KIT SAFETY DATA SHEET



Kit Product Name Quantum Prep Plasmid Midiprep Kit

Kit Catalogue Number(s) 7326120, 7326120EDU

Revision date 17-Jun-2022

Kit Contents

Catalogue Number(s)	Product Name
10028137, 9702823, 9703069	Wash Buffer
10028138, 9702798	Quantum Prep Matrix
10028135, 9703066, 9702336	Lysis Solution
10028136, 9702337, 9703068	Neutralization Solution
10028134, 9703067, 9702335	Cell Resuspension Solution

KITZ / BE Page 1/44



SAFETY DATA SHEET

Revision date 06-Apr-2021 Revision Number 1

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

Product identifier

Product Name Wash Buffer

Catalogue Number(s) 10028137, 9702823, 9703069

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Uses advised against No information available

Details of the supplier of the safety data sheet

<u>Corporate Headquarters</u>
Bio-Rad Laboratories Inc.

Manufacturer

Bio-Rad Laboratories, Life Science Group

Bio-Rad Laboratories Pty Ltd

1000 Alfred Nobel Drive2000 Alfred Nobel Drive189 Bush RoadHercules, CA 94547Hercules, California 94547Albany AucklandUSAUSANew Zealand

Technical Service +64 9 415 2280 or 0508 805 500

sales.nz@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC New Zealand: 64-98010034

SECTION 2: Hazards identification

GHS Classification

Not classified

Label elements

Hazard statements

Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Sodium chloride	7647-14-5	2.5 - 5
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	0.3 - 0.999
Ethylenediaminetetraacetic acid	60-00-4	0.1 - 0.299

Non-hazardous ingredients	Dropriotory	Polonoo
Non-hazardous ingredients	Proprietary	Dalatice

SECTION 4: First aid measures

Description of first aid measures

General advice No hazards which require special first aid measures.

Inhalation Remove to fresh air.

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

Consult a doctor.

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 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 materialsNone 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).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

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

Wash Buffer

None known

None known

None known

None known

None known

None known

Physical state Liquid

Appearance aqueous solution Colour colourless Odour Odourless.

Odour threshold No information available

Property Values Remarks • Method

7-8 pН

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

limits

Lower flammability or explosive No data available

limits

No data available None known Vapour pressure Vapour density No data available None known Relative density No data available None known

Water solubility Miscible in water Solubility(ies) No data available **Partition coefficient** No data available No data available

Autoignition temperature Decomposition temperature

Kinematic viscosity No data available Dynamic viscosity No data available **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.

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.

Acute toxicity

Numerical measures of toxicity

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

ATEmix (oral) 67,575.1774 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
Sodium chloride	= 3 g/kg (Rat)	> 10000 mg/kg (Rabbit)	> 42 mg/L (Rat)1 h
Ethylenediaminetetraacetic acid	> 2000 mg/kg (Rat)	-	-

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

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

Serious eye damage/eye irritation 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 exposureBased onRespiratory irritationBased onNarcotic effectsBased on

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

STOT - repeated exposureBased on available data, the classification criteria are not met.

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

SECTION 12: Ecological information

Ecotoxicity

Ecotoxicity

Aquatic 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	Crustacea
Sodium chloride	-	LC50: 4747 - 7824mg/L (96h,	EC50: 340.7 - 469.2mg/L (48h,
		Oncorhynchus mykiss)	Daphnia magna)
		LC50: 5560 - 6080mg/L (96h,	EC50: =1000mg/L (48h, Daphnia
		Lepomis macrochirus)	magna)
		LC50: 6020 - 7070mg/L (96h,	
		Pimephales promelas)	
		LC50: 6420 - 6700mg/L (96h,	
		Pimephales promelas)	
		LC50: =12946mg/L (96h, Lepomis	
		macrochirus)	
		LC50: =7050mg/L (96h, Pimephales	
		promelas)	
Ethylenediaminetetraacetic acid	EC50: =1.01mg/L (72h,	LC50: 34 - 62mg/L (96h, Lepomis	EC50: =113mg/L (48h, Daphnia
_	Desmodesmus subspicatus)	macrochirus)	magna)
		LC50: 44.2 - 76.5mg/L (96h,	
		Pimephales promelas)	

Terrestrial ecotoxicty

Chemical name	Earthworm	Avian	Honeybees
Sodium chloride	Acute Toxicity: LC50 0.1 - 1	-	-
mg/cm2 (Eisenia foetida, 48 h			
	filter paper)		

Persistence and degradability

No information available.

