SAFETY DATA SHEET
Date: April 13, 2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: CAT5™ Reagent
Catalog Number: CD201, CD501 kit component
Unit Size: 2 mL, 5 mL
Manufacturer/Supplier: Biotium, Inc.
46117 Landing Parkway, Fremont, CA 94538, USA
Phone: 1-510-265-1027, Fax: 1-510-265-1352
Web: http://www.biotium.com

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS Classification
Signal word Warning
Health hazards
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2

Physical hazards None

Hazard statements
Harmful if swallowed (H302)
Causes skin irritation (H315)
Causes serious eye irritation (H319)

Precautionary statements
Prevention
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P273 - Avoid release to the environment
P270 - Do not eat, drink or smoke when using this product

Response
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth

Storage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Disposal
P501 - Dispose of contents/ container to an approved waste disposal plant

WHMIS classification
Acute toxicity - oral - Category 4
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2

Hazard pictogram
Classification according to Regulation (EC) No 1272/2008[CLP] None  
Classification according to Directive 1999/45/EC None  

HMIS Classification  
Health hazard: 2  
Flammability: 0  
Physical hazards: 0  

NFPA Rating  
Health hazard: 2  
Fire: 0  
Reactivity Hazard: 0  

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

3. COMPOSITION/INFORMATION ON INGREDIENTS  

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dodecyl sulfate</td>
<td>151-21-3</td>
<td>205-788-1</td>
<td>--</td>
<td>1-5%</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

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.

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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 room temperature.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**
Substance: None

**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**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAT5™ Reagent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
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<tr>
<td>pH</td>
<td>6.4-7.4</td>
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<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporate rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
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<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
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<tr>
<td>Solubility</td>
<td>Water soluble</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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 (Sodium dodecyl sulfate)

Oral LD50 LD50 Oral Rat: 1,228 mg/kg
Inhalation LC50 LC50 Inhalation - Rat - 1 h - > 3,900 mg/m³
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: WT1050000

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to Fish: Flow-through test LC50 - Pimephales promelas (fathead minnow) - 29 mg/l - 96 h
(OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia dubia (water flea) - 5.55 mg/l - 48 h
NOEC - Daphnia dubia (water flea) - 0.684 mg/l - 7 d
Toxicity to Algae Growth inhibition LOEC - Pseudokirchneriella subcapitata - 2.68 mg/l - 6 d  static test EC50 Desmodesmus subspicatus (Scenedesmus subspicatus) - > 120 mg/l - 72 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

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), TDG  Not dangerous goods during transportation
UN number  None
UN proper shipping name  None
Transport hazard class  None
Packing group  None
Environmental hazards  None
Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code  N/A
Special precaution for user  None

15. REGULATION INFORMATION

US Federal Regulations
US Toxic Substances Control Act (TSCA): Sodium dodecyl sulfate: listed
SARA 302: No chemicals were found.
SARA 313: No chemicals were found.
SARA 311/312 Hazards: No chemicals were found.

WHMIS Hazard Class
Acute toxicity - oral - Category 4
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2

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
Revision date (Initials)  4/13/18 (LR)
Reason for revision Application of WHMIS labeling 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.
SAFETY DATA SHEET

Date: April 13, 2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lysis Buffer
Catalog Number: CD201, CD501 kit component
Unit Size: 2 mL, 5 mL
Manufacturer/Supplier: Biotium, Inc.
46117 Landing Parkway, Fremont, CA 94538, USA
Phone: 1-510-265-1027, Fax: 1-510-265-1352
Web: http://www.biotium.com

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS Classification
Signal word Warning
Health hazards
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2

Physical hazards None

Hazard statements
Harmful if swallowed (H302)
Causes skin irritation (H315)
Causes serious eye irritation (H319)

Precautionary statements
Prevention
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P273 - Avoid release to the environment
P270 - Do not eat, drink or smoke when using this product

Response
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth

Storage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Disposal
P501 - Dispose of contents/ container to an approved waste disposal plant

WHMIS classification
Acute toxicity - oral - Category 4
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2

