

**MATERIAL SAFETY DATA SHEET**

Date Revised: March 23, 2016

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Firefly Luciferase Assay Buffer (Lyophilized)  
**Catalog Number:** 99993-1, 99993-2  
**Unit Size:** 150 assays (99993-1), 1000 assays (99993-2)  
**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 (DTT)**

Health hazard: 1

Flammability: 0

Physical hazards: 0

**NFPA Rating**

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
Dithiothreitol (DTT)	3483-12-3	222-468-7	--	<10%	--	--

**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

CAS no.

country	Austria	Belgium	Denmark	European Union	France	Germany
Limit value, 8hours	--	--	--	--	--	--
Limit value, short term	--	--	--	--	--	--

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	United Kingdom
Limit value, 8hours	--	--	--	--	--	--	
Limit value, short term	--	--	--	--	--	--	

country	United Kingdom	USA-NIOSH	USA-OSHA	Australia	Canada	Japan	South Korea
Limit value, 8hours	--	--	--	--	--	--	
Limit value, short term	--	--	--	--	--	--	

**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 (Lyophilized)
Appearance	White solid
Odor	ND
Odor threshold	ND
pH	ND
Melting point/freezing point	ND
Boiling point	ND
Flash point	ND
Evaporate rate	ND
Flammability	ND
Explosive limits	ND
Vapor pressure	ND
Vapor density	ND
Relative density	ND
Solubility	Soluble (water)
Partition coefficient:n-octanol/water	ND
Auto-ignition temperature	ND
Decomposition temperature	ND
Viscosity	ND
Explosive properties	ND
Oxidizing properties	ND

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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 - 400 mg/kg (DTT)

**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** LC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h (DTT)

**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. 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:** 5X Firefly Lysis Buffer  
**Catalog Number:** 99923/ 30003B-T  
**Unit Size:** 15 mL/5 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]**  
Not classified

**Classification according to Directive 1999/45/EC**  
Not classified

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

**Hazard pictogram**

None

**Signal word**

None

**Hazard statements**

None

**Precautionary statements**

None

**HMIS Classification** (Triton X-100)

Health hazard: 2

Flammability: 1

Physical hazards: 0

**NFPA Rating** (Triton X-100)

Health hazard: 2

Fire: 1

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
Triton X-100	9002-93-1	N/A	N/A	5%	N/A	N/A
Glycerol	56-81-5	200-289-5	N/A	<50%	N/A	N/A

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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.

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

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	Switzerland
Limit	--	--	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	--	--	50 mg/m <sup>3</sup>

value,8hours							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 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 Firefly 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 - 1,800 mg/kg (Triton X-100)

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

**Inhalation LC50** No data available

**Dermal LD50** LD50 Dermal – Rabbit - 8,000 mg/kg (Triton X-100)

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: Moderate eye irritation - 24 h (Triton X-100)

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: Triton X-100: MD0907700; Glycerol: MA8050000

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**12. ECOLOGICAL INFORMATION**

<b>Toxicity</b>	Toxicity to fish (Triton X-100): LC50-Pimephales promelas (fathead minnow) - 8.9 mg/l-96.0 h Toxicity to daphnia and other aquatic invertebrates (Triton X-100): EC50-Daphnia (water flea)-26 mg/l-48 h
<b>Persistence and degradability</b>	
<b>Biodegradation</b>	Biotic/Aerobic Biochemical oxygen demand (Triton X-100) - Exposure time 28 d Result: 36 % - Not readily biodegradable.(Closed Bottle test)
<b>Mobility in soil</b>	no information available
<b>Results of PBT and vPvB assessment</b>	no information available
<b>Other adverse effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects
<b>Additional information</b>	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)**

UN number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (p-tertiary-Octylphenoxy polyethyl alcohol)
Transport hazard class	9
Packing group	III
Environmental hazards	Marine pollutant
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. 4  
Reason for revision Corrections to hazard classifications.

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: December 13, 2013

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** D-Luciferin  
**Catalog Number:** 99907 , 99908  
**Unit Size:** 1 mg (99907), 10 mg (99908)  
**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**

Health hazard: 0

Flammability: 0

Physical hazards: 0

**NFPA Rating**

Health hazard: 0

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
D-Luciferin, potassium salt	2591-17-5	219-981-3	--	100	--	--

### 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

CAS no.

country	Austria	Belgium	Denmark	European Union	France	Germany
Limit value, 8hours	--	--	--	--	--	--
Limit value, short term	--	--	--	--	--	--

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	United Kingdom
Limit value, 8hours	--	--	--	--	--	--	--
Limit value, short term	--	--	--	--	--	--	--

country	United Kingdom	USA-NIOSH	USA-OSHA	Australia	Canada	Japan	South Korea
Limit value, 8hours	--	--	--	--	--	--	--
Limit value,	--	--	--	--	--	--	--

short term							
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## 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	D-Luciferin
Appearance	Yellow solid
Odor	ND
Odor threshold	ND
pH	ND
Melting point/freezing point	ND
Boiling point	ND
Flash point	ND
Evaporate rate	ND
Flammability	ND
Explosive limits	ND
Vapor pressure	ND
Vapor density	ND
Relative density	ND
Solubility	Soluble (water)
Partition coefficient:n-octanol/water	ND
Auto-ignition temperature	ND
Decomposition temperature	ND
Viscosity	ND
Explosive properties	ND
Oxidizing properties	ND

## 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.