Bioaccumulative potential

Bioaccumulation

No information available.

Chemical name	Partition coefficient
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	-3.6

Mobility in soil

Other adverse effects

No information available.

SECTION 13: Disposal considerations

Waste treatment methods

Contaminated packaging

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

SECTION 14: Transport information

<u>IATA</u> 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

New Zealand

Chemical name	New Zealand HSNO Chemical Classification
Sodium chloride - 7647-14-5	6.1E (All),6.1E (O),6.4A
Ethylenediaminetetraacetic acid - 60-00-4	6.1E (All),6.1E (O),6.3B,6.4A,9.1C (All),9.1C (F)

National regulations See Section 8 for any applicable tolerable exposure limits and environmental exposure

limits

Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at

Work Regulation 2017 for more information

EPA New Zealand HSNO approval code or group standard

Not applicable

International Inventories

Contact supplier for inventory compliance status

Legend:

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 06-Apr-2021

Revision Note Reformatted and updated existing information.

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value * Skin designation

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

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

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

Revision date 06-Jul-2021 Revision Number 1

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

Product identifier

Product Name Quantum Prep Matrix

Catalogue Number(s) 10028138, 9702798

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Uses advised against No information available

Details of the supplier of the safety data sheet

<u>Corporate Headquarters</u>
Bio-Rad Laboratories Inc.

Manufacturer

Bio-Rad Laboratories, Life Science Group

Bio-Rad Laboratories Pty Ltd

1000 Alfred Nobel Drive2000 Alfred Nobel Drive189 Bush RoadHercules, CA 94547Hercules, California 94547Albany AucklandUSANew Zealand

Technical Service +64 9 415 2280 or 0508 805 500

sales.nz@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC New Zealand: 64-98010034

SECTION 2: Hazards identification

GHS Classification

Acute toxicity - Oral	Category 4 (HSNO - 6.1D)
Acute toxicity - Dermal	Category 5 (HSNO - 6.1E)
Skin corrosion/irritation	Category 2 (HSNO - 6.3A)
Serious eye damage/eye irritation	Category 2A (HSNO - 6.4A)
Specific target organ toxicity — repeated exposure	Category 1 (HSNO - 6.9A)

Label elements





Signal word Danger

Hazard statements

H302 - Harmful if swallowed

H313 - May be harmful in contact with skin

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Do not breathe dust/fume/gas/mist/vapours/spray Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Eyes

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

Skin

IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off all contaminated clothing and wash it before reuse

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Guanidine, hydrochloride (1:1)	50-01-1	50 - 100
Kieselguhr, soda ash flux-calcined	68855-54-9	20 - 35
Water	7732-18-5	20 - 35
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.

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

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.

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 Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water.

Never give anything by mouth to an unconscious person. 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 doctorsTreat symptomatically.

SECTION 5: Firefighting measures

Suitable Extinguishing Media

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. Use personal protective equipment as required. Evacuate

personnel to safe areas. Avoid contact with skin, eyes or clothing.

Other information Refer to protective measures listed in Sections 7 and 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 Handle in accordance with good industrial hygiene and safety practice. Ensure adequate

ventilation. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using

this product. Take off contaminated clothing and wash it before reuse.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this

product. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions 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 Strong acids. Strong bases. Strong oxidising agents.

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

Hand protection Wear suitable gloves. Impervious gloves.

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

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 stateLiquidAppearanceSuspensionColourwhiteOdourOdourless.

