

**MATERIAL SAFETY DATA SHEET**

Date Revised: March 23, 2016

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** 5X Passive Lysis Buffer  
**Catalog Number:** 99911, 99912, 99934  
**Unit Size:** 5 mL (99934), 10 mL (99911), 30 mL (99912)  
**Manufacturer/Supplier:** Biotium, Inc.  
3159 Corporate Place, Hayward, CA 94545, USA  
Phone: 1-510-265-1027, Fax: 1-510-265-1352  
Web: <http://www.biotium.com>

**2. HAZARDS IDENTIFICATION**

**Classification according to Regulation (EC) No 1272/2008[CLP]**  
None

**Classification according to Directive 1999/45/EC**  
None

**Labelling according to Regulation (EC) No 1272/2008[CLP]**

**Hazard pictogram**

None

**Signal word**

None

**Hazard statements**

None

**Precautionary statements**

None

**HMIS Classification (Glycerol)**

Health hazard: 0

Flammability: 1

Physical hazards: 0

**NFPA Rating (Glycerol)**

Health hazard: 0

Fire: 1

Reactivity Hazard: 0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Name     | CAS No. | EC No.    | Index No. | Weight % | Classification according to 67/548/EEC | Classification according to regulation (EC)No1278/2008 |
|----------|---------|-----------|-----------|----------|--|--|
| Glycerol | 56-81-5 | 200-289-5 | N/A       | 50%      | N/A                                    | N/A  |

**4. FIRST- AID MEASURES****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

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

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

**Suitable extinguishing media**

carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

**Precautions for safe handling**

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Store at -20°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Substance Glycerol

CAS no. 56-81-5

| country                 | Austria | Belgium              | Denmark | European Union | France               | Germany                                    |
|-------------------------|---------|----------------------|---------|----------------|----------------------|--|
| Limit value, 8hours     | --      | 10 mg/m <sup>3</sup> | --      | --             | 10 mg/m <sup>3</sup> | 50 mg/m <sup>3</sup><br>inhalable aerosol  |
| Limit value, short term | --      |                      | --      | --             | --                   | 100 mg/m <sup>3</sup><br>inhalable aerosol |

| country             | Hungary | Italy | Poland               | Spain                | Sweden | Netherlands | Switzerland                               |
|---------------------|---------|-------|----------------------|----------------------|--------|-------------|---|
| Limit value, 8hours | --      | --    | 10 mg/m <sup>3</sup> | 10 mg/m <sup>3</sup> | --     | --          | 50 mg/m <sup>3</sup><br>inhalable aerosol |

|                         |    |    |    |    |    |    |   |
|-------------------------|----|----|----|----|----|----|---|
| Limit value, short term | -- | -- | -- | -- | -- | -- | 100 mg/m <sup>3</sup> inhalable aerosol |
|-------------------------|----|----|----|----|----|----|---|

| country                 | United Kingdom       | USA-NIOSH | USA-OSHA   | Australia                | Canada               | Japan | South Korea          |
|-------------------------|----------------------|-----------|--|--------------------------|----------------------|-------|----------------------|
| Limit value, 8hours     | 10 mg/m <sup>3</sup> | --        | 15 mg/m <sup>3</sup> inhalable dust<br>5 mg/m <sup>3</sup> respirable dust | 10 mg/m <sup>3</sup> (1) | 10 mg/m <sup>3</sup> | --    | 10 mg/m <sup>3</sup> |
| Limit value, short term | --                   | --        | --   | --                       | --                   | --    | --                   |

Australia (1) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.

Germany STV 15 minutes average value

## Personal protective equipment

### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Respiratory protection

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                       |                         |
|---------------------------------------|-------------------------|
| Chemical Name                         | 5X Passive Lysis Buffer |
| Appearance                            | Clear liquid            |
| Odor                                  | No data available       |
| Odor threshold                        | No data available       |
| pH                                    | 7.8                     |
| Melting point/freezing point          | No data available       |
| Boiling point                         | No data available       |
| Flash point                           | No data available       |
| Evaporate rate                        | No data available       |
| Flammability                          | No data available       |
| Explosive limits                      | No data available       |
| Vapor pressure                        | No data available       |
| Vapor density                         | No data available       |
| Relative density                      | No data available       |
| Solubility                            | Water soluble           |
| 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       |

