## **KIT SAFETY DATA SHEET**



Kit Product Name Kit Catalogue Number(s) iScript Select cDNA Synthesis Kit 1708896, 1708897, 1708897BUN

**Revision date** 

31-Aug-2022

## Kit Contents

Catalogue Number(s)	Product Name	
10000995	5X iScript select reaction mix	
8006877	Nuclease-Free Water	
8006875, 8006878, 1725980, 10033611, 10006524	iScript Reverse Transcriptase	
10000997	Oligo(dT) Primer Mix	
10000987	Random Primer Mix	
	GSP Enhancer Solution	

KITC / BE

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## **SAFETY DATA SHEET**

Legal Entity / Contact Address

Pathumwan, Bangkok 10330

Thailand

1st and 2nd Floor, Lumpini 1 Building 239/2, Rajdamri Road, Lumpini,

This safety data sheet was created pursuant to the requirements of: GB/T 16483-2008, GB/T 17519-2013

Product Name 5X iScript select reaction mix Revision date 22-Jul-2021 **Revision Number** 1

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

Product identifier

**Product Name** 5X iScript select reaction mix

Catalogue Number(s) 10000995

Other means of identification

Pure substance/mixture

Mixture

USA

Details of the supplier of the safety data sheet

**Corporate Headquarters** Bio-Rad Laboratories Inc.

1000 Alfred Nobel Drive Hercules, CA 94547 USA

**Technical Service** 

+66 2 652 8313 ctsthailand@bio-rad.com

Manufacturer

2000 Alfred Nobel Drive

Hercules, California 94547

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

**Recommended use** 

Laboratory chemicals

## SECTION 2: Hazards identification

Emergency Overview No significant adverse health effects		
Appearance aqueous solution	Physical state Liquid	Odour Odourless
Classification of the substance or mixtu	<u>re</u>	
Not classified		
Label elements		

Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories Ltd.

Hazard statements Not classified

Physical and chemical hazards Not applicable.

#### Health hazards

Immediate Health Effects: Not applicable. Chronic effects: Not applicable.

## **Environmental hazards**

Not applicable

## Other hazards which do not result in classification

Not applicable

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

#### **Substance**

Not applicable.

#### Mixture

Not classified.

Chemical name	Weight-%	CAS No
Potassium chloride	1 - 2.5	7447-40-7

## **SECTION 4: First aid measures**

#### **Description of necessary 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	No information available.
For emergency responders	No information available.
Note to doctors	Treat symptomatically.

## SECTION 5: Firefighting measures

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	No information available.
Special protective actions for	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

## fire-fighters

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	See Section 12 for additional Ecological Information.	
Methods and material for containment and cleaning up	Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.	
Precautions to prevent secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.	

SECTION 7: Handling and storage		
Precautions for safe handling	Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.	
Conditions for safe storage. including any incompatibilities	Store according to product and label instructions.	
Incompatible materials	None known based on information supplied.	

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

#### Occupational exposure limits

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

Note

See section 16 for terms and abbreviations

#### **Biological occupational exposure limits**

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

Monitoring	and observation	processes
No applicat	le information was	found

No applicable information was found.

tations
systems.

## Individual protection measures, such as personal protective equipment

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

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

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

## Information on basic physical and chemical properties

Appearance	aqueous solution	
Colour	white	
Physical state	Liquid	
Odour	Odourless	
Odour threshold	No information available	
Property	Values	Remarks • Method
pH	7	
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		
Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Additional information		
Explosive properties	Not applicable	
Oxidising properties	Not applicable	

## SECTION 10: Stability and reactivity

<u>Stability</u>	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Sensitivity to mechanical impact Sensitivity to static discharge	None. None.
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.

## **SECTION 11: Toxicological information**

Acute toxicity

Numerical measures of toxicity

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

ATEmix (oral)

54,205.90 mg/kg

## **Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium chloride	= 2600 mg/kg (Rat)	-	-
Skin corrosion/irritation	Based on available data, t	he classification criteria are not m	net.
Serious eye damage/eye irritati	on Based on available data, t	he classification criteria are not m	net.
Respiratory or skin sensitisatio	n Based on available data, t	he classification criteria are not m	net.
Germ cell mutagenicity	Based on available data, t	he classification criteria are not m	net.
Carcinogenicity	Based on available data, t	he classification criteria are not m	net.
Reproductive toxicity	Based on available data, t	he classification criteria are not m	net.
Specific target organ toxicity – single exposure	- Based on available data, t	he classification criteria are not m	net.
Specific target organ toxicity – repeated exposure	- Based on available data, t	he classification criteria are not m	net.
Aspiration hazard	Based on available data, t	he classification criteria are not m	net.