Hazard pictogram
Classification according to Regulation (EC) No 1272/2008[CLP] None
Classification according to Directive 1999/45/EC None

HMIS Classification
Health hazard: 2
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 2
Fire: 0
Reactivity Hazard: 0

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

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<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
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<tbody>
<tr>
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<td>--</td>
<td>1-5%</td>
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</table>

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 room temperature.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters
Substance: None

**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 safe practice. Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>Lysis Buffer</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
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<tr>
<td><strong>pH</strong></td>
<td>6.4-7.4</td>
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<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Solubility</td>
<td>Water soluble</td>
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<tr>
<td>Partition coefficient:n-octanol</td>
<td>Water soluble</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
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<tr>
<td>Viscosity</td>
<td>No data available</td>
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<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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 (Sodium dodecyl sulfate)
Oral LD50
LD50 Oral Rat: 1,228 mg/kg

Inhalation LC50
LC50 Inhalation - Rat - 1 h - > 3,900 mg/m³

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: WT1050000

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to Fish: Flow-through test LC50 - Pimephales promelas (fathead minnow) - 29 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia dubia (water flea) - 5.55 mg/l - 48 h
NOEC - Daphnia dubia (water flea) - 0.684 mg/l - 7 d
Toxicity to Algae Growth inhibition LOEC - Pseudokirchneriella subcapitata - 2.68 mg/l - 6 d static test EC50
Desmodesmus subspicatus (Scenedesmus subspicatus) - > 120 mg/l - 72 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

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), TDG Not dangerous goods during transportation
UN number None
UN proper shipping name None
Transport hazard class None
Packing group None
Environmental hazards None
Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code N/A
Special precaution for user None

15. REGULATION INFORMATION

US Federal Regulations
US Toxic Substances Control Act (TSCA): Sodium dodecyl sulfate: listed
SARA 302: No chemicals were found.
SARA 313: No chemicals were found.
SARA 311/312 Hazards: No chemicals were found.

WHMIS Hazard Class
Acute toxicity - oral - Category 4
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2

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
Revision date (Initials) 4/13/18 (LR)
Reason for revision Application of WHMIS labeling requirements

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Deparaffinization Reagent
Catalog Number: CD201, CD501 kit component
Unit Size: 15 mL, 30 mL
Manufacturer/Supplier: Biotium, Inc.
46117 Landing Parkway, Fremont, CA 94538, USA
Phone: 1-510-265-1027, Fax: 1-510-265-1352
Web: http://www.biotium.com

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS Classification
Signal word None
Health hazards None
Physical hazards None
Hazard statements None
Precautionary statements None
WHMIS classification None
GHS hazard pictogram None

Classification according to Regulation (EC) No 1272/2008[CLP] None
Classification according to Directive 1999/45/EC None

HMIS Classification
Health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 0
Fire: 0
Reactivity Hazard: 0

Labeling according to Regulation (EC) No 1272/2008[CLP]
Hazard pictogram

Signal word Danger

Hazard statements
May cause cancer H350

Precautionary statements

Prevention
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required

Response
P308+P313 IF exposed or concerned: Get medical advice/attention
Storage
P405 Store locked up

Disposal
P501 - Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral oil</td>
<td>8042-47-5</td>
<td>232-455-8</td>
<td>649-221-00-X</td>
<td>90-100%</td>
<td>Carc. 1B</td>
<td>--</td>
</tr>
</tbody>
</table>

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 room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters
None

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Deparaffinization reagent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Viscous liquid</td>
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<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporate rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient:n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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: Mineral oil**
**Oral LD50**
LD50 Oral - Rat - male and female - > 5,000 mg/kg (OECD Test Guideline 401) Effects due to ingestion may include: laxative effect, gastrointestinal disturbance.

**Inhalation LC50**
LC50 Inhalation - Rat - male and female - 4 h - > 5 mg/l (OECD Test Guideline 403) Aspiration may lead to: lipid pneumonia.