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Oral LD50** LD50 Oral – Rat - 12,600 mg/kg (Glycerol)

**Inhalation LC50** None

**Dermal LD50** LD50 Dermal – Rabbit - > 10,000 mg/kg (Glycerol)

**Other information on acute toxicity** no data available

**Skin corrosion/irritation** Skin – Rabbit Result: Mild skin irritation - 24 h (Glycerol)

**Serious eye damage/eye irritation** Eyes – Rabbit Result: Mild eye irritation - 24 h (Glycerol)

**Respiratory or skin sensitization** no data available

**Germ cell mutagenicity** no data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity** no data available

### Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

### Aspiration hazard

no data available

### Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

### Additional Information

RTECS: MA8050000 (Glycerol)

Prolonged or repeated exposure may cause: Nausea, Headache, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Kidney – Irregularities - Based on Human Evidence (Glycerol)

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## 12. ECOLOGICAL INFORMATION

**Toxicity** no information available  
**Persistence and degradability** no information available  
**Biodegradation** no information available  
**Mobility in soil** no information available  
**Results of PBT and vPvB assessment** no information available  
**Other adverse effects** no information available  
**Additional information** no information available

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## 13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

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## 14. TRANSPORT INFORMATION

**IATA, IMDG, DOT (US)** not dangerous good during transportation  
UN number none  
UN proper shipping name none  
Transport hazard class none  
Packing group none  
Environmental hazards none  
Special precaution for user none

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## 15. REGULATION INFORMATION

### US Federal Regulations

US Toxic Substances Control Act (TSCA): Not listed  
SARA 302: No chemicals were found.  
SARA 313: No chemicals were found.  
SARA 311/312 Hazards: No chemicals were found.

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## 16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008  
Refer to section 2 and section 3

Prepared by: Regulatory Department  
Biotium Inc.  
Version no. 3  
Reason for revision Correction to hazard classification

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.

## MATERIAL SAFETY DATA SHEET

Date Revised: October 8, 2014

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### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Firefly Luciferase Assay Buffer  
**Catalog Number:** 99933/99932/99909  
**Unit Size:** 5 mL/15 mL/100 mL  
**Manufacturer/Supplier:** Biotium, Inc.  
3159 Corporate Place, Hayward, CA 94545, USA  
Phone: 1-510-265-1027, Fax: 1-510-265-1352  
Web: <http://www.biotium.com>

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### 2. HAZARDS IDENTIFICATION

**Classification according to Regulation (EC) No 1272/2008[CLP]**

None

**Classification according to Directive 1999/45/EC**

None

**Labelling according to Regulation (EC) No 1272/2008[CLP]**

**Hazard pictogram** None

**Signal word** None

**Hazard statements** None

**Precautionary statements** None

**HMIS Classification**

Health hazard: 0

Flammability: 0

Physical hazards: 0

**NFPA Rating**

Health hazard: 0

Fire: 0

Reactivity Hazard: 0

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

No ingredients present at concentrations classified as hazardous to health or the environment.

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### 4. FIRST-AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

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

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Consult a physician.

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### 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**

carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

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**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Store at -20 °C or -70 °C.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Substance None

CAS no.

**Personal protective equipment****Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Respiratory protection**

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                |                                 |
|----------------|---------------------------------|
| Chemical Name  | Firefly Luciferase Assay Buffer |
| Appearance     | Clear liquid                    |
| Odor           | No data available               |
| Odor threshold | No data available               |

|                                       |                   |
|---------------------------------------|-------------------|
| pH                                    | 7.8               |
| Melting point/freezing point          | No data available |
| Boiling point                         | No data available |
| Flash point                           | No data available |
| Evaporate rate                        | No data available |
| Flammability                          | No data available |
| Explosive limits                      | No data available |
| Vapor pressure                        | No data available |
| Vapor density                         | No data available |
| Relative density                      | No data available |
| Solubility                            | Water soluble     |
| 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 |

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Oral LD50 None

Inhalation LC50 None

Dermal LD50 None

Other information on acute toxicity no data available

**Skin corrosion/irritation** no data available

**Serious eye damage/eye irritation** no data available

**Respiratory or skin sensitization** no data available

**Germ cell mutagenicity** no data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity** no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

**Additional Information**

RTECS: None

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## 12. ECOLOGICAL INFORMATION