## **SECTION 12: Ecological information**

#### 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
Potassium chloride	EC50: =2500mg/L (72h,	LC50: 750 - 1020mg/L (96h,	EC50: =825mg/L (48h, Daphnia
	Desmodesmus subspicatus)	Pimephales promelas)	magna)
		LC50: =1060mg/L (96h, Lepomis	EC50: =83mg/L (48h, Daphnia
		macrochirus)	magna)
Persistence and degradability	No information available.		
Bioaccumulative potential	No information available.		
Mobility in soil	No information available.		

## SECTION 13: Disposal considerations

Waste chemicals	Dispose of in accordance with local regulations. Dispose of waste in accordance with
	environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## **SECTION 14: Transport information**

 IMDG
 Not regulated

 Transport in bulk according to
 No information available

## Annex II of MARPOL and the IBC Code

IATA Not regulated

<u>China</u>

Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

Not regulated

## **SECTION 15: Regulatory information**

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

#### National regulations

#### Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Catalogue of occupational diseases:	Not applicable. Not applicable.
Regulations on the Control over Safety of Hazardous Chemicals Inventory of hazardous chemicals	Not applicable.
GB 18218-2009 Identification of major hazard installations for dangerous chemicals	Not applicable
List of hazardous chemicals under priority management	Not applicable
Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used Inventory of highly toxic goods	Not applicable
Regulations for Environmental Management on the First Import of Chemicals and the Chemicals	Import and Export of Toxic
List of toxic chemicals severely restricted for import and export in China	Not applicable
Measures for the Environmental Management of New Chemical Substances	

**IECSC - China Inventory of Existing Chemical Substances** Contact supplier for inventory compliance status.

International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

SECTION 16: Other information				
Prepared By	Bio-Rad Labora	atories, Environmental Hea	alth and Safety	
Revision date	22-Jul-2021			
Revision Note	Reformatted ar	nd updated existing informa	ation.	
Abbreviations an Legend Section 8 TWA Ceiling C	d acronyms <u>EXPOSURE CONTROLS/PERSO</u> TWA (time-weighted average) Maximum limit value Carcinogen	NAL PROTECTION STEL *	STEL (Short Term Exposure Limit) 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

#### **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

This safety data sheet was created pursuant to the requirements of: GB/T 16483-2008, GB/T 17519-2013

Product Name Nuclease-Free Water Revision date 24-Aug-2021 Revision Number 1.1

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

Product identifier		
Product Name	Nuclease-Free Water	
Catalogue Number(s)	8006877	
English chemical name	Water	
Other means of identification		
CAS No	7732-18-5	
Pure substance/mixture	Substance	
Details of the supplier of the safety	data sheet_	
<u>Corporate Headquarters</u> Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	<u>Manufacturer</u> Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories Ltd. 1st and 2nd Floor, Lumpini 1 Building 239/2, Rajdamri Road, Lumpini, Pathumwan, Bangkok 10330 Thailand
Technical Service	+66 2 652 8313 ctsthailand@bio-rad.com	
Emergency telephone number		
24 Hour Emergency Phone Number	CHEMTREC Hong Kong: 800-968-793	
Recommended use of the chemical	and restrictions on use	
Recommended use	Laboratory chemicals	
SECTION 2: Hazards ident	ification	
	Emergency Overview No significant adverse health effects	
Appearance clear liquid	Physical state Liquid	Odour Odourless

Classification of the substance or mixture

Not classified

Label elements

Hazard statements Not classified

#### Physical and chemical hazards

Not applicable.

#### Health hazards

Immediate Health Effects: Not applicable. Chronic effects: Not applicable.

#### **Environmental hazards**

Not applicable

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

## SECTION 3: Composition/information on ingredients

#### Substance

CAS No

7732-18-5

Not classified.

Chemical name	Weight-%	CAS No
Water	50 - 100	7732-18-5

SECTION 4: First aid measures		
Description of necessary 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	No information available.
For emergency responders	No information available.

Note to doctors Treat symptomatically.

## SECTION 5: Firefighting measures

## **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	No information available.

Special protective actions 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	See Section 12 for additional Ecological Information.
Methods and material for containment and cleaning up	Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.
Precautions to prevent secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

SECTION 7: Handling and storage			
Precautions for safe handling	Handle in accordance with good industrial hygiene and safety practice. See Section 8 information on appropriate personal protective equipment.	for	
Conditions for safe storage, including any incompatibilities	Store according to product and label instructions.		
Incompatible materials	None known based on information supplied.		

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

## **Occupational exposure limits**

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

Note

See section 16 for terms and abbreviations

#### **Biological occupational exposure limits**

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

#### Monitoring and observation processes No applicable information was found.

Engineering controls Showers Eyewash stations Ventilation systems.

#### Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.
Hand protection	Wear suitable gloves.

Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.		
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.		
SECTION 9: Physical and o	chemical properties		
Information on basic physical and c	hemical properties		
Appearance	clear liquid		
Colour	colourless		
Physical state	Liquid		
Odour	Odourless		
Odour threshold	No information available		
Property pH	Values	Remarks • Method	
Melting point / freezing point	0°C		
Boiling point / boiling range	100 °C		
Flash point	No data available	None known	
Evaporation rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air		None known	
Upper flammability or explosive limits	No data available		
Lower flammability or explosive limits	No data available		
Vapour pressure	No data available	None known	
Vapour density	No data available	None known	
Relative density	No data available	None known	
Water solubility	Miscible in water		
Solubility(ies)	No data available	None known	
Partition coefficient	No data available	None known	
Autoignition temperature	No data available	None known	

None known

None known

None known

Additional informationExplosive propertiesNot applicableOxidising propertiesNot applicable

Decomposition temperature

Kinematic viscosity Dynamic viscosity

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

<u>Stability</u>	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Sensitivity to mechanical impact Sensitivity to static discharge	t None. None.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

No data available

No data available

No data available

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

#### Acute toxicity

Numerical measures of toxicity

## **Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50	
Water	> 90 mL/kg (Rat)	-	-	
Skin corrosion/irritation	Based on available data, t	he classification criteria are not n	net.	
Serious eye damage/eye irritat	on Based on available data, t	he classification criteria are not n	net.	
Respiratory or skin sensitisation	n Based on available data, t	Based on available data, the classification criteria are not met.		
Germ cell mutagenicity	Based on available data, t	Based on available data, the classification criteria are not met.		
Carcinogenicity	Based on available data, t	Based on available data, the classification criteria are not met.		
Reproductive toxicity	Based on available data, t	he classification criteria are not m	net.	
Specific target organ toxicity – single exposure	<ul> <li>Based on available data, t</li> </ul>	he classification criteria are not n	net.	
Specific target organ toxicity – repeated exposure	<ul> <li>Based on available data, t</li> </ul>	he classification criteria are not n	net.	
Aspiration hazard	Based on available data, t	he classification criteria are not n	net.	

SECTION 12: Ecological information		
Ecotoxicity	The environmental impact of this product has not been fully investigated.	
Persistence and degradability Bioaccumulative potential	No information available. No information available.	
Mobility in soil	No information available.	
SECTION 13: Disposal considerations		
Waste chemicals	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.	

Do not reuse empty containers.

## **SECTION 14: Transport information**

Contaminated packaging

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

China Not regulated

#### Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

## **SECTION 15: Regulatory information**

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

#### National regulations

#### Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Catalogue of occupational diseases:	Not applicable. Not applicable.	
Regulations on the Control over Safety of Hazardous Chemicals Inventory of hazardous chemicals	Not applicable.	
GB 18218-2009 Identification of major hazard installations for dangerous chemicals	Not applicable	
List of hazardous chemicals under priority management	Not applicable	
Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used Inventory of highly toxic goods	Not applicable	
Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals		
List of toxic chemicals severely restricted for import and export in China	Not applicable	
Measures for the Environmental Management of New Chemical Substances		

IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.

#### International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

SECTION	16: Other inform	nation		
Prepared By		Bio-Rad Laboratori	es, Environmental H	ealth and Safety
Revision date	•	24-Aug-2021		
Revision Note	9	Reformatted and up	pdated existing inforr	nation.
Abbreviations and acronymsLegendSection 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONTWATWA (time-weighted average)STELCeilingMaximum limit value*CCarcinogenSkin designation		· · · · · · · · · · · · · · · · · · ·		
Agency for To: U.S. Environm European Foo EPA (Environr Acute Exposu U.S. Environm	references and sources xic Substances and Dis- ental Protection Agence d Safety Authority (EFS nental Protection Agence re Guideline Level(s) (A ental Protection Agence ental Protection Agence ental Protection Agence	ease Registry (ATSD y ChemView Databas SA) cy) \EGL(s)) y Federal Insecticide,	DR) se , Fungicide, and Rod	enticide 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 Kiph 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

This safety data sheet was created pursuant to the requirements of: GB/T 16483-2008, GB/T 17519-2013

Product Name iScript Reverse Transcriptase Revision date 31-Aug-2022 Revision Number 1.1

