

# KIT SAFETY DATA SHEET



Kit Product Name UMETS by HPLC

Kit Catalogue Number(s) 1956068

Revision date 30-Aug-2021

## Kit Contents

Catalogue Number(s)	Product Name
1956076	UMETS by HPLC Mobile Phase
1956021	UCAT/UMET Urine Calibrator/Urine Std
1956047	UMETS by HPLC Internal Standard
1956018	UMETS Anion Exchange Columns
1956038	UCAT/UMET by HPLC Basic Reagent
1956037	UCAT/UMET Acidic Reagent
1956039	UCAT/UMET/VMA by HPLC Reconstitution Reagent
1956046	UMETS by HPLC Hydrolysis Reagent
1956043	UMETS by HPLC Dilution Reagent
1956044	UMETS by HPLC Transfer Buffer
1956045	UMETS by HPLC Elution Reagent
1956012	HPLC Cation Exchange Columns
1956035	UCAT/PCAT by HPLC Internal Standard



# SAFETY DATA SHEET

According to WHS Regulations

Revision date 27-Aug-2021

Revision Number 2.1

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

### Product identifier

**Product Name** UMETS by HPLC Mobile Phase

**Catalogue Number(s)** 1956076

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

### For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

#### **Hazard statements**

Not classified

### Other hazards which do not result in classification

## SECTION 3: Composition/information on ingredients

**Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Isopropyl alcohol	67-63-0	5 - 10
Diammonium phosphate	7783-28-0	0.3 - 0.999
Citric acid	77-92-9	0.1 - 0.299
Phosphoric acid	7664-38-2	0.01 - 0.099
Non-hazardous ingredients	Proprietary	Balance

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

<b>General advice</b>	No hazards which require special first aid measures.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Treat symptomatically.

**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** None known.

**Special protective actions for fire-fighters**

**Special protective equipment 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** See section 8 for more information.

**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 labelled containers.

**Precautions to prevent secondary hazards**

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

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

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials** None known based on information supplied.

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

Chemical name	Australia	ACGIH TLV
Isopropyl alcohol 67-63-0	400 ppm 983 mg/m <sup>3</sup> 500 ppm STEL 1230 mg/m <sup>3</sup> STEL	STEL: 400 ppm TWA: 200 ppm
Phosphoric acid 7664-38-2	1 mg/m <sup>3</sup> 3 mg/m <sup>3</sup> STEL	STEL: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>

**Biological occupational exposure limits**

Chemical name	Australia	ACGIH
Isopropyl alcohol 67-63-0	-	40 mg/L - urine (Acetone) - end of shift at end of workweek

**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**                      No information available  
**Odour**                      Odourless.  
**Odour threshold**                      No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	5.5	
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	93 °C	
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Miscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	

#### **Other information**

**Molecular weight**                      Not applicable  
**VOC Content (%)**                      Not applicable

### **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**

**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

**Acute toxicity**

**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** No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)** 33,530.60 mg/kg

**ATEmix (dermal)** 72,781.10 mg/kg

**ATEmix (inhalation-dust/mist)** 1,301.7751 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Isopropyl alcohol	= 1870 mg/kg ( Rat )	= 4059 mg/kg ( Rabbit )	= 72600 mg/m <sup>3</sup> ( Rat ) 4 h
Diammonium phosphate	> 2000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	-
Citric acid	= 3 g/kg ( Rat ) = 3000 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-
Phosphoric acid	= 1530 mg/kg ( Rat )	= 2740 mg/kg ( Rabbit )	> 850 mg/m <sup>3</sup> ( Rat ) 1 h

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See section 16 for terms and abbreviations

#### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met.
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Product Information</b>	
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

## **SECTION 12: Ecological information**

### **Ecotoxicity**

#### **Ecotoxicity**

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isopropyl alcohol	EC50: >1000mg/L (72h, <i>Desmodesmus subspicatus</i> ) EC50: >1000mg/L (96h, <i>Desmodesmus subspicatus</i> )	LC50: =11130mg/L (96h, <i>Pimephales promelas</i> ) LC50: =9640mg/L (96h, <i>Pimephales promelas</i> ) LC50: >1400000µg/L (96h, <i>Lepomis macrochirus</i> )	-	EC50: =13299mg/L (48h, <i>Daphnia magna</i> )
Diammonium phosphate	-	LC50: 24.8 - 29.4mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =26.5mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =3.3mg/L (96h, <i>Pimephales promelas</i> ) LC50: =33mg/L (96h, <i>Pimephales promelas</i> )	-	-
Citric acid	-	LC50: =1516mg/L (96h, <i>Lepomis macrochirus</i> )	-	EC50: =120mg/L (72h, <i>Daphnia magna</i> )
Phosphoric acid	-	LC50: 3 - 3.5mg/L (96h, <i>Gambusia affinis</i> )	-	EC50: =4.6mg/L (12h, <i>Daphnia magna</i> )

### **Persistence and degradability**

**Persistence and degradability** No information available.

### **Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

#### Component Information

Chemical name	Partition coefficient
Isopropyl alcohol	0.05
Citric acid	-1.72

#### Mobility

**Mobility in soil** No information available.

**Mobility** No information available.

#### 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

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

### SECTION 15: Regulatory information

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

#### National regulations

##### Australia

See section 8 for national exposure control parameters

#### **Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6

#### **National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Isopropyl alcohol - 67-63-0	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total



	400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total
Phosphoric acid - 7664-38-2	10 tonne/yr Threshold category 1

**International Inventories**

Contact supplier for inventory compliance status

**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**SECTION 16: Other information****Prepared By** Bio-Rad Laboratories, Environmental Health and Safety**Revision date** 27-Aug-2021**Revision Note** Significant changes throughout SDS. Review all sections.**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
C	Carcinogen		

**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) (AELG(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

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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** UCAT/UMET Urine Calibrator/Urine Std

**Catalogue Number(s)** 1956021

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

### For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

#### **Hazard statements**

Not classified

#### Other hazards which do not result in classification

Contains components derived from human urine

## SECTION 3: Composition/information on ingredients

**Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Epinephrine	51-43-4	0.01 - 0.099
1,2-Benzenediol, 4-(2-aminoethyl)-, hydrochloride	62-31-7	0.01 - 0.099
Non-hazardous ingredients	Proprietary	Balance

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

<b>General advice</b>	Contains components derived from human urine.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Call a doctor.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	No information available.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Contains human source material and / or potentially infectious components.
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**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

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

<b>Specific hazards arising from the chemical</b>	None known.
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**Special protective actions for fire-fighters**

<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** See section 8 for more information.

**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** Do not allow into any sewer, on the ground or into any body of water.

**Methods for cleaning up** Clean contaminated surface thoroughly. Use: Disinfectant.

**Precautions to prevent secondary hazards**

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

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

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**General hygiene considerations** Follow universal and standard precautions for handling potentially infectious materials.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials** None known based on information supplied.

