

## SAFETY DATA SHEET

Date: April 19, 2022

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Deparaffinization Reagent  
**Catalog Number:** 99860-30ML, 99860-60ML  
**Unit Size:** 30 mL, 60 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** None  
**Signal word** None  
**Health hazards** None  
**Physical hazards** None  
**Hazard statements** None  
**Precautionary statements** None  
**GHS hazard pictogram** None

**WHMIS classification** None

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

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

Name	CAS No.	EC No.	Weight %	Classification
Mineral oil	8042-47-5	232-455-8	90-100%	N/A

### 4. FIRST- AID MEASURES

**General advice**  
 Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.  
**If inhaled**  
 If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
**In case of skin contact**  
 Wash off with soap and plenty of water. Consult a physician.  
**In case of eye contact**  
 Flush eyes with water as a precaution.  
**If swallowed**

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

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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 room temperature.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Substance: Mineral Oil

CAS no. 8042-47-5

Country	German (AGS)	Germany (DFG)	Romania	Switzerland
Limit value, 8 hours	5 (1) mg/m <sup>3</sup>	5 (1) mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	5 (1) mg/m <sup>3</sup>
Limit value, short term	20 (1)(2) mg/m <sup>3</sup>	20 (1)(2) mg/m <sup>3</sup>	10 (1) mg/m <sup>3</sup>	

Germany (AGS) (1) Respirable fraction (2) 15 minutes average value.

Germany (DFG) (1) Respirable fraction (2) 15 minutes average value.

Romania (1) 15 minutes average value.

Switzerland (1) inhalable fraction.

### 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	Deparaffinization Reagent
Appearance	Viscous liquid
Odor	Odorless
Odor threshold	No data available
pH	No data available
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	No data available
Partition coefficient:n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 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)

**Inhalation LC50** LC50 Inhalation - Rat - male and female - 4 h - > 5 mg/l (OECD Test Guideline 403)

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

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

**Skin corrosion/irritation** Skin - Rabbit  
Result: No skin irritation - 72 h  
(OECD Test Guideline 404)

**Serious eye damage/eye irritation** Eyes - Rabbit

**Respiratory or skin sensitization**Result: No eye irritation - 72 h  
(OECD Test Guideline 405)

Buehler Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

**Germ cell mutagenicity**

Test Type: Ames test

Test system: *S. typhimurium*

Metabolic activation: Metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal

Method: OECD Test Guideline 474

**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**Repeated dose toxicity - Rat - male and female - Oral - 24 Months - NOAEL (No observed adverse effect level) -  $\geq$  1,200 mg/kgRepeated dose toxicity - Rat - male and female - Dermal - 13 Weeks - NOAEL (No observed adverse effect level) -  $<$  125 mg/kg

RTECS: PY8047000

Aspiration may lead to: lipid pneumonia, Effects due to ingestion may include: laxative effect, Gastrointestinal disturbance

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**12. ECOLOGICAL INFORMATION****Toxicity****Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available

<b>Mobility in soil</b>	No information available
<b>Results of PBT and vPvB assessment</b>	No information available
<b>Other adverse effects</b>	No information available
<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

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

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## 15. REGULATION INFORMATION

### US Federal Regulations

US Toxic Substances Control Act (TSCA): White mineral oil: 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

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## 16. OTHER INFORMATION

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

Prepared by:      Regulatory Department  
                         Biotium Inc.

Version no.      3

Revision date (Initials)      4/18/22 (ET)

Reason for revision      Updates to classification and labeling in section 2 and 3. Updates to toxicological and ecological information in sections 11 and 12. Updates to component name and catalog numbers. Update to current SDS template.

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 18, 2022

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** CELLDATA FFPE Binding Buffer  
**Catalog Number:** 99863  
**Unit Size:** 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.

### 2. HAZARDS IDENTIFICATION

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

**WHMIS classification** None

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

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

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

**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  
P270 - Do not eat, drink or smoke when using this product

Response

P330 - Rinse mouth.