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

Product identifier **Product Name** iScript Reverse Transcriptase 8006875, 8006878, 1725980, 10033611, 10006524 Catalogue Number(s) Other means of identification Mixture Pure substance/mixture Details of the supplier of the safety data sheet **Corporate Headquarters** Manufacturer Legal Entity / Contact Address Bio-Rad Laboratories Inc. Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories Ltd. 1000 Alfred Nobel Drive 2000 Alfred Nobel Drive 1st and 2nd Floor, Lumpini 1 Building 239/2, Rajdamri Road, Lumpini, Hercules, CA 94547 Hercules, California 94547 USA Pathumwan, Bangkok 10330 USA Thailand **Technical Service** +66 2 652 8313 ctsthailand@bio-rad.com Emergency telephone number 24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793 Recommended use of the chemical and restrictions on use **Recommended use** Laboratory chemicals SECTION 2: Hazards identification **Emergency Overview** No significant adverse health effects Odour Odourless Physical state Liquid Appearance aqueous solution Classification of the substance or mixture Hazardous to the Aquatic Environment - Acute Hazard Category 3

Label elements

Hazard statements Harmful to aquatic life

Precautionary statements Prevention Avoid release to the environment

#### Response

#### Disposal

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

#### Physical and chemical hazards

Not applicable.

#### Health hazards

Immediate Health Effects: Not applicable. Chronic effects: Not applicable.

#### **Environmental hazards**

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimise use of water to prevent environmental contamination

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

Not applicable

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

#### Substance

Not applicable.

### <u>Mixture</u>

Chemical name	Weight-%	CAS No
1,2,3-Propanetriol	50 - 100	56-81-5

## SECTION 4: First aid measures

## Description of necessary 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	No information available.
For emergency responders	No information available.
Note to doctors	Treat symptomatically.

## SECTION 5: Firefighting measures

#### 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	No information available.
Special protective actions for	Firefighters should wear self-

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	See Section 12 for additional Ecological Information.	
Methods and material for containment and cleaning up	Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.	
Precautions to prevent secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.	

SECTION 7: Handling and storage		
Precautions for safe handling	Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.	
Conditions for safe storage, including any incompatibilities	Store according to product and label instructions.	
Incompatible materials	None known based on information supplied.	

## SECTION 8: Exposure controls/personal protection

#### Occupational exposure limits

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

Note

fire-fighters

See section 16 for terms and abbreviations

#### **Biological occupational exposure limits**

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

## Monitoring and observation processes

No applicable information was found.

Engineering controls	Showe
	Eyewa
	Ventil

Showers Eyewash stations Ventilation systems.

#### Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection	Wear suitable protective clothing.
Hand protection	Wear suitable gloves.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

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

## Information on basic physical and chemical properties

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

Property pH Moting point / frequing point	<u>Values</u> No data available	Remarks • Method None known None known
Melting point / freezing point Boiling point / boiling range	> 100 °C	
Flash point	160 °C	
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 pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Additional information		
Additional information	Not applicable	
Explosive properties	Not applicable	
Oxidising properties	Not applicable	

## SECTION 10: Stability and reactivity

<u>Stability</u>	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Sensitivity to mechanical impact Sensitivity to static discharge	None. None.
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.

## **SECTION 11: Toxicological information**

## Acute toxicity

Numerical measures of toxicity

Component Information			
Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1,2,3-Propanetriol	= 12600 mg/kg(Rat)	> 10 g/kg (Rabbit)	> 2.75 mg/L (Rat)4 h
Skin corrosion/irritation	Based on available data, t	he classification criteria are not m	net.
Serious eye damage/eye irritatio	n Based on available data, t	he classification criteria are not m	net.
Respiratory or skin sensitisation	n Based on available data, t	he classification criteria are not m	net.
Germ cell mutagenicity	Based on available data, t	he classification criteria are not m	net.
Carcinogenicity	Based on available data, t	he classification criteria are not m	net.
Reproductive toxicity	Based on available data, t	he classification criteria are not m	net.
Specific target organ toxicity — single exposure	Based on available data, t	he classification criteria are not m	net.
Specific target organ toxicity — repeated exposure	Based on available data, t	he classification criteria are not m	net.
Target organ effects	Kidney. Respiratory syster	n. Eyes. Skin.	
Aspiration hazard	Based on available data, t	he classification criteria are not m	net.

SECTION 12: Ecological information		
<u>Ecotoxicity</u>	Harmful to aquatic life.	
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
1,2,3-Propanetriol	-	LC50: 51 - 57mL/L (96h,	-
•		Oncorhynchus mykiss)	

**Persistence and degradability** No information available.

Bioaccumulative potential

There is no data for this product.

**Component Information** 

Chemical name	Partition coefficient
1,2,3-Propanetriol	-1.75

Mobility in soil

No information available.

## SECTION 13: Disposal considerations

Waste chemicals

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

#### Contaminated packaging

Do not reuse empty containers.