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

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

**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.

<b>Hand protection</b>	Wear suitable gloves.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	No information available.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Solid
<b>Appearance</b>	solid
<b>Colour</b>	light yellow
<b>Odour</b>	Characteristic.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>		None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Insoluble in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	
<b><u>Other information</u></b>		
<b>Molecular weight</b>	Not applicable	
<b>VOC Content (%)</b>	Not applicable	

## SECTION 10: Stability and reactivity

### Reactivity

<b>Reactivity</b>	No information available.
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### Chemical stability

<b>Stability</b>	Stable under normal conditions.
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### Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### Possibility of hazardous reactions

**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**

**Acute toxicity**

**Information on likely routes of exposure**

**Product Information**

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**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** No information available.

**Numerical measures of toxicity - Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Epinephrine	-	= 62 mg/kg ( Rat )	-
1,2-Benzenediol, 4-(2-aminoethyl)-, hydrochloride	= 2859 mg/kg ( Rat )	-	-

See section 16 for terms and abbreviations

**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 sensitisation** 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.

**Product Information**

**Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information****Ecotoxicity**

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

**Unknown aquatic toxicity** 0.001 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Mobility**

**Mobility in soil** No information available.

**Mobility** No information available.

**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**

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**  
No information available

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**



**Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

No poisons schedule number allocated

**International Inventories**

Contact supplier for inventory compliance status

**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

**SECTION 16: Other information**

**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 27-Aug-2021

**Revision Note** Significant changes throughout SDS. Review all sections.

**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
C	Carcinogen		

**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) (AELG(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

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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 Internal Standard

**Catalogue Number(s)** 1956047

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

<b>Skin corrosion/irritation</b>	Category 1 - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)

### Label elements

Corrosion



**Signal word**

Danger

**Hazard statements**

H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

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

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 or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: rinse mouth. Do NOT induce vomiting

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification****SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Hydrochloric acid	7647-01-0	0.3 - 0.999
4-(2-Aminoethyl)guaiacol hydrochloride	645-33-0	0.01 - 0.099
Non-hazardous ingredients	Proprietary	Balance

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

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Emergency telephone number**Poisons Information Centre, Australia: 13 11 26  
Poisons Information Centre, New Zealand: 0800 764 766**Inhalation**

If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. Remove to fresh air.

**Eye contact**

Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

**Skin contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.

**Ingestion**

Get immediate medical advice/attention. Clean mouth with water and drink afterwards

plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.

**Self-protection of the first aider** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

#### **Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation.

#### **Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

### **SECTION 5: Firefighting measures**

#### **Suitable Extinguishing Media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

#### **Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

#### **Special protective actions for fire-fighters**

**Special protective equipment 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** Attention! Corrosive material. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

#### **Environmental precautions**

**Environmental precautions** Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

#### **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 labelled containers.

**Precautions to prevent secondary hazards**

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

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

**Advice on safe handling** In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash it before reuse. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

**General hygiene considerations** Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Protect from moisture. Store away from other materials. Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

**Incompatible materials** Acids. Bases. Oxidising agent.

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

Chemical name	Australia	ACGIH TLV
Hydrochloric acid 7647-01-0	5 ppm Peak 7.5 mg/m <sup>3</sup> Peak	Ceiling: 2 ppm

**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** Face protection shield. Tight sealing safety goggles.

**Skin and body protection** Long sleeved clothing. Chemical resistant apron. Wear suitable protective clothing.

**Hand protection** Impervious gloves. 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

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Colour</b>	colourless
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	2	
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
Explosive properties	Not applicable	
Oxidising properties	Not applicable	
<u>Other information</u>		
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

## 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

**Possibility of hazardous reactions** None under normal processing.

### Conditions to avoid

**Conditions to avoid** Exposure to air or moisture over prolonged periods.

**Incompatible materials**

**Incompatible materials** Acids. Bases. Oxidising agent.

**Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

**SECTION 11: Toxicological information****Acute toxicity****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	(based on components). Corrosive to the eyes and may cause severe damage including blindness. Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Corrosive. (based on components). Causes burns. Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Causes burns (based on components) Ingestion causes burns of the upper digestive and respiratory tracts May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking May cause lung damage if swallowed May be fatal if swallowed and enters airways Specific test data for the substance or mixture is not available

**Symptoms** Coughing and/ or wheezing. Redness. Burning. May cause blindness.

**Numerical measures of toxicity - Product Information****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Hydrochloric acid	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	= 1.68 mg/L ( Rat ) 1 h

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes burns.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.



<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Product Information</b>	
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### Ecotoxicity

#### Ecotoxicity

**Unknown aquatic toxicity** 0.001 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrochloric acid	-	LC50: =282mg/L (96h, Gambusia affinis)	-	-

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

**Mobility** No information available.

### 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

**ADG** Not regulated

**IATA** Not regulated

**IMDG**

Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6**Major hazard (accident/incident planning) regulation**

Verify that licence requirements are met

## Named hazardous chemicals

Chemical name	Threshold quantity (T)
Hydrochloric acid - 7647-01-0	250 tonne TQ anhydrous 250 tonne TQ refrigerated liquid

**National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Hydrochloric acid - 7647-01-0	10 tonne/yr Threshold category 1 400 tonne/yr Threshold category 2a 1 tonne/h Threshold category 2a 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b

**International Inventories**

Contact supplier for inventory compliance status

**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**SECTION 16: Other information****Prepared By**

Bio-Rad Laboratories, Environmental Health and Safety

**Revision date**

27-Aug-2021

**Revision Note**

Significant changes throughout SDS. Review all sections.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

**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

**Disclaimer**

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**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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 Anion Exchange Columns

**Catalogue Number(s)** 1956018

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

### For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

#### **Hazard statements**

Not classified

### 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	CAS No	Weight-%
Water	7732-18-5	50 - 100
Benzenemethanaminium, ar-ethenyl-N,N,N-trimethyl-, chloride, polymer with diethenylbenzene	60177-39-1	35 - 50
Chemical name	CAS No	Weight-%
Non-hazardous ingredients	Proprietary	Balance

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

<b>General advice</b>	No hazards which require special first aid measures.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	No information available.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

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

<b>Specific hazards arising from the chemical</b>	None known.
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**Special protective actions for fire-fighters**

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

## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** See section 8 for more information.

**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 labelled containers.

### **Precautions to prevent secondary hazards**

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

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### **Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials** None known based on information supplied.