Odour threshold No information available

Property Values Remarks • Method

pH 6-7

Melting point / freezing pointNo data availableNone knownBoiling point / boiling rangeNo data availableNone knownFlash pointNo data availableNone knownEvaporation rateNo data availableNone knownFlammability (solid, gas)No data availableNone known

None known

None known

Flammability Limit in Air

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Vapour pressureNo data availableNone knownVapour densityNo data availableNone knownRelative densityNo data availableNone known

Water solubility Immiscible in water

Solubility(ies)

Partition coefficient

Autoignition temperature

Decomposition temperature

Kinematic viscosity

No data available

No data available

None known

No data available

None known

None known

No data available

None known

None known

Dynamic viscosity No data available 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.

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.

Eye contact Specific test data for the substance or mixture is not available. Irritating to eyes. (based on

components). Causes serious eye irritation.

Skin contact Specific test data for the substance or mixture is not available. Causes skin irritation. (based

on components).

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

gastrointestinal irritation, nausea, vomiting and diarrhoea. Harmful if swallowed. (based on

components).

Symptoms Redness. May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity

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

 ATEmix (oral)
 645.4704 mg/kg

 ATEmix (dermal)
 2,720.50 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Guanidine, hydrochloride (1:1)	= 475 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3.181 mg/L (Rat) 4 h
			= 7.655 mg/L (Rat) 4 h
Kieselguhr, soda ash	-	-	> 2.6 mg/L (Rat)4 h
flux-calcined			-
Water	> 90 mL/kg (Rat)	-	-

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. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

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

Carcinogenicity

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

Chemical name	New Zealand	IARC
Kieselguhr, soda ash flux-calcined - 68855-54-9	-	Group 3

Legend

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicityBased on available data, the classification criteria are not met.

STOT - single exposure
Respiratory irritation
Narcotic effectsBased on available data, the classification criteria are not met.Based on available data, the classification criteria are not met.Based on available data, the classification criteria are not met.

STOT - repeated exposureCauses damage to organs through prolonged or repeated exposure.

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

SECTION 12: Ecological information

Ecotoxicity

Ecotoxicity

Aquatic ecotoxicity

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

environment.

Terrestrial ecotoxicty There is no data for this product.

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
Guanidine, hydrochloride (1:1)	<-1.7

Mobility in soil

Other adverse effects

No information available.

SECTION 13: Disposal considerations

Waste treatment methods

Contaminated packaging

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

SECTION 14: Transport information

IMDG Not regulated

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

New Zealand

Chemical name	New Zealand HSNO Chemical Classification
Guanidine, hydrochloride (1:1) - 50-01-1	6.1C (D),6.1D (All),6.1D (O),8.2C,8.3A,9.3C

National regulations

See Section 8 for any applicable tolerable exposure limits and environmental exposure

limits

Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

EPA New Zealand HSNO approval code or group standard

Not applicable

International Inventories

Contact supplier for inventory compliance status

Legend:

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 06-Jul-2021

Reformatted and updated existing information. **Revision Note**

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA (time-weighted average) STEL (Short Term Exposure Limit) TWA STEL

Ceiling Maximum limit value Skin designation

С 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

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

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End of Safety Data Sheet



SAFETY DATA SHEET

Legal Entity / Contact Address

189 Bush Road

Albany Auckland New Zealand

Revision date 06-Apr-2021 Revision Number 1

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

Product identifier

Product Name Lysis Solution

10028135, 9703066, 9702336 Catalogue Number(s)

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

No information available Uses advised against

Details of the supplier of the safety data sheet

Corporate Headquarters Manufacturer Bio-Rad Laboratories Inc. Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories Pty Ltd

1000 Alfred Nobel Drive 2000 Alfred Nobel Drive Hercules, CA 94547 Hercules, California 94547 USA

USA

Technical Service +64 9 415 2280 or 0508 805 500

sales.nz@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC New Zealand: 64-98010034

SECTION 2: Hazards identification

GHS Classification

Skin corrosion/irritation	Category 2 (HSNO - 6.3A)
Serious eye damage/eye irritation	Category 2 (HSNO - 6.4A)

Label elements



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

Eyes

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

Skin

IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off all contaminated clothing and wash it before reuse

Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
Sodium lauryl sulfate	151-21-3	1 - 2.5
Sodium hydroxide	1310-73-2	0.3 - 0.999
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.