## **SECTION 14: Transport information**

 IMDG
 Not regulated

 Transport in bulk according to
 No information available

 Annex II of MARPOL and the IBC
 Code

IATA Not regulated

China Not regulated

### Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

## **SECTION 15: Regulatory information**

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

#### National regulations

#### Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Catalogue of occupational diseases:	Not applicable. Not applicable.		
Regulations on the Control over Safety of Hazardous Chemicals Inventory of hazardous chemicals	Not applicable.		
GB 18218-2009 Identification of major hazard installations for dangerous chemicals	Not applicable		
List of hazardous chemicals under priority management	Not applicable		
Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used Inventory of highly toxic goods	Not applicable		
Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic			
Chemicals List of toxic chemicals severely restricted for import and export in China	Not applicable		
Measures for the Environmental Management of New Chemical Substances IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.			
International Regulations			
The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable			
The Montreal Protocol on Substances that Depiete the Ozone Layer Not applicable			

The Rotterdam Convention Not applicable

SECTION 16: Other information		
Prepared By	Bio-Rad Laboratories, Environmental Health and Safety	
Revision date	31-Aug-2022	
Revision Note	Reformatted and updated existing information.	

#### Abbreviations and acronyms

#### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit) Ceiling Maximum limit value Skin designation Carcinogen С 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

Legal Entity / Contact Address

Pathumwan, Bangkok 10330

Thailand

1st and 2nd Floor, Lumpini 1 Building 239/2, Rajdamri Road, Lumpini,

This safety data sheet was created pursuant to the requirements of: GB/T 16483-2008, GB/T 17519-2013

Product Name Oligo(dT) Primer Mix Revision date 31-Aug-2022 Revision Number 1.1

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

Product identifier

Product Name Oligo(dT) Primer Mix

Catalogue Number(s) 10000997

Other means of identification

Pure substance/mixture

Mixture

USA

Details of the supplier of the safety data sheet

Corporate Headquarters Bio-Rad Laboratories Inc.

1000 Alfred Nobel Drive Hercules, CA 94547 USA

**Technical Service** 

+66 2 652 8313 ctsthailand@bio-rad.com

Manufacturer

2000 Alfred Nobel Drive

Hercules, California 94547

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

**Recommended use** 

Laboratory chemicals

## **SECTION 2: Hazards identification**

Emergency Overview No significant adverse health effects		
Appearance aqueous solution	Physical state Liquid	Odour Odourless
Classification of the substance or mixtu	re	
Not classified		
Label elements		

Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories Ltd.

Hazard statements Not classified

**Physical and chemical hazards** Not applicable.

#### **Health hazards**

Immediate Health Effects: Not applicable. Chronic effects: Not applicable.

### **Environmental hazards**

Not applicable

## Other hazards which do not result in classification

Not applicable

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

#### **Substance**

Not applicable.

<u>Mixture</u>

Not classified.

## SECTION 4: First aid measures

### **Description of necessary 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	No information available.
For emergency responders	No information available.
Note to doctors	Treat symptomatically.

## SECTION 5: Firefighting measures

## 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	No information available.
Special protective actions 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	See Section 12 for additional Ecological Information.	
Methods and material for containment and cleaning up	Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.	
Precautions to prevent secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.	

SECTION 7: Handling and storage		
Precautions for safe handling	Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.	
Conditions for safe storage, including any incompatibilities	Store according to product and label instructions.	
Incompatible materials	None known based on information supplied.	

## SECTION 8: Exposure controls/personal protection

#### **Occupational exposure limits**

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

Note

See section 16 for terms and abbreviations

#### **Biological occupational exposure limits**

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

## Monitoring and observation processes

No applicable information was found.

Engineering controls	Showers	
	Eyewash stations	
	Ventilation systems.	
Individual protection measures, such as personal protective equipment		
Eye/face protection	Wear safety glasses with side shields (or goggles).	

,	, ,	
Skin and body protection	Wear suitable protective clothing.	
Hand protection	Wear suitable gloves.	
Respiratory protection		under normal use conditions. If exposure limits are I, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good ind	ustrial hygiene and safety practice.

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

Information on basic physical and of Appearance Colour Physical state	<u>chemical properties</u> aqueous solution colourless Liquid	
Odour	Odourless	
Odour threshold	No information available	
Property_	Values_	Remarks • Method
pH	7	
Melting point / freezing point	0°C	
Boiling point / boiling range	100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Additional information		
Explosive properties	Not applicable	
Oxidising properties	Not applicable	
<b>.</b>		

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

<u>Stability</u>	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Sensitivity to mechanical impact Sensitivity to static discharge	t None. None.
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.

## SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Reproductive toxicity Specific target organ toxicity — single exposure	Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.
Specific target organ toxicity —	

## **SECTION 12: Ecological information**

## **Ecotoxicity**

Unknown aquatic toxicity	0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment
Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
<u>Mobility in soil</u>	No information available.

## SECTION 13: Disposal considerations

 Waste chemicals
 Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

 Contaminated packaging
 Do not reuse empty containers.