## **SECTION 8: Exposure controls/personal protection**

### **Control parameters**

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

### **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).

<b>Skin and body protection</b>	Wear suitable protective clothing.
<b>Hand protection</b>	Wear suitable gloves.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	No information available.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Colour</b>	Varies
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>	No data available	None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Immiscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	
<b>Other information</b>		
<b>Molecular weight</b>	Not applicable	
<b>VOC Content (%)</b>	Not applicable	

## SECTION 10: Stability and reactivity

### Reactivity

<b>Reactivity</b>	No information available.
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### Chemical stability

<b>Stability</b>	Stable under normal conditions.
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### Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions****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****Acute toxicity****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** No information available.**Numerical measures of toxicity - Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-

See section 16 for terms and abbreviations

**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 sensitisation** 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.**Product Information**



Aspiration hazard Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### Ecotoxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

### Persistence and degradability

Persistence and degradability No information available.

### Bioaccumulative potential

Bioaccumulation No information available.

### Mobility

Mobility in soil No information available.

Mobility No information available.

### 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

ADG Not regulated

IATA Not regulated

IMDG Not regulated

Transport in bulk according to Annex II of MARPOL and the IBC Code  
No information available

## SECTION 15: Regulatory information

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

National regulations

**Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

No poisons schedule number allocated

**International Inventories**

Contact supplier for inventory compliance status

**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

**SECTION 16: Other information**

**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 27-Aug-2021

**Revision Note** Significant changes throughout SDS. Review all sections.

**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
C	Carcinogen		

**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) (AELG(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

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,

transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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** UCAT/UMET by HPLC Basic Reagent

**Catalogue Number(s)** 1956038

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

<b>Skin corrosion/irritation</b>	Category 1 Sub-category B - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)

### Label elements

Corrosion



**Signal word**

Danger

**Hazard statements**

H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

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

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 or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: rinse mouth. Do NOT induce vomiting

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification****SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Sodium hydroxide	1310-73-2	1 - 2.5
Non-hazardous ingredients	Proprietary	Balance

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

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Emergency telephone number**Poisons Information Centre, Australia: 13 11 26  
Poisons Information Centre, New Zealand: 0800 764 766**Inhalation**

If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. Remove to fresh air.

**Eye contact**

Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

**Skin contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.

**Ingestion**

Get immediate medical advice/attention. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce

vomiting.

**Self-protection of the first aider** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

**SECTION 5: Firefighting measures**

**Suitable Extinguishing Media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

**Special protective actions for fire-fighters**

**Special protective equipment 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** Attention! Corrosive material. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

**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 labelled containers.

**Precautions to prevent secondary hazards**

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

## SECTION 7: Handling and storage

### Precautions for safe handling

**Advice on safe handling** In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash it before reuse. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

**General hygiene considerations** Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Protect from moisture. Store away from other materials. Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

**Incompatible materials** Acids. Bases. Oxidising agent.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Exposure Limits

Chemical name	Australia	ACGIH TLV
Sodium hydroxide 1310-73-2	2 mg/m <sup>3</sup> Peak	Ceiling: 2 mg/m <sup>3</sup>

#### **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** Face protection shield. Tight sealing safety goggles.

**Skin and body protection** Long sleeved clothing. Chemical resistant apron. Wear suitable protective clothing.

**Hand protection** Impervious gloves. 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

<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>
pH		None known
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
Explosive properties	Not applicable	
Oxidising properties	Not applicable	

**Other information**

Molecular weight	Not applicable
VOC Content (%)	Not applicable

**SECTION 10: Stability and reactivity****Reactivity**

Reactivity	No information available.
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**Chemical stability**

Stability	Stable under normal conditions.
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**Explosion data**

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

**Possibility of hazardous reactions**

Possibility of hazardous reactions	None under normal processing.
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**Conditions to avoid**

Conditions to avoid	Exposure to air or moisture over prolonged periods.
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**Incompatible materials**

**Incompatible materials** Acids. Bases. Oxidising agent.

**Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

**SECTION 11: Toxicological information****Acute toxicity****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	(based on components). Corrosive to the eyes and may cause severe damage including blindness. Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Corrosive. (based on components). Causes burns. Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Causes burns (based on components) Ingestion causes burns of the upper digestive and respiratory tracts May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking May cause lung damage if swallowed May be fatal if swallowed and enters airways Specific test data for the substance or mixture is not available
<b>Symptoms</b>	Coughing and/ or wheezing. Redness. Burning. May cause blindness.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	16,250.00 mg/kg
<b>ATEmix (dermal)</b>	67,500.00 mg/kg

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Sodium hydroxide	= 325 mg/kg ( Rat )	= 1350 mg/kg ( Rabbit )	-

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes burns.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met.

<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Product Information</b>	
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### Ecotoxicity

#### Ecotoxicity

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium hydroxide	-	LC50: =45.4mg/L (96h, <i>Oncorhynchus mykiss</i> )	-	-

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

**Mobility** No information available.

### 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

**ADG** Not regulated

**IATA** Not regulated  
**UN number or ID number** 1824  
**Packing group** III

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**  
No information available

## SECTION 15: Regulatory information

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

#### National regulations

##### Australia

See section 8 for national exposure control parameters

##### **Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6

#### International Inventories

Contact supplier for inventory compliance status

#### 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

## SECTION 16: Other information

**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 27-Aug-2021

**Revision Note** Significant changes throughout SDS. Review all sections.

#### **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
C	Carcinogen		

#### **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)  
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**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

Revision date 21-Feb-2021

Revision Number 1

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

### Product identifier

**Product Name** UCAT/UMET Acidic Reagent

**Catalogue Number(s)** 1956037

### Other means of identification

**Proper shipping name** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Acetic acid)

**UN number** UN3265

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

<b>Corrosive to metals</b>	Category 1 - (H290)
<b>Flammable liquids</b>	Category 3 - (H226)
<b>Skin corrosion/irritation</b>	Category 1 Sub-category A - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)

### Label elements

Flame  
Corrosion

**Signal word**

Danger

**Hazard statements**

H290 - May be corrosive to metals

H226 - Flammable liquid and vapour

H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Keep only in original container

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 or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: rinse mouth. Do NOT induce vomiting

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification****SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Acetic acid	64-19-7	5 - 10
Non-hazardous ingredients	Proprietary	Balance

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

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. Remove to fresh air.
<b>Eye contact</b>	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
<b>Ingestion</b>	Get immediate medical advice/attention. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Use personal protective equipment as required. See section 8 for more information. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

**Suitable Extinguishing Media** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray. Alcohol resistant foam.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

**Special protective actions for fire-fighters**

**Special protective equipment 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** See section 8 for more information. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Attention! Corrosive material. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Other information** Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** Refer to protective measures listed in Sections 7 and 8. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

**Precautions to prevent secondary hazards**

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

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

**Advice on safe handling** Use personal protection equipment. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash it before reuse. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

**General hygiene considerations** Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Protect from moisture. Store away from other materials. Keep containers tightly closed in a dry, cool and



well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

**Incompatible materials** Acids. Bases. Oxidising agent.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Exposure Limits

Chemical name	Australia	ACGIH TLV
Acetic acid 64-19-7	10 ppm 25 mg/m <sup>3</sup> 15 ppm STEL 37 mg/m <sup>3</sup> STEL	STEL: 15 ppm TWA: 10 ppm

### **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** Face protection shield. Tight sealing safety goggles.

**Skin and body protection** Antistatic boots. Long sleeved clothing. Chemical resistant apron. Wear suitable protective clothing.