**Toxicity** no information available

**Persistence and degradability** no information available

**Biodegradation** no information available

**Mobility in soil** no information available

**Results of PBT and vPvB assessment** no information available

**Other adverse effects** no information available

**Additional information** no information available

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## 13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

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## 14. TRANSPORT INFORMATION

**IATA, IMDG, DOT (US)** not dangerous good during transportation

UN number none

UN proper shipping name none

Transport hazard class none

Packing group none

Environmental hazards none

Special precaution for user none

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## 15. REGULATION INFORMATION

**US Federal Regulations**

US Toxic Substances Control Act (TSCA): Not listed

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312 Hazards: No chemicals were found.

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## 16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008  
Refer to section 2 and section 3

Prepared by: Regulatory Department

Biotium Inc.  
Version no. 2  
Reason for revision Application of CLP labeling and corresponding requirements

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.

**MATERIAL SAFETY DATA SHEET**

Date Revised: September 4, 2013

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**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** D-Luciferin, potassium salt  
**Catalog Number:** 10101,10101-1,10101-2  
**Unit Size:** 10mg, 50mg, 1g  
**Manufacturer/Supplier:** Biotium, Inc.  
3159 Corporate Place, Hayward, CA 94545, USA  
Phone: 1-510-265-1027, Fax: 1-510-265-1352  
Web: <http://www.biotium.com>

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**2. HAZARDS IDENTIFICATION****Classification according to Regulation (EC) No 1272/2008[CLP]**

None

**Classification according to Directive 1999/45/EC**

None

**Labeling according to Regulation (EC) No 1272/2008[CLP]****Hazard pictogram** None**Signal word** None**Hazard statements** None**Precautionary statements** None**HMIS Classification**

Health hazard: 0

Flammability: 0

Physical hazards: 0

**NFPA Rating**

Health hazard: 0

Fire: 0

Reactivity Hazard: 0

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Name                        | CAS No.    | EC No. | Index No. | Weight % | Classification according to 67/548/EEC | Classification according to regulation (EC)No1278/2008 |
|-----------------------------|------------|--------|-----------|----------|--|--|
| D-Luciferin, Potassium salt | 15144-35-9 | -      | -         | >99%     | -                                      | -  |

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**4. FIRST-AID MEASURES**

### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

### If inhaled

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

### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

### In case of eye contact

Flush eyes with water as a precaution.

### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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## 5. FIREFIGHTING MEASURES

### Suitable extinguishing media

Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

### Special protective equipment for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Methods and materials for containment and cleaning up

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Store at -20 °C.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Substance D-Luciferin, potassium salt

Cas no. 15144-35-9

Control parameter No information available

## Personal protective equipment

### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Respiratory protection

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                       |                             |
|---------------------------------------|-----------------------------|
| Chemical Name                         | D-Luciferin, potassium salt |
| Appearance                            | Solid                       |
| Odor                                  | No information available    |
| Odor threshold                        | No information available    |
| pH                                    | No information available    |
| Melting point/freezing point          | Melting point 201°C         |
| Boiling point                         | No information available    |
| Flash point                           | No information available    |
| Evaporate rate                        | No information available    |
| Flammability                          | No information available    |
| Explosive limits                      | No information available    |
| Vapor pressure                        | No information available    |
| Vapor density                         | No information available    |
| Relative density                      | No information available    |
| Solubility                            | No information available    |
| Partition coefficient:n-octanol/water | No information available    |
| Auto-ignition temperature             | No information available    |
| Decomposition temperature             | No information available    |
| Viscosity                             | No information available    |
| Explosive properties                  | No information available    |
| Oxidizing properties                  | No information available    |

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

**Materials to avoid**

No data available

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50** None

**Inhalation LC50** None

**Dermal LD50** None

**Other information on acute toxicity** no data available

**Skin corrosion/irritation** no data available

**Serious eye damage/eye irritation** no data available

**Respiratory or skin sensitization** no data available

**Germ cell mutagenicity** no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity** no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

**Additional Information**

RTECS: None

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## 12. ECOLOGICAL INFORMATION

**Toxicity** no information available

**Persistence and degradability** no information available

**Biodegradation** no information available

**Mobility in soil** no information available

**Results of PBT and vPvB assessment** no information available  
**Other adverse effects** no information available  
**Additional information** no information available

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### 13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

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### 14. TRANSPORT INFORMATION

**IATA, IMDG, DOT(US)** not dangerous good during transportation  
UN number none  
UN proper shipping name none  
Transport hazard class none  
Packing group none  
Environmental hazards none  
Special precaution for user none

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### 15. REGULATION INFORMATION

#### US Federal Regulations

Us Toxic Substances Control Act(TSCA): Not listed  
SARA 302: No chemicals were found.  
SARA 313: No chemicals were found.  
SARA 311/312 Hazards: No chemicals were found.