## **SECTION 14: Transport information**

IMDG Transport in bulk according to Annex II of MARPOL and the IB0 Code	Not regulated No information available C
IATA	Not regulated
<u>China</u>	Not regulated

#### Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

## **SECTION 15: Regulatory information**

Not applicable

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

## National regulations

#### Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Catalogue of occupational diseases:	Not applicable. Not applicable.
Regulations on the Control over Safety of Hazardous Chemicals Inventory of hazardous chemicals	Not applicable.
GB 18218-2009 Identification of major hazard installations for dangerous chemicals	Not applicable
List of hazardous chemicals under priority management	Not applicable
Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used Inventory of highly toxic goods	Not applicable
Regulations for Environmental Management on the First Import of Chemicals and the Chemicals	Import and Export of Toxic

List of toxic chemicals severely restricted for import and export in China

Measures for the Environmental Management of New Chemical Substances IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.

## International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

Prepared By       Bio-Rad Laboratories, Environmental Health and Safety         Revision date       31-Aug-2022         Revision Note       Reformatted and updated existing information.         Abbrevitations and acronyms       Reformatted and updated existing information.         Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION       TWA (time-weighted average)       STEL         TWA       TWA (time-weighted average)       STEL       STEL (Short Term Exposure Limit)         Ceiling       Maximum limit value       *       Skin designation         C       Carcinogen       *       Skin designation         Key literature references and sources for data used to compile the SDS       Skin designation       Skin designation         U.S. Environmental Protection Agency ChemView Database       Strine Substance and Disease Registry (ATSDR)       Skin designation         U.S. Environmental Protection Agency       Ader Sciel (AEGL(S))       Skin opency Food Safety Authority (EFSA)       Skin designation         D.S. Environmental Protection Agency High Production Volume Chemicals       Food Research Journal       Hazardous Substance Database       International Uniform Chemical Information Database (IUCLID)         Japan GHS Classification       Notistalia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)       NIOSH (National Industrial Chemical Safety and Health)         NIOSH (National In	<b>SECTION 16: Other inform</b>	ation		
Revision Note       Reformatted and updated existing information.         Abbreviations and acronyms       Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION         TWA       TWA (time-weighted average)       STEL         TWA       TWA (time-weighted average)       STEL         Ceiling       Maximum limit value       *         C       Carcinogen       Skin designation         Key literature references and sources for data used to compile the SDS       Skin designation         Agency for Toxic Substances and Disease Registry (ATSDR)       Stenvironmental Protection Agency ChemView Database         Luropean Food Safety Authority (EFSA)       Evaluation       Key (Levironmental 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 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)       Total Health	Prepared By	Bio-Rad Laboratories, E	nvironmental Health	and Safety
Abbreviations and acronyms         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       *       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)	Revision date	31-Aug-2022		
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       Skin designation         Agency for Toxic Substances and Disease Registry (ATSDR)       U.S. Environmental Protection Agency ChemView Database       Fee propention         U.S. Environmental Protection Agency ChemView Database       European Food Safety Authority (EFSA)       Fee propention         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 Inform Chemical Information Database (IUCLID)         Japan GHS Classification       Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)         NIOSH (National Institute for Occupational Safety and Health)       Scheme (NICNAS)	Revision Note	Reformatted and update	ed existing information	on.
	Legend Section 8: EXPOSURE CONTWATWA (time-weightCeilingMaximum limit valCCarcinogenKey literature references and sourceAgency for Toxic Substances and DisU.S. Environmental Protection AgenceEuropean Food Safety Authority (EFSEPA (Environmental Protection Agence)Acute Exposure Guideline Level(s) (AU.S. Environmental Protection Agence)V.S. Environmental Protection Agence)U.S. Environmental Protection Agence)U.S. Environmental Protection Agence)Food Research JournalHazardous Substance DatabaseInternational Uniform Chemical InformJapan GHS ClassificationAustralia National Industrial ChemicalNIOSH (National Institute for Occupation)	red average) lue ces for data used to com ease Registry (ATSDR) y ChemView Database SA) cy) LEGL(s)) y Federal Insecticide, Fun y High Production Volume nation Database (IUCLID) s Notification and Assess tional Safety and Health)	STEL * apile the SDS gicide, and Rodentic e Chemicals	Skin designation