**Hand protection** Impervious gloves. 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** Varies  
**Odour** Odourless.  
**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>		None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	100 °C	
<b>Flash point</b>	> 55 °C	
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive</b>	No data available	

<b>limits</b>		
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Miscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	
<b>Other information</b>		
<b>Molecular weight</b>	Not applicable	
<b>VOC Content (%)</b>	Not applicable	

## 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** Yes.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### Conditions to avoid

**Conditions to avoid** Heat, flames and sparks. Exposure to air or moisture over prolonged periods.

### Incompatible materials

**Incompatible materials** Acids. Bases. Oxidising agent.

### Hazardous decomposition products

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

### Acute toxicity

### Information on likely routes of exposure

#### **Product Information**

**Inhalation** Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased

blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Specific test data for the substance or mixture is not available.

**Eye contact**

(based on components). Corrosive to the eyes and may cause severe damage including blindness. Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.

**Skin contact**

Corrosive. (based on components). Causes burns. Specific test data for the substance or mixture is not available.

**Ingestion**

Causes burns (based on components) Ingestion causes burns of the upper digestive and respiratory tracts May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking May cause lung damage if swallowed May be fatal if swallowed and enters airways Specific test data for the substance or mixture is not available

**Symptoms**

Coughing and/ or wheezing. Redness. Burning. May cause blindness.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	50,923.10 mg/kg
ATEmix (dermal)	16,307.70 mg/kg
ATEmix (inhalation-dust/mist)	175.40 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Acetic acid	= 3310 mg/kg ( Rat )	= 1060 mg/kg ( Rabbit )	= 11.4 mg/L ( Rat ) 4 h

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation**

Classification based on data available for ingredients. Causes burns.

**Serious eye damage/eye irritation**

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Respiratory or skin sensitisation**

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.

**Product Information****Aspiration hazard**

Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

**Ecotoxicity****Ecotoxicity**

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Acetic acid	-	LC50: =75mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =79mg/L (96h, <i>Pimephales promelas</i> )	-	EC50: =47mg/L (24h, <i>Daphnia magna</i> ) EC50: =65mg/L (48h, <i>Daphnia magna</i> )

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Acetic acid	-0.31

**Mobility**

**Mobility in soil** No information available.

**Mobility** No information available.

**Other adverse effects**

**Other adverse effects** No information available.

**SECTION 13: Disposal considerations****Waste treatment methods**

**Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

**SECTION 14: Transport information****ADG**

**UN number** UN3265  
**Proper shipping name** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Acetic acid)  
**Transport hazard class(es)** 8  
**Packing group** III  
**Special Provisions** 223, 274  
**Description** UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Acetic acid), 8, III

**IATA**

**UN number or ID number** UN3265  
**UN proper shipping name** Corrosive liquid, acidic, organic, n.o.s. (Acetic acid)  
**Transport hazard class(es)** 8  
**Packing group** III

<b>ERG Code</b>	8L
<b>Special Provisions</b>	A3, A803
<b>Description</b>	UN3265, Corrosive liquid, acidic, organic, n.o.s. (Acetic acid), 8, III
<b>IMDG</b>	
<b>UN number or ID number</b>	UN3265
<b>UN proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Acetic acid)
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III
<b>EmS-No</b>	F-A, S-B
<b>Special Provisions</b>	223, 274
<b>Marine pollutant</b>	NP
<b>Description</b>	UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Acetic acid), 8, III, (55°C C.C.)

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

No poisons schedule number allocated

**Major hazard (accident/incident planning) regulation**

Verify that licence requirements are met

**Hazardous chemical**

Liquids with flash points &lt;61°C kept above their boiling points at ambient conditions

<b>Threshold quantity (T)</b>	200
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**National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Acetic acid - 64-19-7	10 tonne/yr Threshold category 1

**International Inventories**

Contact supplier for inventory compliance status

**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**SECTION 16: Other information**

<b>Prepared By</b>	Bio-Rad Laboratories, Environmental Health and Safety
<b>Revision date</b>	21-Feb-2021
<b>Revision Note</b>	Significant changes throughout SDS. Review all sections.

**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
C	Carcinogen		

**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

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text**

**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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** UCAT/UMET/VMA by HPLC Reconstitution Reagent

**Catalogue Number(s)** 1956039

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

### For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

#### **Hazard statements**

Not classified

#### Other hazards which do not result in classification

Causes mild skin irritation

## SECTION 3: Composition/information on ingredients

**Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Hydrochloric acid	7647-01-0	0.1 - 0.299
Non-hazardous ingredients	Proprietary	Balance

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

<b>General advice</b>	No hazards which require special first aid measures.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	Prolonged contact may cause redness and irritation.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

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

<b>Specific hazards arising from the chemical</b>	None known.
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**Special protective actions for fire-fighters**

<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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**SECTION 6: Accidental release measures**



**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** See section 8 for more information.

**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 labelled containers.

**Precautions to prevent secondary hazards**

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

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

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials** None known based on information supplied.

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

Chemical name	Australia	ACGIH TLV
Hydrochloric acid 7647-01-0	5 ppm Peak 7.5 mg/m <sup>3</sup> Peak	Ceiling: 2 ppm

**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.

<b>Hand protection</b>	Wear suitable gloves.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	No information available.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Colour</b>	colourless
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>		None known
<b>Melting point / freezing point</b>	0 °C	
<b>Boiling point / boiling range</b>	100 °C	
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Miscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	

### Other information

<b>Molecular weight</b>	Not applicable
<b>VOC Content (%)</b>	Not applicable

## SECTION 10: Stability and reactivity

### Reactivity

<b>Reactivity</b>	No information available.
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### Chemical stability

<b>Stability</b>	Stable under normal conditions.
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### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

### Possibility of hazardous reactions

**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**

**Acute toxicity**

**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. Causes mild skin irritation.

**Ingestion** Specific test data for the substance or mixture is not available.

**Symptoms** Prolonged contact may cause redness and irritation.

**Numerical measures of toxicity - Product Information**

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Hydrochloric acid	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	= 1.68 mg/L ( Rat ) 1 h

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. May cause skin irritation.

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** 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.

**Product Information****Aspiration hazard**

Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information****Ecotoxicity****Ecotoxicity****Unknown aquatic toxicity**

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrochloric acid	-	LC50: =282mg/L (96h, <i>Gambusia affinis</i> )	-	-

**Persistence and degradability****Persistence and degradability**

No information available.