**Dermal LD50**
LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

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

**Repeated dose 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: PY8047000

12. ECOLOGICAL INFORMATION

**Toxicity**
Toxicity to fish: static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (OECD Test Guideline 203)  Toxicity to daphnia and other aquatic invertebrates: static test LC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)

**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
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), TDG | Not dangerous goods during transportation |
| UN number                | None                                      |
| UN proper shipping name  | None                                      |
| Transport hazard class   | None                                      |
| Packing group            | None                                      |
| Environmental hazards    | None                                      |
| Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code | None |
| Special precaution for user | None                                    |

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.

WHMIS Hazard Class None

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
Revision date (Initials) 4/13/18 (LR)
Reason for revision Application of WHMIS labeling 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.
SAFETY DATA SHEET
Date: April 13, 2018

1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Wash Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Number:</td>
<td>CD201, CD501 kit component</td>
</tr>
<tr>
<td>Unit Size:</td>
<td>5 mL, 12 mL</td>
</tr>
<tr>
<td>Manufacturer/Supplier:</td>
<td>Biotium, Inc.</td>
</tr>
<tr>
<td></td>
<td>46117 Landing Parkway, Fremont, CA 94538, USA</td>
</tr>
<tr>
<td></td>
<td>Phone: 1-510-265-1027, Fax: 1-510-265-1352</td>
</tr>
<tr>
<td></td>
<td>Web: <a href="http://www.biotium.com">http://www.biotium.com</a></td>
</tr>
</tbody>
</table>

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS Classification

- Signal word: None
- Health hazards: None
- Physical hazards: None
- Hazard statements: None
- Precautionary statements: None

WHMIS classification: None

GHS hazard pictogram: None

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

Classification according to Directive 1999/45/EC: None

HMIS Classification

- Health hazard: 0
- Flammability: 0
- Physical hazards: 0

NFPA Rating

- Health hazard: 0
- Fire: 0
- Reactivity Hazard: 0

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

- Hazard pictogram: None
- Signal word: None
- Hazard statements: None
- Precautionary statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

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 °C.

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

Components with workplace control parameters
None

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wash Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
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<tr>
<td>pH</td>
<td>7-8</td>
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<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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

### 12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>No information available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>No information available</td>
</tr>
<tr>
<td>Biodegradation</td>
<td>No information available</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>No information available</td>
</tr>
<tr>
<td>Results of PBT and vPvB assessment</td>
<td>No information available</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>No information available</td>
</tr>
<tr>
<td>Additional information</td>
<td>No information available</td>
</tr>
</tbody>
</table>

### 13. DISPOSAL CONSIDERATIONS

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

### 14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>IATA, IMDG, DOT (US), TDG</th>
<th>Not dangerous goods during transportation</th>
</tr>
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<tbody>
<tr>
<td>UN number</td>
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<tr>
<td>UN proper shipping name</td>
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</tr>
<tr>
<td>Transport hazard class</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>None</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code</td>
<td>None</td>
</tr>
<tr>
<td>Special precaution for user</td>
<td>None</td>
</tr>
</tbody>
</table>

### 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.

**WHMIS Hazard Class**

None

### 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  
Revision date (Initials) 4/13/18 (LR)  
Reason for revision Application of WHMIS labeling requirements

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17. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Binding Buffer  
Catalog Number: CD201, CD501 kit component  
Unit Size: 7 mL, 15 mL  
Manufacturer/Supplier: Biotium, Inc.  
46117 Landing Parkway, Fremont, CA 94538, USA  
Phone: 1-510-265-1027, Fax: 1-510-265-1352  
Web: http://www.biotium.com

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

18. HAZARDS IDENTIFICATION

GHS Classification  
Signal word: Warning  
Health hazards  
Acute oral toxicity Category 4  
Skin irritation Category 2  
Eye irritation Category 2A

Physical hazards: None

Hazard statements  
H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation

Precautionary statements  
Prevention  
P264 - Wash hands thoroughly after handling  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P273 - Avoid release to the environment  
P270 - Do not eat, drink or smoke when using this product