P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
P301 + P312 - 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  
P332 + P313 - IF SKIN irritation occurs: Get medical advice/attention.  
P337 + P313 - IF eye irritation persists: Get medical advice/attention.  
P362- Take off contaminated clothing and wash before reuse.

#### Disposal

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

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS No.	EC No.	Weight %	Classification
Guanidine hydrochloride	50-01-1	200-002-3	20-50%	Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2

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### 4. FIRST-AID MEASURES

#### **General advice**

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

#### **If inhaled**

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

#### **In case of skin contact**

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

#### **In case of eye contact**

Flush eyes with water as a precaution.

#### **If swallowed**

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

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### 5. FIREFIGHTING MEASURES

#### **Suitable extinguishing media**

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

#### **Special protective equipment for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

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### 6. ACCIDENTAL RELEASE MEASURES

#### **Personal precautions**

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

#### **Environmental precautions**

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

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

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

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### 7. HANDLING AND STORAGE

#### **Precautions for safe handling**

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

#### **Conditions for safe storage**

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

Store at room temperature

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## 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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	CELLDATA FFPE Binding Buffer
Appearance	Liquid
Odor	Odorless
Odor threshold	No data available
pH	5-7
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

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

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## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity (guanidine hydrochloride)**

**Oral LD50** LD50 Oral - Rat - female - 773.6 mg/kg  
(OECD Test Guideline 401)

**Inhalation LC50** LC50 Inhalation - Rat - female - 4 h - 3.181 mg/l  
(OECD Test Guideline 403)

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

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

**Skin corrosion/irritation**

Skin - Rabbit

Result: Skin irritation - 24 h  
(US-EPA)

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Causes serious eye irritation.  
(OECD Test Guideline 405)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Respiratory or skin sensitization**

Buehler Test - Guinea pig

Result: negative  
(OECD Test Guideline 406)

**Germ cell mutagenicity**

Not mutagenic in Ames Test.

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster fibroblasts

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

**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**

Repeated dose toxicity - Rat - male and female - Oral - 90 Days - NOAEL (No observed adverse effect level) - 100 mg/kg

RTECS: MF4300000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption:

The following applies to parasympathomimetic agents in general: after oral uptake and depending on the dose, these physiologically highly active substances cause salivation, rhinorrhoea, and in some cases also lacrimation, perspiration, contraction of the pupils, dizziness, vomiting, colics, diarrhoea. Risk of collapse and cardiac arrest. Inhalation of dusts and aerosols leads to the above symptoms. Respiration is accelerated at first, then slows down.

Handle in accordance with good industrial hygiene and safety practice.

Liver - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

RTECS: MF4300000

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## 12. ECOLOGICAL INFORMATION

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

Toxicity to daphnia and other aquatic invertebrates  
static test EC50 - Daphnia magna (Water flea) - 70.2 mg/l - 48 h  
(OECD Test Guideline 202)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Guanidinium nitrate

Toxicity to algae  
static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 33.5 mg/l - 72 h  
(Regulation (EC) No. 440/2008, Annex, C.3)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Guanidinium nitrate

Toxicity to bacteria  
static test EC10 - Pseudomonas putida - ca. 7,125 mg/l - 18 h  
(DIN 38412)

**Persistence and degradability** No information available

**Bioaccumulative potential** 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

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.

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## 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

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## 15. 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, Chronic Health Hazard

**WHMIS Hazard Class** None

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## 16. OTHER INFORMATION

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

Prepared by: Regulatory Department  
Biotium Inc.

Version no. 3

Revision date (Initials) 4/18/22 (ET)

Reason for revision Updates to classification and labeling in section 2 and 3. Updates to toxicological and ecological information in sections 11 and 12. Updates to component name and catalog numbers. Update to current SDS template.