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### 16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008

Prepared by: Regulatory Department  
Biotium Inc.

Version no. 2

Reason for revision Application of CLP labeling and corresponding requirements

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.

## MATERIAL SAFETY DATA SHEET

Date Revised: October 8, 2014

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### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Renilla Luciferase Assay Buffer  
**Catalog Number:** 99935/99913/99914  
**Unit Size:** 5 mL/10 mL/50 mL  
**Manufacturer/Supplier:** Biotium, Inc.  
3159 Corporate Place, Hayward, CA 94545, USA  
Phone: 1-510-265-1027, Fax: 1-510-265-1352  
Web: <http://www.biotium.com>

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### 2. HAZARDS IDENTIFICATION

**Classification according to Regulation (EC) No 1272/2008[CLP]**

None

**Classification according to Directive 1999/45/EC**

None

**Labelling according to Regulation (EC) No 1272/2008[CLP]**

**Hazard pictogram** None

**Signal word** None

**Hazard statements** None

**Precautionary statements** None

**HMIS Classification**

Health hazard: 0

Flammability: 0

Physical hazards: 0

**NFPA Rating**

Health hazard: 0

Fire: 0

Reactivity Hazard: 0

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

No ingredients present at concentrations classified as hazardous to health or the environment.

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### 4. FIRST-AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

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

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Consult a physician.

---

## 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**

carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

---

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

---

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Store at -20 °C or -70 °C.

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Substance           None

CAS no.

**Personal protective equipment****Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Respiratory protection**

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                       |                                 |
|---------------------------------------|---------------------------------|
| Chemical Name                         | Renilla Luciferase Assay Buffer |
| Appearance                            | Liquid                          |
| Odor                                  | No data available               |
| Odor threshold                        | No data available               |
| pH                                    | 5.5                             |
| Melting point/freezing point          | No data available               |
| Boiling point                         | No data available               |
| Flash point                           | No data available               |
| Evaporate rate                        | No data available               |
| Flammability                          | No data available               |
| Explosive limits                      | No data available               |
| Vapor pressure                        | No data available               |
| Vapor density                         | No data available               |
| Relative density                      | No data available               |
| Solubility                            | Water soluble                   |
| 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               |

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Oral LD50 None

Inhalation LC50 None

Dermal LD50 None

Other information on acute toxicity no data available

**Skin corrosion/irritation** no data available

**Serious eye damage/eye irritation** no data available

**Respiratory or skin sensitization** no data available

**Germ cell mutagenicity** no data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity** no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

**Additional Information**

RTECS: None

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## 12. ECOLOGICAL INFORMATION

**Toxicity** no information available

**Persistence and degradability** no information available

**Biodegradation** no information available

**Mobility in soil** no information available

**Results of PBT and vPvB assessment** no information available

**Other adverse effects** no information available

**Additional information** no information available

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## 13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

---

## 14. TRANSPORT INFORMATION

**IATA, IMDG, DOT (US)** not dangerous good during transportation

UN number none

UN proper shipping name none

Transport hazard class none

Packing group none

Environmental hazards none

Special precaution for user none

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## 15. REGULATION INFORMATION

**US Federal Regulations**

US Toxic Substances Control Act (TSCA): Not listed

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312 Hazards: No chemicals were found.

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## 16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008  
Refer to section 2 and section 3

Prepared by: Regulatory Department  
Biotium Inc.

Version no. 2

Reason for revision Application of CLP labeling and corresponding requirements

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.