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

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.

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

None known.

chemical

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 Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. 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 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. Take off

contaminated clothing and wash it before reuse.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this

product. Avoid contact with skin, eyes or clothing.

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

Lysis Solution Revision date 06-Apr-2021

Exposure Limits

Chemical name	New Zealand	ACGIH TLV	United Kingdom	Australia
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	STEL: 2 mg/m ³	2 mg/m³ Peak

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.

Hand protection Wear suitable gloves. Impervious gloves.

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

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

Remarks • Method Property Values

12.5-13.5 Melting point / freezing point 0°C 100 °C

Boiling point / boiling range Flash point No data available None known **Evaporation rate** No data available None known Flammability (solid, gas) No data available Flammability Limit in Air

None known None known

No data available Upper flammability or explosive

limits

Lower flammability or explosive No data available

limits

No data available None known Vapour pressure 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 No data available **Partition coefficient** None known

248 °C **Autoignition temperature**

Decomposition temperature None known No data available None known Kinematic viscosity

No data available None known Dynamic viscosity

Explosive propertiesOxidising properties
Not applicable.
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 avoidNone 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.

Eye contact Specific test data for the substance or mixture is not available. Irritating to eyes. (based on

components). Causes serious eye irritation.

Skin contact Specific test data for the substance or mixture is not available. Causes skin irritation. (based

on components).

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

gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms Redness. May cause redness and tearing of the eyes.

Acute toxicity

Revision date 06-Apr-2021

Lysis Solution

Numerical measures of toxicity

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

ATEmix (dermal) 20,000.00 mg/kg ATEmix (inhalation-dust/mist) 97.60 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
Sodium lauryl sulfate	= 1288 mg/kg (Rat)	= 200 mg/kg (Rabbit)	> 3900 mg/m³ (Rat) 1 h
Sodium hydroxide	= 325 mg/kg (Rat)	= 1350 mg/kg (Rabbit)	-
·			

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

Skin corrosion/irritationClassification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

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 Respiratory irritation Narcotic effects Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.

STOT - repeated exposureBased on available data, the classification criteria are not met.

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

SECTION 12: Ecological information

Ecotoxicity

Ecotoxicity

Aquatic 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	Crustacea
Sodium lauryl sulfate	EC50: 3.59 - 15.6mg/L (96h,	LC50: 10.2 - 22.5mg/L (96h,	EC50: =1.8mg/L (48h, Daphnia
,	Pseudokirchneriella subcapitata)	Pimephales promelas)	magna)
	EC50: 30 - 100mg/L (96h,	LC50: 10.8 - 16.6mg/L (96h,	
	Desmodesmus subspicatus)	Poecilia reticulata)	
	EC50: =117mg/L (96h,	LC50: 13.5 - 18.3mg/L (96h,	
	Pseudokirchneriella subcapitata)	Poecilia reticulata)	
	EC50: =53mg/L (72h,	LC50: 15 - 18.9mg/L (96h,	
	Desmodesmus subspicatus)	Pimephales promelas)	
		LC50: 22.1 - 22.8mg/L (96h,	
		Pimephales promelas)	
		LC50: 4.06 - 5.75mg/L (96h,	
		Lepomis macrochirus)	
		LC50: 4.2 - 4.8mg/L (96h, Lepomis	
		macrochirus)	
		LC50: 4.3 - 8.5mg/L (96h,	