**Bioaccumulative potential****Bioaccumulation**

No information available.

**Mobility****Mobility in soil**

No information available.

**Mobility**

No information available.

**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****ADG**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6**Major hazard (accident/incident planning) regulation**

Verify that licence requirements are met

**Named hazardous chemicals**

Chemical name	Threshold quantity (T)
Hydrochloric acid - 7647-01-0	250 tonne TQ anhydrous 250 tonne TQ refrigerated liquid

**National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Hydrochloric acid - 7647-01-0	10 tonne/yr Threshold category 1 400 tonne/yr Threshold category 2a 1 tonne/h Threshold category 2a 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b

**International Inventories**

Contact supplier for inventory compliance status

**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**SECTION 16: Other information****Prepared By** Bio-Rad Laboratories, Environmental Health and Safety**Revision date** 27-Aug-2021**Revision Note** Significant changes throughout SDS. Review all sections.**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
C	Carcinogen		

**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) (AEGLS)  
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

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**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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 Hydrolysis Reagent

**Catalogue Number(s)** 1956046

### Other means of identification

**Proper shipping name** HYDROCHLORIC ACID SOLUTION

**UN number** UN1789

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

<b>Acute toxicity - Inhalation (Gases)</b>	Category 4 - (H332)
<b>Skin corrosion/irritation</b>	Category 1 Sub-category A - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)

### Label elements

Exclamation mark  
Corrosion

**Signal word**

Danger

**Hazard statements**

H314 - Causes severe skin burns and eye damage

H332 - Harmful if inhaled

**Precautionary Statements - Prevention**

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

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

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 or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: rinse mouth. Do NOT induce vomiting

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification**

May be harmful if swallowed

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Hydrochloric acid	7647-01-0	5 - 10
Non-hazardous ingredients	Proprietary	Balance

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

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Emergency telephone number**

Poisons Information Centre, Australia: 13 11 26

Poisons Information Centre, New Zealand: 0800 764 766

**Inhalation**

Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.



	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
<b>Ingestion</b>	Get immediate medical advice/attention. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.
<b>Self-protection of the first aider</b>	Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapours or mists. Use personal protective equipment as required. See section 8 for more information.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

**Special protective actions for fire-fighters**

**Special protective equipment 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** Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid breathing vapours or mists. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

#### **Environmental precautions**

**Environmental precautions** Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

#### **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 labelled containers.

#### **Precautions to prevent secondary hazards**

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

### **SECTION 7: Handling and storage**

#### **Precautions for safe handling**

**Advice on safe handling** Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash it before reuse. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

**General hygiene considerations** Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

#### **Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Protect from moisture. Store away from other materials. Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store according to product and label instructions.

**Incompatible materials** Acids. Bases. Oxidising agent.

### **SECTION 8: Exposure controls/personal protection**

#### **Control parameters**

##### **Exposure Limits**

Chemical name	Australia	ACGIH TLV
Hydrochloric acid 7647-01-0	5 ppm Peak 7.5 mg/m <sup>3</sup> Peak	Ceiling: 2 ppm

#### **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**

<b>Eye/face protection</b>	Face protection shield. Tight sealing safety goggles.
<b>Skin and body protection</b>	Long sleeved clothing. Chemical resistant apron. Wear suitable protective clothing.
<b>Hand protection</b>	Impervious gloves. Wear suitable gloves.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	No information available.

### **SECTION 9: Physical and chemical properties**

#### **Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Colour</b>	white
<b>Odour</b>	Pungent.
<b>Odour threshold</b>	No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	1	
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	85-108 °C	
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Miscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	

#### **Other information**

<b>Molecular weight</b>	Not applicable
<b>VOC Content (%)</b>	Not applicable

### **SECTION 10: Stability and reactivity**

#### **Reactivity**

<b>Reactivity</b>	No information available.
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#### **Chemical stability**

<b>Stability</b>	Stable under normal conditions.
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**Explosion data****Sensitivity to mechanical impact** None.**Sensitivity to static discharge** None.**Possibility of hazardous reactions****Possibility of hazardous reactions** None under normal processing.**Conditions to avoid****Conditions to avoid** Exposure to air or moisture over prolonged periods. Excessive heat.**Incompatible materials****Incompatible materials** Acids. Bases. Oxidising agent.**Hazardous decomposition products****Hazardous decomposition products** None known based on information supplied.**SECTION 11: Toxicological information****Acute toxicity****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
<b>Eye contact</b>	(based on components). Corrosive to the eyes and may cause severe damage including blindness. Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Corrosive. (based on components). Causes burns. Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Causes burns (based on components) Ingestion causes burns of the upper digestive and respiratory tracts May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking May cause lung damage if swallowed May be fatal if swallowed and enters airways Specific test data for the substance or mixture is not available
<b>Symptoms</b>	Redness. Burning. May cause blindness. Coughing and/ or wheezing.

**Numerical measures of toxicity - Product Information****The following values are calculated based on chapter 3.1 of the GHS document**

<b>ATEmix (oral)</b>	3,419.50 mg/kg
<b>ATEmix (dermal)</b>	72,054.74 mg/kg
<b>ATEmix (inhalation-gas)</b>	8,093.4224 mg/l
<b>ATEmix (inhalation-dust/mist)</b>	7.198 mg/l

**Unknown acute toxicity**

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Hydrochloric acid	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	= 1.68 mg/L ( Rat ) 1 h

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes burns.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Product Information</b>	
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information****Ecotoxicity****Ecotoxicity**

<b>Unknown aquatic toxicity</b>	0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.
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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrochloric acid	-	LC50: =282mg/L (96h, Gambusia affinis)	-	-

**Persistence and degradability**

<b>Persistence and degradability</b>	No information available.
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**Bioaccumulative potential**

<b>Bioaccumulation</b>	No information available.
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**Mobility**

<b>Mobility in soil</b>	No information available.
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<b>Mobility</b>	No information available.
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**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

### ADG

**UN number** UN1789  
**Proper shipping name** HYDROCHLORIC ACID SOLUTION  
**Transport hazard class(es)** 8  
**Packing group** II  
**Description** UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

### IATA

**UN number or ID number** UN1789  
**UN proper shipping name** Hydrochloric acid solution  
**Transport hazard class(es)** 8  
**Packing group** II  
**ERG Code** 8L  
**Special Provisions** A3, A803  
**Description** UN1789, Hydrochloric acid solution, 8, II

### IMDG

**UN number or ID number** UN1789  
**UN proper shipping name** HYDROCHLORIC ACID SOLUTION  
**Transport hazard class(es)** 8  
**Packing group** II  
**EmS-No** F-A, S-B  
**Marine pollutant** NP  
**Description** UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

### **Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

## SECTION 15: Regulatory information

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

#### National regulations

##### Australia

See section 8 for national exposure control parameters

### **Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6

### **Major hazard (accident/incident planning) regulation**

Verify that licence requirements are met

## Named hazardous chemicals

Chemical name	Threshold quantity (T)
Hydrochloric acid - 7647-01-0	250 tonne TQ anhydrous 250 tonne TQ refrigerated liquid

## National pollutant inventory

Subject to reporting requirement

Chemical name	National pollutant inventory
Hydrochloric acid - 7647-01-0	10 tonne/yr Threshold category 1 400 tonne/yr Threshold category 2a 1 tonne/h Threshold category 2a 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b

International Inventories

Contact supplier for inventory compliance status

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

**SECTION 16: Other information**

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 27-Aug-2021

Revision Note Significant changes throughout SDS. Review all sections.

