

SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2022
Date Updated: December 31, 2022

SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION -----

| | |
|------------------------|---|
| Product Name | BB Total RNA Isolation Kit (Blood/Cultured Cell/Fungus)(Column Based) |
| Product Code(s) | BRIK00100 |
| Recommended Use | For Laboratory Research Use Only Not for Human or Animal Drug Use |
| Supplier | Bio Basic Asia Pacific Pte Ltd. |
| Address | 2 International Business Park Road Strategy #01-04, Singapore 609930 |
| Telephone | (+65) 6954 2519 (+65) 6491 5938 |
| Email | sg@biobasic-asia.com |

SECTION 2. ----- HAZARDS IDENTIFICATION -----

Edetic Acid (Buffer RL, Buffer RO)

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS – none

Potential Health Effects

| | |
|-------------------------|--|
| Skin | Causes irritation to skin. Symptoms include redness, itching, and pain. |
| Eyes | Causes irritation, redness, and pain. |
| Ingestion | Toxic. May cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Ingestion of large amounts can cause hypocalcemic tetany due to formation of calcium complexes and appreciable systemic toxicity involving blood chemistry changes due to chelation properties. Exposure may cause kidney injury, muscle cramps, bone-marrow depression, and a generalized allergic reaction. |
| Inhalation | Causes irritation of the mucous membrane and upper respiratory tract. |
| Chronic Exposure | Chronic exposure may cause kidney damage. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. |

Guanidine Thiocyanate (Buffer RA)

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

| | |
|-----------------------|---|
| Health hazard: | 2 |
| Flammability: | 1 |
| Reactivity: | 1 |
| Contact: | 2 |

Hazards not otherwise classified (HNOC) or not covered by GHS – none

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Potential Health Effects

| | |
|-------------------------|--|
| Skin | Causes irritation to skin. Symptoms include redness, itching, and pain. |
| Eyes | Causes irritation, redness, and pain. |
| Ingestion | Toxic. May cause psychosis, vomiting, disorientation, weakness, low blood pressure, convulsions and death which may be delayed. The probable lethal dose is between 15-30 grams. Repeated ingestion of small amounts may cause weakness, confusion, central nervous system effects, nausea and skin eruptions. |
| Inhalation | Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. |
| Chronic Exposure | Prolonged or repeated skin exposure may cause dermatitis. |

Guanidine Hydrochloride (Buffer W1)

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

| | |
|-----------------------|---|
| Health hazard: | 2 |
| Flammability: | 1 |
| Reactivity: | 0 |
| Contact: | 2 |

Hazards not otherwise classified (HNOC) or not covered by GHS – none

Potential Health Effects

| | |
|-------------------|--|
| Skin | Causes irritation to skin. Symptoms include redness, itching, and pain. |
| Eyes | Causes irritation, redness, and pain. |
| Ingestion | Toxic. May cause neurological disturbances. Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. |
| Inhalation | Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. |

Sodium Dodecyl Sulphate (Buffer RO)

Classification of the substance or mixture

Not a hazardous substance or mixture

GHS Label elements, including precautionary statements



| | |
|-----------------------|---|
| Health hazard: | 1 |
| Flammability: | 3 |
| Reactivity: | 1 |
| Contact: | 3 |

Hazards not otherwise classified (HNOC) or not covered by GHS – none

Potential Health Effects

| | |
|-------------------|--|
| Skin | Mildly irritating to skin, causes dryness and a rash on continued exposure May cause allergic skin reactions. |
| Eyes | Causes irritation, redness, and pain. |
| Ingestion | Large doses may cause gastrointestinal distress, nausea and diarrhea |
| Inhalation | Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. May cause allergic reaction in sensitive individuals |

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Chronic Exposure Chronic exposure may cause skin effects.
Additional Note Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance

SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

| Chemical Name | CAS-No. | Weight % |
|-------------------------------------|-----------|----------|
| Edetic Acid (Buffer RL, Buffer RO) | 6381-92-6 | 0.1 – 5 |
| Guanidine Thiocyanate (Buffer RA) | 593-84-0 | 5 – 10 |
| Guanidine Hydrochloride (Buffer W1) | 50-01-1 | 5 – 10 |
| Sodium Dodecyl Sulfate (Buffer RO) | 151-21-3 | 0.5 – 2 |

Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.

SECTION 4. ----- FIRST-AID MEASURES -----

Edetic Acid (Buffer RL, Buffer RO)

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. If difficulty in breathing, give oxygen. Contact a physician.