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 18, 2022

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** CELLDATA Wash Buffer  
**Catalog Number:** 99864  
**Unit Size:** 12 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** None  
**Signal word** None  
**Health hazards** None  
**Physical hazards** None  
**Hazard statements** None  
**Precautionary statements** None  
**GHS hazard pictogram** None

**WHMIS classification** None

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

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

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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 room temperature

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## 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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	CELLDATA Wash Buffer
Appearance	Liquid
Odor	Odorless
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	No data available
Partition coefficient:n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides  
 Other decomposition products - No data available

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Oral LD50** None

**Inhalation LC50** None

**Dermal LD50** None

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

**Skin corrosion/irritation** No data available

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

**Respiratory or skin sensitization** No data available

**Germ cell mutagenicity** No data available

### Carcinogenicity

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

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

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

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

**Reproductive toxicity** No data available

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

No data available

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

No data available

### Aspiration hazard

No data available

### Potential health effects

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

Ingestion May be harmful if swallowed.

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

Eyes May cause eye irritation.

### Additional Information

RTECS: None

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## 12. ECOLOGICAL INFORMATION

**Toxicity** No information available  
**Persistence and degradability** No information available  
**Bioaccumulative potential** 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), 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

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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.

**WHMIS Hazard Class** None

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## 16. OTHER INFORMATION

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

Prepared by: Regulatory Department  
Biotium Inc.

Version no. 3

Revision date (Initials) 4/18/22 (ET)

Reason for revision Updates to component name and catalog numbers. Update to current SDS template.

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 21, 2022

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** DNASTORM™ FFPE CAT5™ Lysis Buffer  
**Catalog Number:** 99869-12ML, 99869-25ML  
**Unit Size:** 12 mL, 25 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** None  
**Signal word** None  
**Health hazards** None  
**Physical hazards** None  
**Hazard statements** None  
**Precautionary statements** None  
**GHS hazard pictogram** None

#### WHMIS classification

Sodium dodecyl sulfate:  
Combustible dusts  
Acute toxicity - oral - Category 4  
Skin corrosion / irritation - Category 2  
Serious eye damage / eye irritation - Category 2A

#### Hazard statements

H302 – Harmful if swallowed  
H315 – Causes skin irritation  
H319 – Causes serious eye irritation

#### Precautionary statements

P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
P330 - Rinse mouth.  
P362 - Take off contaminated clothing and wash before reuse.  
P501 - Dispose of contents/container to approved waste disposal facility.  
P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.  
P302+P352 - IF ON SKIN: wash with plenty of soap and water.  
P332+P313 - IF SKIN irritation occurs: Get medical advice/attention  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313- IF eye irritation persists: Get medical advice/attention.

#### Hazard pictogram





**NFPA Rating**

Sodium dodecyl sulfate

Health hazard: 0

Fire: 0

Reactivity Hazard: 0

Glycerol:

Health hazard: 1

Fire: 1

Reactivity Hazard: 0

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

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Name	CAS No.	EC No.	Weight %	Classification
Sodium dodecyl sulfate	151-21-3	205-788-1	1-5%	WHMIS Classification Combustible dusts Acute toxicity - oral - Category 4 Skin corrosion / irritation - Category 2 Serious eye damage / eye irritation - Category 2A
Glycerol	56-81-5	200-289-5	1-5%	N/A

---

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

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

**If inhaled**

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

**In case of skin contact**

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

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

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

---

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

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

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

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

### Environmental precautions

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

### Methods and materials for containment and cleaning up

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

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

### Conditions for safe storage

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

Store at room temperature

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Substance: Glycerol

CAS no. 56-81-5

Country	Australia	Austria	Belgium	Canada - Ontario	Canada - Québec	Finland	France
Limit value, 8hours	10 (1) mg/m <sup>3</sup>		10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Limit value, short term							

Country	Germany (AGS)	Germany (DFG)	Ireland	New Zealand	Poland	Singapore	South Korea
Limit value, 8hours	200 (1) mg/m <sup>3</sup>	200 (1) mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	10 (1) mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Limit value, short term	400 (1)(2) mg/m <sup>3</sup>	400 (1)(2) mg/m <sup>3</sup>					

Country	Spain	Switzerland	United Kingdom	USA-OSHA
Limit value, 8hours	10 mg/m <sup>3</sup>	50 inhalable aerosol	10 mg/m <sup>3</sup>	15 inhalable dust 5 respirable dust
Limit value, short term		100 inhalable aerosol		

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

Germany (AGS) (1) Inhalable fraction (2) 15 minutes average value.