**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
C	Carcinogen		

**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

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**





# SAFETY DATA SHEET

According to WHS Regulations

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

**Catalogue Number(s)** 1956043

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

### For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

#### **Hazard statements**

Not classified

### Other hazards which do not result in classification

## SECTION 3: Composition/information on ingredients

**Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Ammonium boron oxide ((NH <sub>4</sub> )B <sub>5</sub> O <sub>8</sub> )	12007-89-5	2.5 - 5
Ethylenediaminetetraacetic acid	60-00-4	0.1 - 0.299
Non-hazardous ingredients	Proprietary	Balance

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

<b>General advice</b>	No hazards which require special first aid measures.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	No information available.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

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

<b>Specific hazards arising from the chemical</b>	None known.
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**Special protective actions for fire-fighters**

<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** See section 8 for more information.

**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 labelled containers.

### Precautions to prevent secondary hazards

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

## SECTION 7: Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials** None known based on information supplied.

## SECTION 8: Exposure controls/personal protection

### Control parameters

**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	Australia	ACGIH TLV
Ammonium boron oxide ((NH <sub>4</sub> )B <sub>5</sub> O <sub>8</sub> ) 12007-89-5		STEL: 6 mg/m <sup>3</sup> inhalable particulate matter TWA: 2 mg/m <sup>3</sup> 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

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

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Colour</b>	colourless
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	7.5	
<b>Melting point / freezing point</b>	0 °C	
<b>Boiling point / boiling range</b>	= 100 °C	
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Miscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	

### Other information

<b>Molecular weight</b>	Not applicable
<b>VOC Content (%)</b>	Not applicable

## SECTION 10: Stability and reactivity

### Reactivity

<b>Reactivity</b>	No information available.
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### Chemical stability

<b>Stability</b>	Stable under normal conditions.
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### Explosion data

Sensitivity to mechanical impact None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**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**

**Acute toxicity**

**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** No information available.

**Numerical measures of toxicity - Product Information**

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

See section 16 for terms and abbreviations

**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 sensitisation** 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.

**Product Information**

**Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### Ecotoxicity

#### Ecotoxicity

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	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.

**Mobility** No information available.

### 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

**ADG** Not regulated

**IATA** Not regulated

**IMDG**

Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

No poisons schedule number allocated

Chemical name	National pollutant inventory
Ammonium boron oxide ((NH <sub>4</sub> )B <sub>5</sub> O <sub>8</sub> ) - 12007-89-5	10 tonne/yr Threshold category 1

**International Inventories**

Contact supplier for inventory compliance status

**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**SECTION 16: Other information****Prepared By** Bio-Rad Laboratories, Environmental Health and Safety**Revision date** 27-Aug-2021**Revision Note** Significant changes throughout SDS. Review all sections.**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
C	Carcinogen		

**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) (AELG(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

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**End of Safety Data Sheet**





# SAFETY DATA SHEET

According to WHS Regulations

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 Transfer Buffer

**Catalogue Number(s)** 1956044

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

<b>Skin corrosion/irritation</b>	Category 1 Sub-category B - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)

### Label elements

Corrosion



**Signal word**

Danger

**Hazard statements**

H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

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

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 or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: rinse mouth. Do NOT induce vomiting

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification**

May be harmful if swallowed Toxic to aquatic life with long lasting effects Toxic to aquatic life

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Ammonium hydroxide	1336-21-6	5 - 10
Non-hazardous ingredients	Proprietary	Balance

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

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Emergency telephone number**

Poisons Information Centre, Australia: 13 11 26

Poisons Information Centre, New Zealand: 0800 764 766

**Inhalation**

If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. Remove to fresh air.

**Eye contact**

Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

**Skin contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.

**Ingestion**

Get immediate medical advice/attention. Clean mouth with water and drink afterwards

plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.

**Self-protection of the first aider** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

#### **Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation.

#### **Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

### **SECTION 5: Firefighting measures**

#### **Suitable Extinguishing Media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

#### **Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

#### **Special protective actions for fire-fighters**

**Special protective equipment 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** Attention! Corrosive material. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

#### **Environmental precautions**

**Environmental precautions** Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

#### **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 labelled containers.

**Precautions to prevent secondary hazards**

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

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

**Advice on safe handling** In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash it before reuse. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

**General hygiene considerations** Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Protect from moisture. Store away from other materials. Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

**Incompatible materials** Acids. Bases. Oxidising agent.

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

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

**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** Face protection shield. Tight sealing safety goggles.

**Skin and body protection** Long sleeved clothing. Chemical resistant apron. Wear suitable protective clothing.

**Hand protection** Impervious gloves. 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	white
Odour	Ammonia-like odour.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	11.9	
Melting point / freezing point	No data available	None known
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
Explosive properties	Not applicable	
Oxidising properties	Not applicable	
<u>Other information</u>		
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

## SECTION 10: Stability and reactivity

### Reactivity

Reactivity	No information available.
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### Chemical stability

Stability	Stable under normal conditions.
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### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

### Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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### Conditions to avoid

Conditions to avoid	Exposure to air or moisture over prolonged periods.
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### Incompatible materials

**Incompatible materials** Acids. Bases. Oxidising agent.

**Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

**SECTION 11: Toxicological information**

**Acute toxicity**

**Information on likely routes of exposure**

**Product Information**

<b>Inhalation</b>	Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	(based on components). Corrosive to the eyes and may cause severe damage including blindness. Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Corrosive. (based on components). Causes burns. Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Causes burns (based on components) Ingestion causes burns of the upper digestive and respiratory tracts May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking May cause lung damage if swallowed May be fatal if swallowed and enters airways Specific test data for the substance or mixture is not available
<b>Symptoms</b>	Coughing and/ or wheezing. Redness. Burning. May cause blindness.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document  
ATEmix (oral) 4,902.00 mg/kg

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Ammonium hydroxide	= 350 mg/kg ( Rat )	-	-

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes burns.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.