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**

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End of Safety Data Sheet



## SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: GB/T 16483-2008, GB/T 17519-2013

Product Name Random Primer Mix Revision date 31-Aug-2022 Revision Number 1.1

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

Product identifier			
Product Name	Random Primer Mix		
Catalogue Number(s)	10000987		
Other means of identification			
Pure substance/mixture	Mixture		
Details of the supplier of the safety	data sheet		
Corporate Headquarters Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	<u>Manufacturer</u> Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories Ltd. 1st and 2nd Floor, Lumpini 1 Build 239/2, Rajdamri Road, Lumpini, Pathumwan, Bangkok 10330 Thailand	ling
Technical Service	+66 2 652 8313 ctsthailand@bio-rad.com		
Emergency telephone number			
24 Hour Emergency Phone Number	CHEMTREC Hong Kong: 800-968-793		
Recommended use of the chemical	and restrictions on use		
Recommended use	Laboratory chemicals		
SECTION 2: Hazards identi	fication		
	<b>Emergency Overview</b> No significant adverse health effects		
Appearance aqueous solution	Physical state Liquid	Odour	Odourless
	indum-		

Classification of the substance or mixture

Not classified

Label elements

Hazard statements Not classified

**Physical and chemical hazards** Not applicable.

#### **Health hazards**

Immediate Health Effects: Not applicable. Chronic effects: Not applicable.

## **Environmental hazards**

Not applicable

## Other hazards which do not result in classification

Not applicable

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

#### **Substance**

Not applicable.

#### <u>Mixture</u>

Not classified.

## SECTION 4: First aid measures

### **Description of necessary 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	No information available.
For emergency responders	No information available.
Note to doctors	Treat symptomatically.

## SECTION 5: Firefighting measures

## 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	No information available.
Special protective actions 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	See Section 12 for additional Ecological Information.
Methods and material for containment and cleaning up	Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.
Precautions to prevent secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

SECTION 7: Handling and storage	
Precautions for safe handling	Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.
Conditions for safe storage, including any incompatibilities	Store according to product and label instructions.
Incompatible materials	None known based on information supplied.

## SECTION 8: Exposure controls/personal protection

#### **Occupational exposure limits**

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

Note

See section 16 for terms and abbreviations

#### **Biological occupational exposure limits**

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

## Monitoring and observation processes

No applicable information was found.

Engineering controls	Showers
	Eyewash stations
	Ventilation systems.
Individual protection measure	s, such as personal protective equipment
Eye/face protection	Wear safety glasses with side shields (or goggles).

_,	
Skin and body protection	Wear suitable protective clothing.
Hand protection	Wear suitable gloves.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

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

Information on basic physical and of Appearance Colour Physical state Odour Odour threshold	chemical properties aqueous solution colourless Liquid Odourless No information available	
Property_	Values	Remarks • Method
рН	7	
Melting point / freezing point	0°C	
Boiling point / boiling range	100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Additional information Explosive properties Oxidising properties	Not applicable Not applicable	

## SECTION 10: Stability and reactivity

<u>Stability</u>	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
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.

## SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Reproductive toxicity Specific target organ toxicity — single exposure	Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.
Specific target organ toxicity —	

## **SECTION 12: Ecological information**

## **Ecotoxicity**

Unknown aquatic toxicity	0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment
Persistence and degradability Bioaccumulative potential	No information available. No information available.
Mobility in soil	No information available.

## SECTION 13: Disposal considerations

Waste chemicals	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

## **SECTION 14: Transport information**

IMDG Transport in bulk according to Annex II of MARPOL and the IBC Code	Not regulated No information available
IATA	Not regulated
<u>China</u>	Not regulated

## Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

## SECTION 15: Regulatory information

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

#### National regulations

#### Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Catalogue of occupational diseases:	Not applicable. Not applicable.	
Regulations on the Control over Safety of Hazardous Chemicals Inventory of hazardous chemicals	Not applicable.	
GB 18218-2009 Identification of major hazard installations for dangerous chemicals	Not applicable	
List of hazardous chemicals under priority management	Not applicable	
Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used Inventory of highly toxic goods Not applicable		
Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals		

List of toxic chemicals severely restricted for import and export in China

Not applicable

Measures for the Environmental Management of New Chemical Substances IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.

## International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

SECTION 16: Other information			
Prepared By	Bio-Rad Laboratories,	Environmental Health	n and Safety
Revision date	31-Aug-2022		
Revision Note	Reformatted and upda	ted existing information	on.
Revision Note       Reformatted and updated existing information.         Abbreviations and acronyms       Eggend 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       *       Skin designation         Key Iterature references and sources for data used to compile the SDS         Agency for Toxic Substances and Disease Registry (ATSDR)       Stenvironmental Protection Agency ChemView Database         European Food Safety Authority (EFSA)       EPA (Environmental Protection Agency ChemView Database         European Food Safety Authority (EFSA)       EPA (Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act         U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act       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)       Site Actin Agency International Institute for Occupati		Skin designation	

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

This safety data sheet was created pursuant to the requirements of: GB/T 16483-2008, GB/T 17519-2013