Germany (DFG) (1) Inhalable fraction (2) 15 minutes average value.

New Zealand (1) The value for inhalable dust containing no asbestos and less than 1% free silica.

### 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	RNAstorm™ FFPE Lysis Buffer
Appearance	Liquid
Odor	Odorless
Odor threshold	No data available
pH	6.4-7.4
Melting point/freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporate rate	No data available
Flammability	No data available
Explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	Water soluble
Partition coefficient:n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

## 11. TOXICOLOGICAL INFORMATION

### Sodium dodecyl sulfate

#### Acute toxicity

##### Oral LD50

LD50 Oral - Rat - female - 977 mg/kg  
(OECD Test Guideline 401)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute toxicity estimate Inhalation - 4 h - 1.51 mg/l - dust/mist

##### Inhalation LC50

LC50 Inhalation Rat: > 3,900 mg/m<sup>3</sup>/1H

##### Dermal LD50

LD50 Dermal - Rabbit - > 2,000 mg/kg  
(OECD Test Guideline 404)

##### Other information on acute toxicity

No data available

#### Skin corrosion/irritation

Skin - Rabbit  
Result: Irritations  
(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit  
Result: Irreversible effects on the eye  
(OECD Test Guideline 405)

**Respiratory or skin sensitization**

Maximization Test

Result: negative

Remarks: (IUCLID)

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test):

Test system: Mouse lymphoma test

Method: OECD Test Guideline 476

Result: negative

**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

**Glycerol**

**Acute toxicity**

**Oral LD50** LD50 Oral - Rat – 12600 mg/kg  
LD50 Oral – Mice – 4090 mg/kg  
TDLo Oral – Human – 1428 mg/kg

**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: MA8050000

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## 12. ECOLOGICAL INFORMATION

### Sodium dodecyl sulfate

#### 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: flow-through test EC50 - Daphnia dubia (Water flea) - 5.55 mg/l - 48 h Remarks: (ECHA); flow-through test NOEC - Ceriodaphnia dubia (water flea) - 0.88 mg/l - 7 d (US-EPA)

Toxicity to algae: ErC50 - Desmodesmus subspicatus (green algae) - > 120 mg/l - 72h (DIN 38412)

Toxicity to bacteria: EC50 - activated sludge - 130 mg/l - 3 h (OECD Test Guideline 209)

**Persistence and degradability** aerobic - Exposure time 28 d  
Result: 95 % - Readily biodegradable.  
(OECD Test Guideline 301B)

**Bioaccumulative potential** Cyprinus carpio (Carp) - 72 h  
(Sodium dodecyl sulphate)  
Bioconcentration factor (BCF): 3.9 - 5.3

**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

### Glycerol

#### Toxicity

Toxicity threshold (cell multiplication inhibition test) Algae (Microcystis aeruginosa) 2900 mg/l

Toxicity threshold (cell multiplication inhibition test) Protozoa (Entosiphon sulcatum) 3200 mg/l

LC50; Species: Goldfish; Concentration: >5000 mg/L for 24 hr - modified ASTM D 1345

LC50; Species: Daphnia magna (Water flea, age < or = 24 hr); Conditions: freshwater, static, 20-22 °C;

Concentration: >10000 mg/L for 24 hr /formulated product/

**Persistence and degradability** aerobic - Exposure time 2 d  
Result: 90 % - Readily biodegradable.  
Remarks: (ECHA)

**Bioaccumulative potential** No information available

<b>Mobility in soil</b>	No information available
<b>Results of PBT and vPvB assessment</b>	No information available
<b>Other adverse effects</b>	No information available
<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

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

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## 15. REGULATION INFORMATION

### US Federal Regulations

US Toxic Substances Control Act (TSCA): Sodium dodecyl sulfate: listed  
Glycerol: listed

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312 Hazards: No chemicals were found.