<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Product Information</b>	
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### Ecotoxicity

<b>Ecotoxicity</b>	Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
<b>Unknown aquatic toxicity</b>	0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ammonium hydroxide	-	LC50: =8.2mg/L (96h, Pimephales promelas)	-	EC50: =0.66mg/L (48h, Daphnia pulex) EC50: =0.66mg/L (48h, water flea)

### Persistence and degradability

<b>Persistence and degradability</b>	No information available.
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### Bioaccumulative potential

<b>Bioaccumulation</b>	No information available.
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### Mobility

<b>Mobility in soil</b>	No information available.
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<b>Mobility</b>	No information available.
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### Other adverse effects

<b>Other adverse effects</b>	No information available.
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## SECTION 13: Disposal considerations

### Waste treatment methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.

## SECTION 14: Transport information

<b>ADG</b>	Not regulated
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**IATA** Not regulated

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

## SECTION 15: Regulatory information

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

#### National regulations

##### Australia

See section 8 for national exposure control parameters

##### **Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6

#### International Inventories

Contact supplier for inventory compliance status

#### 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

## SECTION 16: Other information

**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 27-Aug-2021

**Revision Note** Significant changes throughout SDS. Review all sections.

### **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
C	Carcinogen		

### **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) (AELG(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

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text**

**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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 Elution Reagent

**Catalogue Number(s)** 1956045

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

### For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

#### **Hazard statements**

Not classified

### Other hazards which do not result in classification

## SECTION 3: Composition/information on ingredients

**Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Ammonium acetate	631-61-8	1 - 2.5
Acetic acid	64-19-7	0.01 - 0.099
Non-hazardous ingredients	Proprietary	Balance

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

<b>General advice</b>	No hazards which require special first aid measures.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	No information available.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

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

<b>Specific hazards arising from the chemical</b>	None known.
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**Special protective actions for fire-fighters**

<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** See section 8 for more information.

**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 labelled containers.

### Precautions to prevent secondary hazards

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

## SECTION 7: Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials** None known based on information supplied.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Exposure Limits

Chemical name	Australia	ACGIH TLV
Acetic acid 64-19-7	10 ppm 25 mg/m <sup>3</sup> 15 ppm STEL 37 mg/m <sup>3</sup> STEL	STEL: 15 ppm TWA: 10 ppm

### 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

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

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Colour</b>	colourless
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	6	
<b>Melting point / freezing point</b>	0 °C	
<b>Boiling point / boiling range</b>	100 °C	
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Miscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	

### Other information

<b>Molecular weight</b>	Not applicable
<b>VOC Content (%)</b>	Not applicable

## SECTION 10: Stability and reactivity

### Reactivity

<b>Reactivity</b>	No information available.
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### Chemical stability

<b>Stability</b>	Stable under normal conditions.
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### Explosion data

Sensitivity to mechanical impact None.

**Sensitivity to static discharge** None.

#### **Possibility of hazardous reactions**

**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**

#### **Acute toxicity**

#### **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** No information available.

#### **Numerical measures of toxicity - Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Acetic acid	= 3310 mg/kg ( Rat )	= 1060 mg/kg ( Rabbit )	= 11.4 mg/L ( Rat ) 4 h

See section 16 for terms and abbreviations

#### **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 sensitisation** 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.

**Product Information**  
**Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### Ecotoxicity

#### Ecotoxicity

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ammonium acetate	-	LC50: =1.06mg/L (48h, <i>Cyprinus carpio</i> )	-	-
Acetic acid	-	LC50: =75mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =79mg/L (96h, <i>Pimephales promelas</i> )	-	EC50: =47mg/L (24h, <i>Daphnia magna</i> ) EC50: =65mg/L (48h, <i>Daphnia magna</i> )

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

#### Component Information

Chemical name	Partition coefficient
Acetic acid	-0.31

### Mobility

**Mobility in soil** No information available.

**Mobility** No information available.

### 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

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

## SECTION 15: Regulatory information

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

#### National regulations

##### Australia

See section 8 for national exposure control parameters

##### **Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

No poisons schedule number allocated

##### **National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Acetic acid - 64-19-7	10 tonne/yr Threshold category 1

##### International Inventories

Contact supplier for inventory compliance status

#### 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

## SECTION 16: Other information

**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 27-Aug-2021

**Revision Note** Significant changes throughout SDS. Review all sections.

### **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
C	Carcinogen		

### **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

**Disclaimer**

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**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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** HPLC Cation Exchange Columns

**Catalogue Number(s)** 1956012

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

<b>Skin corrosion/irritation</b>	Category 2 - (H315)
<b>Serious eye damage/eye irritation</b>	Category 2 - (H319)

### Label elements

Exclamation mark



**Signal word**

Warning

**Hazard statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash it before reuse

**Other hazards which do not result in classification**

Harmful to aquatic life with long lasting effects

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Amberlite IRC-50S Ion Exchange Resin	81133-22-4	35 - 50
Acetic acid	64-19-7	1 - 2.5
5-Bromo-5-nitro-1,3-dioxane	30007-47-7	0.01 - 0.099
Non-hazardous ingredients	Proprietary	Balance

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

Show this safety data sheet to the doctor in attendance.

**Emergency telephone number**

Poisons Information Centre, Australia: 13 11 26

Poisons Information Centre, New Zealand: 0800 764 766

**Inhalation**

Get medical attention immediately if symptoms occur. Remove to fresh air.

**Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

**Skin contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

**Ingestion**

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor.

**Self-protection of the first aider**

Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

**Most important symptoms and effects, both acute and delayed****Symptoms**

May cause redness and tearing of the eyes. Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Treat symptomatically.

**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** None known.

**Special protective actions for fire-fighters**

**Special protective equipment 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. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

**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 labelled containers.

**Precautions to prevent secondary hazards**

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

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

**Advice on safe handling** Take off contaminated clothing and wash it before reuse. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store according to product and label instructions.

**Incompatible materials** Strong acids. Strong bases. Strong oxidising agents.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Exposure Limits

Chemical name	Australia	ACGIH TLV
Acetic acid 64-19-7	10 ppm 25 mg/m <sup>3</sup> 15 ppm STEL 37 mg/m <sup>3</sup> STEL	STEL: 15 ppm TWA: 10 ppm

#### 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** If splashes are likely to occur, wear safety glasses with side-shields.

**Skin and body protection** Long sleeved clothing. Wear suitable protective clothing.

**Hand protection** Impervious gloves. 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** Suspension  
**Colour** white  
**Odour** Ammonia-like odour.  
**Odour threshold** No information available

Property	Values	Remarks • Method
pH	6.5	
Melting point / freezing point	No data available	None known
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	No data available	

<b>limits</b>		
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Immiscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	
<b>Other information</b>		
<b>Molecular weight</b>	Not applicable	
<b>VOC Content (%)</b>	Not applicable	

## 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

**Possibility of hazardous reactions** None under normal processing.

### Conditions to avoid

**Conditions to avoid** None known based on information supplied.

### Incompatible materials

**Incompatible materials** Strong acids. Strong bases. Strong oxidising agents.

### Hazardous decomposition products

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

### Acute toxicity

### Information on likely routes of exposure

#### **Product Information**

**Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.

<b>Eye contact</b>	Irritating to eyes. Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).
<b>Skin contact</b>	Causes skin irritation. (based on components). Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea
<b>Symptoms</b>	Redness. May cause redness and tearing of the eyes.

