Safety Data Sheet

This safety data sheet complies with the requirements of:
JIS Z 7253:2019

Revision Date 2021-02-09
Revision Number 2

1. Identification

Product Name Pre-Amplification Buffer
Product Code ST2207
Registration number No information available

Details of the supplier of the safety data sheet

Supplier
Japan:
Takara Bio Inc.
Nojihigashi 7-4-38
Kusatsu, Shiga 525-0058, Japan
Phone: +81.77.565.6972
Web: www.takara-bio.com

China:
Takara Biomedical Technology (Beijing) Co., Ltd.
Life Science Park, 22 KeXueYuan Road, Changping District,
Beijing 102206, China
Phone: +86 10 8072 0980
Web: www.takarabiomed.com.cn

Emergency telephone number In case of emergency, call PERS (Professional Emergency Resource Services) 1-800-633-8253 (US) or 801-629-0667 (international).

Recommended use of the chemical and restrictions on use
Identified uses For research use only. Not for use in diagnostic procedures
Restrictions on use No information available

2. Hazard(s) identification

GHS Classification
Not classified

Acute toxicity - Oral	Classification not possible
Acute toxicity - Dermal	Classification not possible
Acute toxicity - Inhalation (Gases)	Classification not applicable
Acute toxicity - Inhalation (Vapors)	Classification not possible
Acute toxicity - Inhalation (Dusts/Mists)	Classification not possible
Skin corrosion/irritation	Classification not possible
Serious eye damage/eye irritation	Classification not possible
Respiratory sensitization	Classification not possible
Skin sensitization	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Classification not possible
Reproductive toxicity	Classification not possible
Effects on or via lactation	No effects on or via lactation
Specific target organ toxicity (single exposure)	Classification not possible
Specific target organ toxicity (repeated exposure)	Classification not possible
Aspiration hazard	Classification not possible
Acute aquatic toxicity	Classification not possible
Chronic aquatic toxicity	Classification not possible
Ozone	Classification not possible

GHS label elements

Hazard Statements
Not classified

Prevention
• Not applicable

Response
• Not applicable
Storage
• Not applicable
Disposal
• Not applicable

Other hazards
No information available.

3. Composition/information on ingredients

Pure substance/mixture Mixture

Chemical name	CAS No	Weight-%	ENCS Inventory	ENCS Number	ISHL Inventory	ISHL No
Tetramethylammonium sulfate	14190-16-0	1 - 5	Existing	(2)-186	Existing	(2)-186
Tetramethylammonium chloride	75-57-0	0.1 - 1	Existing	(1)-215,(2)-186	Existing	(1)-215,(2)-186

Pollutant Release and Transfer Registry (PRTR)
Not applicable

Industrial Safety and Health Law
ISHL Notifiable Substances
Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label
Not applicable

Poisonous and Deleterious Substances Control Law
Not applicable

4. First-aid measures

In case of inhalation Remove to fresh air.

In case of skin contact Wash skin with soap and water.

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

In case of ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms/effects, acute and delayed No information available.

Note to physicians Treat symptomatically.

5. Fire-fighting measures

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

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical No information available.

Special Extinguishing Media
Large Fire Cool drums with water spray.
CAUTION: Use of water spray when fighting fire may be inefficient.

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions See Section 12 for additional Ecological Information.

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

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

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

7. Handling and storage

Handling
Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.
Storage
Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Engineering controls Showers
Eyewash stations
Ventilation systems.

Exposure guidelines 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

Environmental exposure controls No information available.

Personal Protective Equipment
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.

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear, colorless
Physical state	Liquid
Color	No information available
Odor	Odorless
Odor Threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point		No information available
Boiling point/boiling range (°C)		No information available
Flammability (solid, gas)		No information available
Upper/lower flammability or explosive limits		
Upper flammability limit:		
Lower flammability limit:		
Flash point		ASTM D 56
Evaporation Rate		No information available
Autoignition temperature	215 °C / 419 °F	No information available
Decomposition temperature		No information available
pH		No information available
Viscosity		
Kinematic viscosity		No information available
Dynamic Viscosity		No information available
Water solubility		No information available
Solubility in other solvents		No information available
Partition Coefficient (n-octanol/water)		No information available
Vapor pressure		No information available
Vapor density		No information available
Relative density		No information available
Particle characteristics		
Particle Size		Not applicable
Particle Size Distribution		Not applicable

Other information

Explosive properties	No information available
Oxidizing properties	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Incompatible materials	None known based on information supplied.
Hazardous Decomposition Products	None known based on information supplied.
Explosion Data	
Sensitivity to static discharge	None.
Sensitivity to mechanical impact	None.

11. Toxicological information

Acute toxicity

Numerical measures of toxicity - Product Information

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

ATEmix (oral) 55,010.00 mg/kg
ATEmix (dermal) 63,236.40 mg/kg
ATEmix (inhalation-dust/mist) 17.3897 mg/l

2.30351 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
15.16052 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
28.59017 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
28.59017 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
15.16052 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Tetramethylammonium chloride	= 50 mg/kg (Rat)	-	-

Symptoms No information available.

Product Information

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

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

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

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

Respiratory or skin sensitization Classification not possible.

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

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

Reproductive toxicity Based on available data, the classification criteria are not met. Classification not possible.

Target organ effects Kidney. Respiratory system. Eyes. Skin.
STOT - single exposure Based on available data, the classification criteria are not met. Classification not possible.

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

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

12. Ecological information

Ecotoxicity Classification not possible.

Percentage for unknown hazards 0.48188 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Tetramethylammonium chloride	-	431 - 495: 96 h Pimephales promelas mg/L LC50 flow-through	-

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Hazardous to the ozone layer Classification not possible. Based on available data, the classification criteria are not met.
Other adverse effects No information available.

13. Disposal considerations

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

Contaminated packaging Do not reuse empty containers.

14. Transport information

IMDG Not regulated

ADR Not regulated

IATA Not regulated

Japan Not regulated

15. Regulatory information

National regulations

Pollutant Release and Transfer Registry (PRTR)
Not applicable

Industrial Safety and Health Law
Not applicable
ISHL Notifiable Substances
Not applicable

Poisonous and Deleterious Substances Control Law
Not applicable

Fire Service Law:
Not applicable

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)
The table below indicates ingredients above the cut-off threshold considered as relevant which are listed

Chemical name	CAS No	Chemical Substances Control Law
Tetramethylammonium sulfate	14190-16-0	Priority assessment chemical substance
Tetramethylammonium chloride	75-57-0	Priority assessment chemical substance

Act on Prevention of Marine Pollution and Maritime Disaster
Not applicable
Water Pollution Control Act

Hazardous substance per Water Pollution Control Law article 2 and Enforcement Order article 2
Air Pollution Control Law
Air pollutants with regulated emissions standards, Air Pollution Control Act article 3
Volatile organic compound per Air Pollution Control Law article 2, paragraph 4

International Regulations

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories
IECSC .

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. Other information

Revision Date 2021-02-09
Revision Note No information available.

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

TWA	Time weighted average	Ceiling	Maximum limit value
*	Skin designation	+	Sensitizers
**	Hazard 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 Chemicals Agency
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
World Health Organization

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End of Safety Data Sheet