### WHMIS Hazard Class

Sodium dodecyl sulfate:

Combustible dusts

Acute toxicity - oral - Category 4

Skin corrosion / irritation - Category 2

Serious eye damage / eye irritation - Category 2A

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## 16. OTHER INFORMATION

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

Prepared by: Regulatory Department  
Biotium Inc.

Version no. 3

Revision date (Initials) 4/21/22 (ET)

Reason for revision Addition of glycerol and updates to classification and labeling in section 2 and 3.  
Updates to toxicological and ecological information in sections 11 and 12.  
Updates to component name and catalog numbers. Update to current SDS template.

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 21, 2022

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** DNASTORM™ FFPE Proteinase K  
**Catalog Number:** 99870  
**Unit Size:** 1.2 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****Alkaline protease**

Respiratory sensitization : Category 1

Skin sensitization : Category 1

**Signal word** Danger**Health hazards** None**Physical hazards** None**Hazard statements**

H317 – May cause an allergic reaction

H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Precautionary statements**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P285 - In case of inadequate ventilation wear respiratory protection.

P302+P352 - IF ON SKIN: wash with plenty of soap and water.

P363 - Wash contaminated clothing before reuse.

P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P333+P313 - IF SKIN irritation or rash occurs: Get medical advice/attention.

P342+P311 - IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

P501 - Dispose of contents/container to approved waste disposal facility.

**GHS hazard pictogram****WHMIS classification** None**NFPA Rating****Alkaline protease**

Health hazard: 0

Fire: 0

Reactivity Hazard: 0

**Glycerol**

Health hazard: 1

Fire: 1

Reactivity Hazard: 0

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

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

**Hazard pictogram**

**Signal word** None

**Hazard statements** None

**Precautionary statements** None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS No.	EC No.	Weight %	Classification
Alkaline protease	39450-01-6	254-457-8	1-10%	GHS Classifications Respiratory sensitization : Category 1 Skin sensitization : Category 1
Glycerol	56-81-5	200-289-5	20%	N/A

### 4. FIRST-AID MEASURES

**General advice**

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

**If inhaled**

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

**In case of skin contact**

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

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

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

### 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**

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

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

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

**Environmental precautions**

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

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

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

### 7. HANDLING AND STORAGE

**Precautions for safe handling**

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

**Conditions for safe storage**

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

Store at 4°C.



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Substance: Glycerol

CAS no. 56-81-5

Country	Australia	Austria	Belgium	Canada - Ontario	Canada - Québec	Finland	France
Limit value, 8hours	10 (1) mg/m <sup>3</sup>		10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Limit value, short term							

Country	Germany (AGS)	Germany (DFG)	Ireland	New Zealand	Poland	Singapore	South Korea
Limit value, 8hours	200 (1) mg/m <sup>3</sup>	200 (1) mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	10 (1) mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Limit value, short term	400 (1)(2) mg/m <sup>3</sup>	400 (1)(2) mg/m <sup>3</sup>					

Country	Spain	Switzerland	United Kingdom	USA-OSHA
Limit value, 8hours	10 mg/m <sup>3</sup>	50 inhalable aerosol	10 mg/m <sup>3</sup>	15 inhalable dust 5 respirable dust
Limit value, short term		100 inhalable aerosol		

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

Germany (AGS) (1) Inhalable fraction (2) 15 minutes average value.

Germany6 (DDFG) (1) Inhalable fraction (2) 15 minutes average value.

New Zealand (1) The value for inhalable dust containing no asbestos and less than 1% free silica.