#### **Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	79,805.20 mg/kg
<b>ATEmix (dermal)</b>	25,557.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	274.90 mg/l

#### **Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Acetic acid	= 3310 mg/kg ( Rat )	= 1060 mg/kg ( Rabbit )	= 11.4 mg/L ( Rat ) 4 h
5-Bromo-5-nitro-1,3-dioxane	= 455 mg/kg ( Rat )	-	-

See section 16 for terms and abbreviations

#### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Irritating to skin.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Product Information</b>	
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

## **SECTION 12: Ecological information**

### **Ecotoxicity**

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects.
<b>Unknown aquatic toxicity</b>	0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to	Crustacea
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			microorganisms	
Acetic acid	-	LC50: =75mg/L (96h, Lepomis macrochirus) LC50: =79mg/L (96h, Pimephales promelas)	-	EC50: =47mg/L (24h, Daphnia magna) EC50: =65mg/L (48h, Daphnia magna)

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Acetic acid	-0.31

**Mobility**

**Mobility in soil** No information available.

**Mobility** No information available.

**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**

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**



No poisons schedule number allocated

#### National pollutant inventory

Subject to reporting requirement

Chemical name	National pollutant inventory
Acetic acid - 64-19-7	10 tonne/yr Threshold category 1

#### International Inventories

Contact supplier for inventory compliance status

#### 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

### SECTION 16: Other information

**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 27-Aug-2021

**Revision Note** Significant changes throughout SDS. Review all sections.

#### 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
C	Carcinogen		

#### 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

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**



# SAFETY DATA SHEET

According to WHS Regulations

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** UCAT/PCAT by HPLC Internal Standard

**Catalogue Number(s)** 1956035

### Other means of identification

**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 manufacturer or importer

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
Level 5  
446 Victoria Road,  
Gladesville NSW 2111  
Australia

For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

<b>Skin corrosion/irritation</b>	Category 1 - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)

### Label elements

Corrosion

**Signal word**

Danger

**Hazard statements**

H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

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

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 or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: rinse mouth. Do NOT induce vomiting

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification****SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Hydrochloric acid	7647-01-0	0.3 - 0.999
4-(Aminomethyl)pyrocatechol hydrobromide	16290-26-9	0.01 - 0.099
Non-hazardous ingredients	Proprietary	Balance

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

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Emergency telephone number**Poisons Information Centre, Australia: 13 11 26  
Poisons Information Centre, New Zealand: 0800 764 766**Inhalation**

If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. Remove to fresh air.

<b>Eye contact</b>	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
<b>Ingestion</b>	Get immediate medical advice/attention. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

**Special protective actions for fire-fighters**

**Special protective equipment 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** Attention! Corrosive material. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent

product from entering drains. Prevent further leakage or spillage if safe to do so.

#### **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 labelled containers.

#### **Precautions to prevent secondary hazards**

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

### **SECTION 7: Handling and storage**

#### **Precautions for safe handling**

**Advice on safe handling** In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash it before reuse. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

**General hygiene considerations** Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

#### **Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Protect from moisture. Store away from other materials. Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

**Incompatible materials** Acids. Bases. Oxidising agent.

### **SECTION 8: Exposure controls/personal protection**

#### **Control parameters**

#### **Exposure Limits**

Chemical name	Australia	ACGIH TLV
Hydrochloric acid 7647-01-0	5 ppm Peak 7.5 mg/m <sup>3</sup> Peak	Ceiling: 2 ppm

#### **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** Face protection shield. Tight sealing safety goggles.

<b>Skin and body protection</b>	Long sleeved clothing. Chemical resistant apron. Wear suitable protective clothing.
<b>Hand protection</b>	Impervious gloves. Wear suitable gloves.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	No information available.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Colour</b>	colourless
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	1.1	
<b>Melting point / freezing point</b>	0 °C	
<b>Boiling point / boiling range</b>	100 °C	
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Miscible in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	
<b>Other information</b>		
<b>Molecular weight</b>	Not applicable	
<b>VOC Content (%)</b>	Not applicable	

## SECTION 10: Stability and reactivity

### Reactivity

<b>Reactivity</b>	No information available.
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### Chemical stability

<b>Stability</b>	Stable under normal conditions.
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### **Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions****Possibility of hazardous reactions** None under normal processing.**Conditions to avoid****Conditions to avoid** Exposure to air or moisture over prolonged periods.**Incompatible materials****Incompatible materials** Acids. Bases. Oxidising agent.**Hazardous decomposition products****Hazardous decomposition products** None known based on information supplied.**SECTION 11: Toxicological information****Acute toxicity****Information on likely routes of exposure****Product Information****Inhalation**

Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Specific test data for the substance or mixture is not available.

**Eye contact**

(based on components). Corrosive to the eyes and may cause severe damage including blindness. Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.

**Skin contact**

Corrosive. (based on components). Causes burns. Specific test data for the substance or mixture is not available.

**Ingestion**

Causes burns (based on components) Ingestion causes burns of the upper digestive and respiratory tracts May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking May cause lung damage if swallowed May be fatal if swallowed and enters airways Specific test data for the substance or mixture is not available

**Symptoms**

Coughing and/ or wheezing. Redness. Burning. May cause blindness.

**Numerical measures of toxicity - Product Information****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Hydrochloric acid	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	= 1.68 mg/L ( Rat ) 1 h

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**



<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes burns.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Product Information</b>	
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### Ecotoxicity

#### Ecotoxicity

**Unknown aquatic toxicity** 0.007 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrochloric acid	-	LC50: =282mg/L (96h, <i>Gambusia affinis</i> )	-	-

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

**Mobility** No information available.

### 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****ADG** Not regulated**IATA** Not regulated**IMDG** Not regulated**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6**Major hazard (accident/incident planning) regulation**

Verify that licence requirements are met

**Named hazardous chemicals**

Chemical name	Threshold quantity (T)
Hydrochloric acid - 7647-01-0	250 tonne TQ anhydrous 250 tonne TQ refrigerated liquid

**National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Hydrochloric acid - 7647-01-0	10 tonne/yr Threshold category 1 400 tonne/yr Threshold category 2a 1 tonne/h Threshold category 2a 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b

**International Inventories**

Contact supplier for inventory compliance status

**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**SECTION 16: Other information**

**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 27-Aug-2021

**Revision Note** Significant changes throughout SDS. Review all sections.

**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
C	Carcinogen		

**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) (AELG(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 (IUCID)  
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

**Disclaimer**

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**End of Safety Data Sheet**