	Oncorhynchus mykiss)
	LC50: 5.8 - 7.5mg/L (96h,
	Pimephales promelas)
	LC50: 6.2 - 9.6mg/L (96h,
	Pimephales promelas)
	LC50: 8 - 12.5mg/L (96h,
	Pimephales promelas)
	LC50: 9.9 - 20.1mg/L (96h,
	Brachydanio rerio)
	LC50: =1.31mg/L (96h, Cyprinus
	carpio)
	LC50: =4.2mg/L (96h,
	Oncorhynchus mykiss)
	LC50: =4.5mg/L (96h, Lepomis
	macrochirus)
	LC50: =4.62mg/L (96h,
	Oncorhynchus mykiss)
	LC50: =7.97mg/L (96h, Brachydanio
	rerio)
Sodium hydroxide	- LC50: =45.4mg/L (96h, -
<u> </u>	Oncorhynchus mykiss)

Terrestrial ecotoxicty There is no data for this product.

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
Sodium lauryl sulfate	1.6

Mobility in soil

Other adverse effects

No information available.

SECTION 13: Disposal considerations

Waste treatment methods

Contaminated packaging

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

SECTION 14: Transport information

IATA Not regulated

IMDG Not regulated

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

No information available

Lysis Solution Revision date 06-Apr-2021

SECTION 15: Regulatory information

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

National regulations

New Zealand

Chemical name	New Zealand HSNO Chemical Classification
Sodium lauryl sulfate - 151-21-3	6.1C (D),6.1C (All),6.1D (O),6.3B,6.4A,9.1D (All),9.1D (F),9.1D
	(C),9.1D (A),9.2D,9.3C
	6.1D (All),6.1D (D),6.3B,6.4A,9.1D (All),9.1D (F),9.1D (C),9.1D
	(A),9.2D,9.3C
	6.1E (AII),6.1E (D)
Sodium hydroxide - 1310-73-2	6.1D (All),6.1D (O),6.1D (D),8.1A,8.2B,8.3A,9.1D (All),9.1D
	(F),9.1D (C),9.3C
	6.1D (All),6.1D (O),6.1E (D),8.1A,8.2B,8.3A,9.1D (All),9.1D
	(F),9.1D (C)
	6.1E (AII),6.1E (O),6.3A,6.4A
	6.1E (All),6.1E (O),8.1A,8.2C,8.3A

National regulations See Section 8 for any applicable tolerable exposure limits and environmental exposure

limits

Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check

the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at

Work Regulation 2017 for more information

EPA New Zealand HSNO approval code or group standard

Not applicable

International Inventories

Contact supplier for inventory compliance status

Legend:

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 06-Apr-2021

Revision Note Reformatted and updated existing information.

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

STEL (Short Term Exposure Limit) TWA (time-weighted average) STEL TWA

Skin designation Ceiling Maximum limit value

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

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

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

Revision date 06-Apr-2021 Revision Number 1

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

Product identifier

Product Name Neutralization Solution

Catalogue Number(s) 10028136, 9702337, 9703068

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Uses advised against No information available

Details of the supplier of the safety data sheet

<u>Corporate Headquarters</u>
Bio-Rad Laboratories Inc.

Manufacturer

Bio-Rad Laboratories, Life Science Group

Bio-Rad Laboratories Pty Ltd

1000 Alfred Nobel Drive2000 Alfred Nobel Drive189 Bush RoadHercules, CA 94547Hercules, California 94547Albany AucklandUSAUSANew Zealand

Technical Service +64 9 415 2280 or 0508 805 500

sales.nz@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC New Zealand: 64-98010034

SECTION 2: Hazards identification

GHS Classification

Acute toxicity - Oral	Category 4 (HSNO - 6.1D)
Acute toxicity - Dermal	Category 5 (HSNO - 6.1E)
Skin corrosion/irritation	Category 2 (HSNO - 6.3A)
Serious eye damage/eye irritation	Category 2A (HSNO - 6.4A)

Label elements



Signal word Warning

Hazard statements

H302 - Harmful if swallowed

H313 - May be harmful in contact with skin

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

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

Eyes

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

Skin

IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off all contaminated clothing and wash it before reuse

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Water	7732-18-5	35 - 50
Guanidine, hydrochloride (1:1)	50-01-1	35 - 50
Potassium acetate	127-08-2	5 - 10

Chemical name	CAS No	Weight-%
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.