### 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	DNAstorm™ FFPE Proteinase K
Appearance	Liquid
Odor	Odorless
Odor threshold	No data available
pH	No data available
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	Soluble in water
Partition coefficient:n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Glycerol

**Oral LD50** LD50 Oral - Rat – 12600 mg/kg  
LD50 Oral – Mice – 4090 mg/kg  
TDLo Oral – Human – 1428 mg/kg

**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**

Glycerol

RTECS: MA8050000

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**12. ECOLOGICAL INFORMATION****Toxicity**

Glycerol

Toxicity threshold (cell multiplication inhibition test) Algae (*Microcystis aeruginosa*) 2900 mg/l

Toxicity threshold (cell multiplication inhibition test) Protozoa (*Entosiphon sulcatum*) 3200 mg/l

LC50; Species: Goldfish; Concentration: >5000 mg/L for 24 hr - modified ASTM D 1345

LC50; Species: *Daphnia magna* (Water flea, age < or = 24 hr); Conditions: freshwater, static, 20-22 °C;

Concentration: >10000 mg/L for 24 hr /formulated product/

**Persistence and degradability**

Glycerol

aerobic - Exposure time 2 d

Result: 90 % - Readily biodegradable.

Remarks: (ECHA)

**Bioaccumulative potential** 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.

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**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

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**15. REGULATION INFORMATION****US Federal Regulations**

US Toxic Substances Control Act (TSCA): Glycerol: 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

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**16. OTHER INFORMATION**

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

Refer to section 2 and section 3

Prepared by: Regulatory Department

	Biotium Inc.
Version no.	3
Revision date (Initials)	4/21/22 (ET)
Reason for revision	Updates to classification and labeling in section 2 and 3. Updates to toxicological and ecological information in sections 11 and 12. Updates to component name and catalog numbers. Update to current SDS template.

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 21, 2022

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** RNase A  
**Catalog Number:** 99871-600UL, 99871-1200UL  
**Unit Size:** 600 uL 1.2 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** None  
**Signal word** None  
**Health hazards** None  
**Physical hazards** None  
**Hazard statements** None  
**Precautionary statements** None  
**GHS hazard pictogram** None

**WHMIS classification** None**NFPA Rating**

Health hazard: 1  
Fire: 1  
Reactivity Hazard: 0

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

Name	CAS No.	EC No.	Weight %	Classification
Glycerol	56-81-5	200-289-5	20%	N/A

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

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

**If inhaled**

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

**In case of skin contact**

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

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

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

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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 4°C.

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**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.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Chemical Name	RNase A
Appearance	Liquid
Odor	Odorless
Odor threshold	No data available
pH	No data available
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	Soluble in water
Partition coefficient:n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Oral LD50** LD50 Oral - Rat – 12600 mg/kg  
LD50 Oral – Mice – 4090 mg/kg  
TDLo Oral – Human – 1428 mg/kg

**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: MA8050000

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**12. ECOLOGICAL INFORMATION****Toxicity**

Toxicity threshold (cell multiplication inhibition test) Algae (*Microcystis aeruginosa*) 2900 mg/l  
Toxicity threshold (cell multiplication inhibition test) Protozoa (*Entosiphon sulcatum*) 3200 mg/l  
LC50; Species: Goldfish; Concentration: >5000 mg/L for 24 hr - modified ASTM D 1345  
LC50; Species: *Daphnia magna* (Water flea, age < or = 24 hr); Conditions: freshwater, static, 20-22 °C;  
Concentration: >10000 mg/L for 24 hr /formulated product/

**Persistence and degradability** aerobic - Exposure time 2 d  
Result: 90 % - Readily biodegradable.  
Remarks: (ECHA)

**Bioaccumulative potential** 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), 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

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**15. REGULATION INFORMATION****US Federal Regulations**

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**16. OTHER INFORMATION**

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Refer to section 2 and section 3

Prepared by: Regulatory Department  
Biotium Inc.

Version no. 3  
Revision date (Initials) 4/21/22 (ET)



Reason for revision	Addition of glycerol and updates to classification and labeling in section 2 and 3. Updates to toxicological and ecological information in sections 11 and 12. Updates to component name and catalog numbers. Update to current SDS template.
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