## MATERIAL SAFETY DATA SHEET

Date Revised: March 23, 2016

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Renilla Luciferase Enhancer  
**Catalog Number:** 99936/99915/99916  
**Unit Size:** 5 mL/10 mL/50 mL  
**Manufacturer/Supplier:** Biotium, Inc.  
 3159 Corporate Place, Hayward, CA 94545, USA  
 Phone: 1-510-265-1027, Fax: 1-510-265-1352  
 Web: <http://www.biotium.com>

### 2. HAZARDS IDENTIFICATION

**Classification according to Regulation (EC) No 1272/2008[CLP]**

None

**Classification according to Directive 1999/45/EC**

None

**Labelling according to Regulation (EC) No 1272/2008[CLP]**

**Hazard pictogram** None

**Signal word** None

**Hazard statements** None

**Precautionary statements** None

**HMIS Classification** (sodium sulfite)

Health hazard: 1

Flammability: 0

Physical hazards: 0

**NFPA Rating** (sodium sulfite)

Health hazard: 1

Fire: 0

Reactivity Hazard: 0

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Name           | CAS No.   | EC No.    | Index No. | Weight % | Classification according to 67/548/EEC | Classification according to regulation (EC)No1278/2008 |
|----------------|-----------|-----------|-----------|----------|--|--|
| Sodium sulfite | 7757-83-7 | 231-821-4 | N/A       | <2%      | N/A                                    | N/A  |

### 4. FIRST- AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

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

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

---

**5. FIREFIGHTING MEASURES****Suitable extinguishing media**

carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

---

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

---

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Store at -20 °C or -70 °C.

---

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Substance           None

CAS no.

**Personal protective equipment****Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Respiratory protection**

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

## Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                       |                             |
|---------------------------------------|-----------------------------|
| Chemical Name                         | Renilla Luciferase Enhancer |
| Appearance                            | Liquid                      |
| Odor                                  | No data available           |
| Odor threshold                        | No data available           |
| pH                                    | 5.5                         |
| Melting point/freezing point          | No data available           |
| Boiling point                         | No data available           |
| Flash point                           | No data available           |
| Evaporate rate                        | No data available           |
| Flammability                          | No data available           |
| Explosive limits                      | No data available           |
| Vapor pressure                        | No data available           |
| Vapor density                         | No data available           |
| Relative density                      | No data available           |
| Solubility                            | Water soluble               |
| 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           |

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Sodium sulfite, CAS 7757-83-7

#### Acute toxicity

**Oral LD50** LD50 Oral - rat - 3,560 mg/kg

**Inhalation LC50** LC50 Inhalation - rat - 4 h - > 5,500 mg/m<sup>3</sup>

**Dermal LD50** None

**Other information on acute toxicity** no data available

#### Skin corrosion/irritation

Skin – rabbit Result: No skin irritation

#### Serious eye damage/eye irritation

Eyes – rabbit Result: Mild eye irritation

**Respiratory or skin sensitization**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**Germ cell mutagenicity** no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity** no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

**Additional Information**

RTECS: WE2150000 (Sodium sulfite, CAS 7757-83-7)

May cause irritation of the: Gastrointestinal tract, violent colic, Diarrhoea, Disturbance of: circulatory system, Central nervous system depression, death, Persons with allergies and/or asthma may exhibit hypersensitivity to sulfites., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

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## 12. ECOLOGICAL INFORMATION

**Toxicity** Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 660 mg/l - 96 h

**Persistence and degradability** no information available

**Biodegradation** no information available

**Mobility in soil** no information available

**Results of PBT and vPvB assessment** no information available

**Other adverse effects** no information available

**Additional information** no information available

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## 13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

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## 14. TRANSPORT INFORMATION

**IATA, IMDG, DOT (US)** not dangerous good during transportation

3159 Corporate Place, Hayward, CA 94545 U.S.A.  
Tel: 1-510-265-1027; Fax: 1-510-265-1352

btinfo@biotium.com  
<http://www.biotium.com/>

UN number none  
UN proper shipping name none  
Transport hazard class none  
Packing group none  
Environmental hazards none  
Special precaution for user none

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## 15. REGULATION INFORMATION

### US Federal Regulations

US Toxic Substances Control Act (TSCA): Not listed  
SARA 302: No chemicals were found.  
SARA 313: No chemicals were found.  
SARA 311/312 Hazards: No chemicals were found.

---

## 16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008  
Refer to section 2 and section 3

Prepared by: Regulatory Department  
Biotium Inc.  
Version no. 3  
Reason for revision Correction to hazard classification

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.