Response  
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing  
P330 - Rinse mouth

Storage  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Disposal  
P501 - Dispose of contents/container to an approved waste disposal plant

WHMIS classification: None  
GHS hazard pictogram
### Classification according to Regulation (EC) No 1272/2008 [CLP]

- **Acute Tox. 4**
- **Skin Irrit. 2**
- **Eye Irrit. 2**

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

None

### HMIS Classification

- **Health hazard:** 0
- **Flammability:** 0
- **Physical hazards:** 0

### NFPA Rating

- **Health hazard:** 0
- **Fire:** 0
- **Reactivity Hazard:** 0

### Labeling according to Regulation (EC) No 1272/2008 [CLP]

**Hazard pictogram**

### Signal word

- **Warning**

### Hazard statements

- **H302** - Harmful if swallowed
- **H315** - Causes skin irritation
- **H319** - Causes serious eye irritation

### Precautionary statements

#### Prevention

- **P264** - Wash hands thoroughly after handling
- **P280** - Wear protective gloves/protective clothing/eye protection/face protection
- **P273** - Avoid release to the environment
- **P270** - Do not eat, drink or smoke when using this product

#### Response

- **P301 + P310** - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- **P302 + P352** - IF ON SKIN: Wash with plenty of soap and water
- **P305 + P351 + P338** - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- **P330** - Rinse mouth

#### Storage

- **P403 + P233** - Store in a well-ventilated place. Keep container tightly closed

#### Disposal

- **P501** - Dispose of contents/ container to an approved waste disposal plant
19. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guanidine hydrochloride</td>
<td>50-01-1</td>
<td>200-002-3</td>
<td>607-148-00-0</td>
<td>20-50%</td>
<td>--</td>
<td>Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2</td>
</tr>
</tbody>
</table>

20. 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.

21. 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.

22. 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.

23. 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 room temperature

24. EXPOSURE CONTROLS/PERSONAL PROTECTION

   Components with workplace control parameters
   None

   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.

### 25. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Binding Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
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<tr>
<td>pH</td>
<td>5-7</td>
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<td>Boiling point</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Evaporate rate</td>
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<td>Flammability</td>
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<td>Explosive limits</td>
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<tr>
<td>Vapor pressure</td>
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<td>Vapor density</td>
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<td>Solubility</td>
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<td>Partition coefficient:n-octanol/water</td>
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<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
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<tr>
<td>Explosive properties</td>
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</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 26. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
Contact with acids or bleach liberates toxic gases.

**Conditions to avoid**
Heat, flames and sparks.

**Materials to avoid**
Acids or bleach.

**Hazardous decomposition products**
Contact with acids or bleach liberates toxic gases. Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available

### 27. TOXICOLOGICAL INFORMATION

**Acute toxicity (guanidine hydrochloride)**

<table>
<thead>
<tr>
<th>Oral LD50</th>
<th>LD50 Oral Rat: 1,120 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation LC50</td>
<td>LC50 Inhalation - Rat - female - 4 h - 3.181 mg/l (OECD Test Guideline 403)</td>
</tr>
</tbody>
</table>
28. ECOLOGICAL INFORMATION

**Toxicity**
LC50 - Leuciscus idus (Golden orfe) - 1,759 mg/l

**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

29. DISPOSAL CONSIDERATIONS

Contact with acids or bleach liberates toxic gases. DO NOT ADD acids or bleach to any liquid wastes containing this product.

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

30. TRANSPORT INFORMATION

**IATA, IMDG, DOT (US), TDG**
Not dangerous goods during transportation

**UN number**
None

**UN proper shipping name**
None

**Transport hazard class**
None

**Packing group**
None

**Environmental hazards**
None

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code**
None

**Special precaution for user**
None
31. REGULATION INFORMATION

US Federal Regulations
US Toxic Substances Control Act (TSCA): Guanidine hydrochloride
SARA 302: No chemicals were found.
SARA 313: No chemicals were found.
SARA 311/312 Hazards: Acute health hazard.

