SAFETY DATA SHEET

Revision date 27-Aug-2021 **Revision Number** 3.1

1. Identification

Product identifier

Product Name UCAT by HPLC Mobile Phase

Other means of identification

Catalog Number(s) 1956073

Recommended use of the chemical and restrictions on use

Recommended use In-vitro laboratory reagent or component

Restrictions on use No information available

Details of the supplier of the safety data sheet

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

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

Legal Entity / Contact Address
Bio-Rad Laboratories (Canada) Ltd.
2403 Guenette
Montreal, Quebec H4R 2E9
Canada

Technical Service 1-800-361-1808
CSD_Techsupport@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Canada:1 (800) 424-9300

2. Hazard(s) identification

Classification

Reproductive toxicity	Category 1B

Label elements

Danger

Hazard statements

May damage fertility or the unborn child

Precautionary Statements - Prevention
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other information

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Water	7732-18-5	80 - 100	-	
Isopropyl alcohol	67-63-0	5 - 10	-	
Diammonium phosphate	7783-28-0	0.1 - 1	-	
Citric acid	77-92-9	0.1 - 1	-	
Boric acid (H3BO3)	10043-35-3	0.1 - 1	-	
Phosphoric acid	7664-38-2	<= 0.1	-	

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water.

Ingestion 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 physicians Treat symptomatically.

5. Fire-fighting measures

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 None known.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions See section 8 for more information.

Methods and material for containment and cleaning up

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

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

7. Handling and storage

Precautions for safe handling

Advice on safe handling 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. Remove contaminated clothing and shoes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Store according to product and label instructions.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	Alberta	British Columbia	Ontario	Quebec
Isopropyl alcohol 67-63-0	TWA: 200 ppm TWA: 492 mg/m³ STEL: 400 ppm STEL: 984 mg/m³	TWA: 200 ppm STEL: 400 ppm	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm TWA: 985 mg/m³ STEL: 500 ppm STEL: 1230 mg/m³
Boric acid (H3BO3) 10043-35-3		TWA: 2 mg/m³ STEL: 6 mg/m³	TWA: 2 mg/m³ STEL: 6 mg/m³	
Phosphoric acid 7664-38-2	TWA: 1 mg/m³ STEL: 3 mg/m³	TWA: 1 mg/m³ STEL: 3 mg/m³	TWA: 1 mg/m³ STEL: 3 mg/m³	TWA: 1 mg/m³ STEL: 3 mg/m³

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).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
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.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Color	No information available
Odor	Odorless
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	5-6	
Melting point / freezing point	No data available	None known
Boiling point / boiling range	97 °C / 206.6 °F	
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	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	Not applicable.
Oxidizing properties	Not applicable.
Softening point	Not applicable
Molecular weight	Not applicable
VOC Content (%)	Not applicable

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

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

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

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

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

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

ATEmix (oral) 33,693.70 mg/kg
ATEmix (dermal) 73,135.10 mg/kg
ATEmix (inhalation-dust/mist) 1,308.1081 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Isopropyl alcohol 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m³ (Rat) 4 h
Diammonium phosphate 7783-28-0	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	-
Citric acid 77-92-9	= 3 g/kg (Rat) = 3000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Boric acid (H3BO3) 10043-35-3	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 0.16 mg/L (Rat) 4 h
Phosphoric acid 7664-38-2	= 1530 mg/kg (Rat)	= 2740 mg/kg (Rabbit)	> 850 mg/m³ (Rat) 1 h

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

Skin corrosion/irritation Based on available data, the classification criteria are not met.

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

Respiratory or skin sensitization Based on available data, the classification criteria are not met.

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

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

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Isopropyl alcohol 67-63-0	-	Group 3	-	X
Boric acid (H3BO3) 10043-35-3	-	Group 2A	-	X

Legend

IARC (International Agency for Research on Cancer)
Group 2A - Probably Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

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.

Target organ effects Respiratory system, Eyes, Skin.

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

12. Ecological information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isopropyl alcohol 67-63-0	EC50: >1000mg/L (72h, Desmodesmus subspicatus) EC50: >1000mg/L (96h, Desmodesmus subspicatus)	LC50: =11130mg/L (96h, Pimephales promelas) LC50: =9640mg/L (96h, Pimephales promelas) LC50: >1400000µg/L (96h, Lepomis macrochirus)	-	EC50: =13299mg/L (48h, Daphnia magna)
Diammonium phosphate 7783-28-0	-	LC50: 24.8 - 29.4mg/L (96h, Oncorhynchus mykiss) LC50: =26.5mg/L (96h, Oncorhynchus mykiss) LC50: =3.3mg/L (96h, Pimephales promelas) LC50: =33mg/L (96h, Pimephales promelas)	-	-
Citric acid 77-92-9	-	LC50: =1516mg/L (96h, Lepomis macrochirus)	-	EC50: =120mg/L (72h, Daphnia magna)
Boric acid (H3BO3)	-	LC50: =1020mg/L (72h,	-	EC50: 115 - 153mg/L

10043-35-3		Carassius auratus)		(48h, Daphnia magna)
Phosphoric acid 7664-38-2	-	LC50: 3 - 3.5mg/L (96h, Gambusia affinis)	-	EC50: =4.6mg/L (12h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Isopropyl alcohol 67-63-0	0.05
Citric acid 77-92-9	-1.72
Boric acid (H3BO3) 10043-35-3	-0.757

Other adverse effects No information available.

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.

14. Transport information

TDG Not regulated

DOT Not regulated

MEX Not regulated

IATA Not regulated

IMDG Not regulated

15. Regulatory information

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

International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories
Contact supplier for inventory compliance status

16. Other information

NFPA	**Health hazards** 0	**Flammability** 0	**Instability** 0	**Physical and chemical properties** -
HMIS	**Health hazards** *	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Chronic Hazard Star Legend * = Chronic Health Hazard

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia 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)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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

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Revision Note Significant changes throughout SDS. Review all sections.

Disclaimer

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End of Safety Data Sheet