In case of skin contact

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

If swallowed

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Note to Physician:

Treat symptomatically and supportively.

Guanidine Thiocyanate (Buffer RA)

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. If difficulty in breathing, give oxygen. Contact a physician.

In case of skin contact

Wipe off excess material from skin then immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

If swallowed

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Note to Physician:

No data available

Guanidine Hydrochloride (Buffer W1)

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If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. If difficulty in breathing, give oxygen. Contact a physician.

In case of skin contact

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

If swallowed

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Note to Physician:

No data available

Sodium Dodecyl Sulphate (Buffer RO)

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. If difficulty in breathing, give oxygen. Contact a physician.

In case of skin contact

Immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

If swallowed

Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Note to Physician:

No data available

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Extinguishing media

Suitable extinguishing media

No restriction

Special hazards arising from the substance or mixture

No data available

Advice for firefighters

No data available

Further information

Dangerous decomposition is not anticipated.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES -----

Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

Environmental precautions

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No special environmental precautions required.

Methods and materials for containment and cleaning up

Actions to be taken on spillage: Dilute spilled liquids with plenty of water and adsorb.

Absorbent material: No restriction.

Actions to be taken to limit damage: Special measures to limit damage are not necessary

Reference to other sections

For disposal see section 13.

Further information

Special measures to limit damage are not necessary.

SECTION 7. ----- HANDLING AND STORAGE-----

Precautions for safe handling

Open and handle vessels carefully.

Conditions for safe storage, including any incompatibilities

Store at room temperature. Do not store together with acids.

Specific end use(s)

Apart from the uses mentioned in Section 1 no other specific uses are stipulated.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

Personal protective equipment

Eye/face protection

Use safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with one-way gloves.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene measures

Wash hands before and after use.

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

Information on basic physical and chemical properties

| | |
|------------------------------|-------------------|
| Appearance | Form: Liquid |
| Odour | No data available |
| Odour Threshold | No data available |
| pH(Buffer) | No data available |
| Miscibility with water | Immiscible (All) |
| Melting point/freezing point | No data available |

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| | |
|--|-------------------|
| Initial boiling point and boiling range | No data available |
| Flash point | No data available |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/lower flammability or explosive limits | No data available |
| Vapour pressure | No data available |
| Vapour density | No data available |
| Relative density | No data available |
| Water solubility | No data available |
| Partition coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | No data available |
| Decomposition temperature | No data available |
| Viscosity | No data available |
| Explosive properties | No data available |
| Oxidizing properties | No data available |

Other safety information

No data available

SECTION 10. -----STABILITY AND REACTIVITY -----

Reactivity

No data available

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Reacts with alkalis and oxidizing agents.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Danger of toxic pyrolysis products.

Other decomposition products - No data available. In the event of fire: see section 5

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Buffer RL and RO

Acute toxicity

LD50 Oral - Rat – 1.288mg/kg

LD50 Oral - Rabbit – 2.300mg/kg

LD50 Intravenous - Mouse – 56mg/kg

Buffer RA

Acute toxicity

LD50 Oral - Rat – 593mg/kg

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LD50 Intra peritoneal - Mouse – 300mg/kg

Buffer W1

Acute toxicity

LD50 Oral - Rat – 475mg/kg

LD50 Inhalation - Rat - 5.3mg/l – 4h

LD50 Intra peritoneal - Mouse – 500mg/kg

Skin corrosion/irritation

Irritant to skin and mucous membranes.

Serious eye damage/eye irritation

Irritant to eyes

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

May cause reproductive and fetal effects

Specific target organ toxicity - single exposure

Kidneys, Eyes, Skin

Specific target organ toxicity - repeated exposure

May cause dermatitis

Aspiration hazard

No data available

Additional Information

No data available

SECTION 12. ----- ECOLOGICAL INFORMATION -----

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

Water hazard class: 2 (hazardous to water and ground)

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

Waste treatment methods

Product

Used reagent can be disposed in accordance with local regulations. Dispose of empty packs by local recycling or waste disposal routes

Contaminated packaging

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Clean thoroughly prior to disposal.

SECTION 14. ----- TRANSPORT INFORMATION -----

DOT

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15. ----- REGULATORY INFORMATION -----

TSCA (Toxic Substances Control Act): All ingredients are listed.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity: None of the ingredients are listed.

SECTION 16. ----- OTHER INFORMATION -----

Further information: no limited for paper copy, just for internal uses.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

Issuing Date: 31-Dec-2022

End of SDS