WHMIS Hazard Class None

32. 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
Revision date (Initials) 4/13/18 (LR)
Reason for revision Application of WHMIS labeling requirements

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SAFETY DATA SHEET
Date: April 13, 2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: DNAse Buffer
Catalog Number: CD201, CD501 kit component
Unit Size: 2 mL, 5 mL
Manufacturer/Supplier: Biotium, Inc.
46117 Landing Parkway, Fremont, CA 94538, USA
Phone: 1-510-265-1027, Fax: 1-510-265-1352
Web: http://www.biotium.com

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS Classification
Signal word None
Health hazards None
Physical hazards None
Hazard statements None
Precautionary statements None
WHMIS classification None
GHS hazard pictogram None

Classification according to Regulation (EC) No 1272/2008[CLP] None
Classification according to Directive 1999/45/EC None

HMIS Classification
Health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 0
Fire: 0
Reactivity Hazard: 0

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

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 room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
None

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>DNAse Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
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<td>Odor threshold</td>
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<tr>
<td>pH</td>
<td>7-8</td>
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<td>Melting point/freezing</td>
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<tr>
<td>Boiling point</td>
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</table>
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 carcinogen or potential 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.
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

13. DISPOSAL CONSIDERATIONS

Non-hazardous waste. Consult local state or national regulation for proper disposal.

14. TRANSPORT INFORMATION

- **IATA, IMDG, DOT (US), TDG**: Not dangerous goods during transportation
- **UN number**: None
- **UN proper shipping name**: None
- **Transport hazard class**: None
- **Packing group**: None
- **Environmental hazards**: None
- **Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code**: None
- **Special precaution for user**: None

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.
  - WHMIS Hazard Class: None

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
Revision date (Initials) 4/13/18 (LR)
Reason for revision Application of WHMIS labeling 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.
SAFETY DATA SHEET
Date: April 13, 2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Protease
Catalog Number: CD201, CD501 kit component
Unit Size: 250 uL, 600 uL
Manufacturer/Supplier: Biotium, Inc.
    46117 Landing Parkway, Fremont, CA 94538, USA
    Phone: 1-510-265-1027, Fax: 1-510-265-1352
    Web: http://www.biotium.com

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS Classification
Signal word Danger
Health hazards
Acute oral toxicity: Category 4
Skin irritation Category 2
Serious eye damage Category 1
Respiratory sensitisation Category 1
Specific target organ toxicity – single exposure: Category 3, Respiratory system
Acute aquatic toxicity Category 1
Chronic aquatic toxicity Category 2

Physical hazards None

Hazard statements
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H400 - Very toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing / eye protection / face protection
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P273 - Avoid release to the environment
P270 - Do not eat, drink or smoke when using this product

Response
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
P330 - Rinse mouth
P332 + P313 - If skin irritation occurs, get medical advice / attention.
P342 + P311 – If experiencing respiratory symptoms, call a POISON CENTER or doctor / physician.
Storage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Disposal
P501 - Dispose of contents/ container to an approved waste disposal plant

WHMIS classification
Acute toxicity - inhalation - Category 2
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2B
Respiratory sensitization - Category 1

GHS hazard pictogram

Classification according to Regulation (EC) No 1272/2008[CLP]  None
Classification according to Directive 1999/45/EC  None

HMIS Classification
Health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 0
Fire: 0
Reactivity Hazard: 0

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

Hazard pictogram

Signal word  Danger

Hazard statements
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.

Precautionary statements
Prevention
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing / eye protection / face protection
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P273 - Avoid release to the environment
P270 - Do not eat, drink or smoke when using this product

Response
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
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<tr>
<td>Alkaline Protease</td>
<td>9014-01-1</td>
<td>232-752-2</td>
<td>647-012-00-8</td>
<td>1-10%</td>
<td>Xi; R37/38-41 R42</td>
<td>Skin Irrit. 2 Eye Dam. 1 STOT SE 3 Resp. Sens. 1</td>
</tr>
</tbody>
</table>

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 room temperature.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