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.

Neutralization Solution Revision date 06-Apr-2021

Indication of any immediate medical attention and special treatment needed

Note to doctorsTreat symptomatically.

SECTION 5: Firefighting measures

Suitable Extinguishing Media

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.

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.

Neutralization Solution Revision date 06-Apr-2021

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep out of the reach of children. 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 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 If splashes are likely to occur, wear safety glasses with side-shields.

Hand protection Impervious gloves. Wear suitable gloves.

Skin and body protection Long sleeved clothing. 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.

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

ColourwhiteOdourOdourless.

Odour threshold No information available

Property Values Remarks • Method

pH 4-5

No data available Melting point / freezing point None known Boiling point / boiling range No data available None known Flash point No data available None known No data available **Evaporation rate** None known Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Vapour pressureNo data availableNone knownVapour densityNo data availableNone knownRelative densityNo data availableNone known

Water solubility
Solubility(ies)
Miscible in water
No data available

Solubility(ies)No data availableNone knownPartition coefficientNo data availableNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNone known

 Kinematic viscosity
 No data available
 None known

 Dynamic viscosity
 No data available
 None known

 Explosive properties
 Not applicable

Explosive propertiesNot 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.

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.

Eye contact Irritating to eyes. Specific test data for the substance or mixture is not available. Causes

serious eye irritation. (based on components).

Skin contact Causes skin irritation. (based on components). Specific test data for the substance or

mixture is not available.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Specific test

data for the substance or mixture is not available. Harmful if swallowed. (based on

components).

Symptoms Redness. May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity

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

ATEmix (oral) 1,097.20 mg/kg **ATEmix (dermal)** 4,763.30 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg(Rat)	-	-
Guanidine, hydrochloride (1:1)	= 475 mg/kg (Rat)	> 2000 mg/kg(Rabbit)	= 3.181 mg/L (Rat) 4 h = 7.655 mg/L (Rat) 4 h
Potassium acetate	= 3250 mg/kg (Rat)	> 20000 mg/kg (Rabbit)	-

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

Skin corrosion/irritationClassification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

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

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

Reproductive toxicityBased on available data, the classification criteria are not met.

STOT - single exposure Respiratory irritation Narcotic effects Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

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

SECTION 12: Ecological information

Ecotoxicity

Ecotoxicity

Aquatic ecotoxicity

Unknown aguatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aguatic

environment.

Chemical name	Algae/aguatic plants	Fish	Crustacea
Onomical name	1 19-10, 11-10-11-1		

Potassium acetate	-	LC50: =6800mg/L (96h,	-
		Oncorhynchus mykiss)	

Terrestrial ecotoxicty There is no data for this product.

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
Guanidine, hydrochloride (1:1)	<-1.7

Mobility in soil

Other adverse effects

No information available.

SECTION 13: Disposal considerations

Waste treatment methods

Contaminated packaging

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

SECTION 14: Transport information

<u>IATA</u> Not regulated

<u>IMDG</u> 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

New Zealand

Chemical name	New Zealand HSNO Chemical Classification
Guanidine, hydrochloride (1:1) - 50-01-1	6.1C (D),6.1D (All),6.1D (O),8.2C,8.3A,9.3C
Potassium acetate - 127-08-2	6.1E (All),6.1E (O)

National regulations

Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

EPA New Zealand HSNO approval code or group standard

Not applicable

International Inventories

Contact supplier for inventory compliance status

Legend:

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 06-Apr-2021

Revision Note Reformatted and updated existing information.

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA (time-weighted average) STEL (Short Term Exposure Limit) TWA STEL

Ceiling Maximum limit value Skin designation

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

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

Neutralization Solution Revision date 06-Apr-2021

Organization 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

Revision date 06-Apr-2021 Revision Number 1

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

Product identifier

Product Name Cell Resuspension Solution

Catalogue Number(s) 10028134, 9703067, 9702335

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Uses advised against No information available

Details of the supplier of the safety data sheet

<u>Corporate Headquarters</u>
Bio-Rad Laboratories Inc.