Product Name GSP Enhancer Solution Revision date 31-Aug-2022 Revision Number 1.1

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

Product identifier		
Product Name	GSP Enhancer Solution	
Catalogue Number(s)		
Other means of identification		
Pure substance/mixture	Mixture	
Details of the supplier of the safety	data sheet	
<u>Corporate Headquarters</u> Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	<u>Manufacturer</u> Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories Ltd. 1st and 2nd Floor, Lumpini 1 Building 239/2, Rajdamri Road, Lumpini, Pathumwan, Bangkok 10330 Thailand
Technical Service	+66 2 652 8313 ctsthailand@bio-rad.com	
Emergency telephone number		
24 Hour Emergency Phone Number	CHEMTREC Hong Kong: 800-968-793	
Recommended use of the chemical and restrictions on use		
Recommended use	Laboratory chemicals	
SECTION 2: Hazards identification		
	Emergency Overview No significant adverse health effects	
Appearance aqueous solution	Physical state Liquid	Odour Odourless
Classification of the substance or m	ixture	
Not classified		
Label elements		

Hazard statements Not classified

#### Physical and chemical hazards

Not applicable.

#### Health hazards

Immediate Health Effects: Not applicable. Chronic effects: Not applicable.

## **Environmental hazards**

Not applicable

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

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

#### Substance

Not applicable.

<u>Mixture</u>

Not classified.

## **SECTION 4: First aid measures**

Description of necessary 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	No information available.	
For emergency responders	No information available.	
Note to doctors	Treat symptomatically.	

## SECTION 5: Firefighting measures

#### **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	No information available.

Special protective actions 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	See Section 12 for additional Ecological Information.	
Methods and material for containment and cleaning up	Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.	
Precautions to prevent secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.	

SECTION 7: Handling and storage		
Precautions for safe handling	Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.	
Conditions for safe storage, including any incompatibilities	Store according to product and label instructions.	
Incompatible materials	None known based on information supplied.	

## SECTION 8: Exposure controls/personal protection

## **Occupational exposure limits**

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

Note

See section 16 for terms and abbreviations

#### **Biological occupational exposure limits**

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

#### Monitoring and observation processes

No applicable information was found.

Engineering controls	Showers
	Eyewash stations
	Ventilation systems.

## Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.
Hand protection	Wear suitable gloves.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are

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

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

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

Appearance Colour       aqueous solution colourless         Physical state       Liquid         Odour       Odourless         Odour threshold       No information available         Property pH       Values < 7	Information on basic physical and o	chemical properties		
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Additional information Explosive properties Not applicable	-			
Explosive properties Not applicable	Dynamic viscosity	No data available	None known	
• • •				
Oxidising properties Not applicable				
	Oxidising properties	Not applicable		

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

<u>Stability</u>	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Sensitivity to mechanical impact Sensitivity to static discharge	t None. None.
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.

## SECTION 11: Toxicological information

#### Acute toxicity

Numerical measures of toxicity

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Burner I with a real tate	
Reproductive toxicity	Based on available data, the classification criteria are not met.
Reproductive toxicity Specific target organ toxicity — single exposure	Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.
Specific target organ toxicity —	

## **SECTION 12: Ecological information**

#### **Ecotoxicity**

Unknown aquatic toxicity	0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment	
Persistence and degradability Bioaccumulative potential	No information available. No information available.	
Mobility in soil	No information available.	
SECTION 13: Disposal considerations		

# Waste chemicals Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Contaminated packaging Do not reuse empty containers.

## **SECTION 14: Transport information**

IMDG Transport in bulk according to Annex II of MARPOL and the IB Code	Not regulated No information available C
IATA	Not regulated
<u>China</u>	Not regulated

#### Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

## SECTION 15: Regulatory information

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

## National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases		
Catalogue of occupational hazard factors: Catalogue of occupational diseases:	Not applicable. Not applicable.	
Regulations on the Control over Safety of Hazardous Chemicals Inventory of hazardous chemicals	Not applicable.	
GB 18218-2009 Identification of major hazard installations for dangerous chemicals	Not applicable	
List of hazardous chemicals under priority management	Not applicable	
Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used Inventory of highly toxic goods	Not applicable	
Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals		
List of toxic chemicals severely restricted for import and export in China	Not applicable	
Measures for the Environmental Management of New Chemical Substances IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.		
International Regulations		

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

<b>SECTION 16: Other inform</b>	ation		
Prepared By	Bio-Rad Laboratories, E	nvironmental Health	and Safety
Revision date	31-Aug-2022		
Revision Note	Reformatted and updated existing information.		
Revision Note       Reformated and updated existing information.         Abbreviations and acronyms       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       *       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       Substance Database       IUCLID)			
Australia National Industrial Chemical	is inotification and Assessr	nent Scheme (NICN	IAS)

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