**Substance:** Subtilisins

**CAS no.** 9014-01-1

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<thead>
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<th>Country</th>
<th>Austria</th>
<th>Belgium</th>
<th>Denmark</th>
<th>European Union</th>
<th>France</th>
<th>Germany</th>
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<td>0.00006 mg/m³</td>
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<tr>
<td>Limit value, short term</td>
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<td>--</td>
<td>0.00006 mg/m³</td>
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<td>--</td>
<td>--</td>
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</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Ireland</th>
<th>Poland</th>
<th>Spain</th>
<th>Sweden</th>
<th>Netherlands</th>
<th>Switzerland</th>
<th>United Kingdom</th>
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<tbody>
<tr>
<td>Limit value, 8 hours</td>
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<td>--</td>
<td>1 glycine unit/m³</td>
<td>--</td>
<td>--</td>
<td>0.00004 mg/m³</td>
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<tr>
<td>Limit value, short term</td>
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<td>0.00006 mg/m³</td>
<td>1 glycine unit/m³ (1)</td>
<td>--</td>
<td>0.00006 mg/m³</td>
<td>--</td>
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</tbody>
</table>

**Australia** (1) Ceiling limit value
**Canada - Ontario** (1) Ceiling limit value
**Canada - Québec** (1) Ceiling limit value
**Ireland** (1) 15 minutes reference period
**New Zealand** (1) Ceiling limit value
**People's Republic of China** (1) 15 minutes average value
**Spain** sen
**Sweden** (1) 15 minutes average value
**USA - NIOSH** (1) 60 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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Protease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
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</table>
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**

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>1,800 mg/kg (OECD Test Guideline 401)</td>
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<tr>
<td>Inhalation LC50</td>
<td>No data available</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>No data available</td>
</tr>
<tr>
<td>Other information on acute toxicity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**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 a 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

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish: semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 8.2 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates: semi-static test EC50 - Daphnia magna (Water flea) - 0.170 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae: static test EC50 - Pseudokirchneriella subcapitata - 0.83 mg/l - 72 h (OECD Test Guideline 201)

Persistence and degradability No information available
Biodegradation
Aerobic - Exposure time 29 d
Result: 100 % - Readily biodegradable
(OECD Test Guideline 301B)

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

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), TDG Not dangerous goods during transportation
UN number None
UN proper shipping name None
Transport hazard class None
Packing group None
Environmental hazards None
Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code None
Special precaution for user None

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.

WHMIS Hazard Class
Acute toxicity - inhalation - Category 2
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2B
Respiratory sensitization - Category 1

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
Revision date (Initials) 4/13/18 (LR)
Reason for revision Application of WHMIS labeling 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.
SAFETY DATA SHEET
Date: April 13, 2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: DNase I
Catalog Number: CD201, CD501 kit component
Unit Size: 1 vial
Manufacturer/Supplier: Biotium, Inc.
46117 Landing Parkway, Fremont, CA 94538, USA
Phone: 1-510-265-1027, Fax: 1-510-265-1352
Web: http://www.biotium.com

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS Classification
Signal word None
Health hazards None
Physical hazards None
Hazard statements None
Precautionary statements None

WHMIS classification None
GHS hazard pictogram None

Classification according to Regulation (EC) No 1272/2008[CLP] None
Classification according to Directive 1999/45/EC None

HMIS Classification
Health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 0
Fire: 0
Reactivity Hazard: 0

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dnase I</td>
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<td>232-667-0</td>
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<td>90-100%</td>
<td>--</td>
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</tr>
</tbody>
</table>

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 room temperature.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**
None

**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**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>DNase I</th>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
</tbody>
</table>
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 a 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

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

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), TDG
Not dangerous goods during transportation

UN number
None

UN proper shipping name
None

Transport hazard class
None

Packing group
None

Environmental hazards
None

Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code
None

Special precaution for user
None

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.

WHMIS Hazard Class
None

16. OTHER INFORMATION

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

Prepared by: Regulatory Department
Biotium Inc.

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Reason for revision Application of WHMIS labeling 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.