**MATERIAL SAFETY DATA SHEET**

Date Revised: March 23, 2016

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**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Coelenterazine (also known as native coelenterazine)  
**Catalog Number:** 10110/10110-1/10110-2  
**Unit Size:** 50 ug/1 mg/250 ug  
**Manufacturer/Supplier:** Biotium, Inc.  
3159 Corporate Place, Hayward, CA 94545, USA  
Phone: 1-510-265-1027, Fax: 1-510-265-1352  
Web: <http://www.biotium.com>

---

**2. HAZARDS IDENTIFICATION****Classification according to Regulation (EC) No 1272/2008[CLP]**

None

**Classification according to Directive 1999/45/EC**

None

**Labeling according to Regulation (EC) No 1272/2008[CLP]****Hazard pictogram****Signal word** None**Hazard statements**

None

**Precautionary statements** None**HMIS Classification**

Health hazard: 0

Flammability: 0

Physical hazards: 0

**NFPA Rating**

Health hazard: 0

Fire: 0

Reactivity Hazard: 0

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Name                  | CAS No.    | EC No. | Index No. | Weight % | Classification according to 67/548/EEC | Classification according to regulation (EC)No1278/2008 |
|-----------------------|------------|--------|-----------|----------|--|--|
| <b>Coelenterazine</b> | 55779-48-1 | -      | -         | ≥95%     | -                                      | -  |

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**4. FIRST-AID MEASURES****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

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

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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## 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**

Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

---

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

---

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Store desiccated at -20°. Product is light sensitive. Protect from light at all times.

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

|                   |                          |
|-------------------|--------------------------|
| Substance         | <b>Coelenterazine</b>    |
| CAS no.           | 55779-48-1               |
| Control parameter | No information available |

**Personal protective equipment****Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Respiratory protection**

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

---

**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                                       |  |
|---------------------------------------|--|
| Chemical Name                         | <b>Coelenterazine</b>                  |
| Appearance                            | Yellow crystalline powder              |
| Odor                                  | No information available               |
| Odor threshold                        | No information available               |
| pH                                    | No information available               |
| Melting point/freezing point          | No information available               |
| Boiling point                         | No information available               |
| Flash point                           | No information available               |
| Evaporate rate                        | No information available               |
| Flammability                          | No information available               |
| Explosive limits                      | No information available               |
| Vapor pressure                        | No information available               |
| Vapor density                         | No information available               |
| Relative density                      | No information available               |
| Solubility                            | Soluble in MeOH or EtOH.<br>Avoid DMSO |
| Partition coefficient:n-octanol/water | No information available               |
| Auto-ignition temperature             | No information available               |
| Decomposition temperature             | No information available               |
| Viscosity                             | No information available               |
| Explosive properties                  | No information available               |
| Oxidising properties                  | No information available               |

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**10. STABILITY AND REACTIVITY****Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

No data available

**Conditions to avoid**

Heat, flames and sparks. Light

**Materials to avoid**

Avoid DMSO; Strong oxidizing agents.

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50** None

**Inhalation LC50** None

**Dermal LD50** None

**Other information on acute toxicity** no data available

**Skin corrosion/irritation** no data available

**Serious eye damage/eye irritation** no data available

**Respiratory or skin sensitization** no data available

**Germ cell mutagenicity** no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity** no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

**Additional Information**

RTECS: None

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## 12. ECOLOGICAL INFORMATION

**Toxicity** no information available

**Persistence and degradability** no information available

**Biodegradation** no information available  
**Mobility in soil** no information available  
**Results of PBT and vPvB assessment** no information available  
**Other adverse effects** no information available  
**Additional information** None

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## 13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

---

## 14. TRANSPORT INFORMATION

**IATA, IMDG, DOT(US)** not dangerous good during transportation  
UN number none  
UN proper shipping name none  
Transport hazard class none  
Packing group none  
Environmental hazards none  
Special precaution for user none

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## 15. REGULATION INFORMATION

### US Federal Regulations

US Toxic Substances Control Act(TSCA): Not listed  
SARA 302: No chemicals were found.  
SARA 313: No chemicals were found.  
SARA 311/312 Hazards: No chemicals were found.

---

## 16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008

Prepared by: Regulatory Department  
Biotium Inc.  
Version no. 3  
Reason for revision Correction to hazard classification

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