Manufacturer

Bio-Rad Laboratories, Life Science Group

Bio-Rad Laboratories Pty Ltd

1000 Alfred Nobel Drive 2000 Alfred Nobel Drive 189 Bush Road
Hercules, CA 94547 Hercules, California 94547 Albany Auckland
USA New Zealand

Technical Service +64 9 415 2280 or 0508 805 500

sales.nz@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC New Zealand: 64-98010034

SECTION 2: Hazards identification

GHS Classification

Not classified

Label elements

Hazard statements

Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Water	7732-18-5	50 - 100
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	77-86-1	0.3 - 0.999
Tetrasodium EDTA	64-02-8	0.3 - 0.999

ZGHS / BE Page 37 / 44

Revision date 06-Apr-2021

Chemical name	CAS No	Weight-%
Nuclease, ribo-	9001-99-4	< 0.001
Non-hazardous ingredients	Proprietary	Balance

SECTION 4: First aid measures

Description of first aid measures

General advice No hazards which require special first aid measures.

Inhalation Remove to fresh air.

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Eve contact

Consult a doctor.

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 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

See section 8 for more information. Personal precautions

Use personal protection recommended in Section 8. For emergency responders

Environmental precautions

See Section 12 for additional Ecological Information. **Environmental precautions**

Revision date 06-Apr-2021

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).

Hand protection Wear suitable gloves.

Skin and body protectionWear suitable protective clothing.

exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

None known

None known

Information on basic physical and chemical properties

Physical state Liquid

Appearance aqueous solution
Colour colourless
Odour Odourless.

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

pH 7.5-8.5 Melting point / freezing point 0 °C Boiling point / boiling range 100 °C

Flash point No data available None known Evaporation rate No data available None known Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Vapour pressureNo data availableNone knownVapour densityNo data availableNone knownRelative densityNo data availableNone known

Water solubility
Solubility(ies)
Partition coefficient
No data available
No data available
No data available

Partition coefficientNo data availableNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNo data availableNone knownKinematic viscosityNo data availableNone known

Dynamic viscosity

Explosive properties

Oxidising properties

No data available
Not applicable.

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 avoidNone known based on information supplied.

Incompatible materials

Revision date 06-Apr-2021

Incompatible materialsNone 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.

Acute toxicity

Numerical measures of toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
1,3-Propanediol,	= 5900 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
2-amino-2-(hydroxymethyl)-			
Tetrasodium EDTA	= 1658 mg/kg (Rat)	-	-

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

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

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

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

STOT - single exposureRespiratory irritation
Narcotic effects

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

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

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

SECTION 12: Ecological information

Ecotoxicity

STOT - repeated exposure

Ecotoxicity

Aquatic 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	Crustacea
Tetrasodium EDTA	-	LC50: =41mg/L (96h, Lepomis	-
		macrochirus)	
		LC50: =59.8mg/L (96h, Pimephales	
		promelas)	

Terrestrial ecotoxicty There is no data for this product.

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation No information available.

Mobility in soil

Other adverse effects

No information available.

SECTION 13: Disposal considerations

Waste treatment methods

Contaminated packaging

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

SECTION 14: Transport information

IMDG Not regulated

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

New Zealand

Chemical name	New Zealand HSNO Chemical Classification
1,3-Propanediol, 2-amino-2-(hydroxymethyl) 77-86-1	6.1E (I),6.3A,6.4A
Tetrasodium EDTA - 64-02-8	6.1D (All),6.1D (O),6.4A,9.3C
	6.1E (All),6.1E (O),6.4A

National regulations

See Section 8 for any applicable tolerable exposure limits and environmental exposure

Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

EPA New Zealand HSNO approval code or group standard

Not applicable

International Inventories

Contact supplier for inventory compliance status

Legend:

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

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

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