information available

Chemical name	PBT and vPvB assessment
Ammonium boron oxide ((NH ₄)B ₅ O ₈)	PBT assessment does not apply
Ethylenediaminetetraacetic acid	The substance is not PBT / vPvB PBT assessment does not apply

Other adverse effects

Other adverse effects No information available

SECTION 13: Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

ADR	Not regulated
IMDG	Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available
IATA	Not regulated

SECTION 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****Singapore****Environmental Public Health Act**

Dispose of waste product or used containers according to local regulations.

Hazardous Waste (Control of Export, Import and Transit) Act

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. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

Poison

None Listed

Chemical name	Strategic Goods (Control) Act
Ammonium boron oxide ((NH ₄)B ₅ O ₈)	1C225

Workplace Safety and Health Act

Comply with the health and safety at work laws.

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Label elements

Issuing Date	Bio-Rad Laboratories, Environmental Health and Safety
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Revision Note	Significant changes throughout SDS. Review all sections.

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Disclaimer

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End of Safety Data Sheet