

**MATERIAL SAFETY DATA SHEET**

Date Revised: December 23, 2014

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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: AccuClear Buffer  
Catalog Number: 99978 / 99978-T  
Unit Size: 200 mL / 50 mL  
Manufacturer/Supplier: Biotium, Inc.  
3159 Corporate Place, Hayward, CA 94545, USA  
Phone: 1-510-265-1027, Fax: 1-510-265-1352  
Web: <http://www.biotium.com>

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**2. HAZARDS IDENTIFICATION**

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

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

HMIS Classification  
Health hazard: 0  
Flammability: 0  
Physical hazards: 0  
NFPA Rating  
Health hazard: 0  
Fire: 0  
Reactivity Hazard: 0

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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

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**4. FIRST-AID MEASURES**

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

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

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## 5. FIREFIGHTING MEASURES

Suitable extinguishing media  
Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.  
Special protective equipment for firefighters  
Wear self contained breathing apparatus for firefighting if necessary.

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions  
Avoid breathing vapors, mist or gas. Remove all sources of ignition.  
Environmental precautions  
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.  
Methods and materials for containment and cleaning up  
Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

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## 7. HANDLING AND STORAGE

Precautions for safe handling  
Avoid inhalation of vapor or mist.  
Avoid direct contact with substance.  
Conditions for safe storage  
Keep container tightly closed in a dry and well-ventilated place.  
Store at 4°C.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Substance	none
CAS no.	none
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	AccuClear Buffer
Appearance	Clear liquid
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling point	No information available
Flash point	No information available
Evaporate rate	No information available
Flammability	No information available
Explosive limits	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Solubility	Water soluble
Partition coefficient:n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

No data available.

### Materials to avoid

No data available

### Hazardous decomposition products

No data available

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Oral LD50            None

Inhalation LC50                      None  
Dermal LD50                      None  
Other information on acute toxicity                      no data available

Skin corrosion/irritation                      no data available  
Serious eye damage/eye irritation                      no data available  
Respiratory or skin sensitization                      no data available  
Germ cell mutagenicity                      no data available  
Carcinogenicity

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

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

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

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

Reproductive toxicity                      no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)  
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)  
no data available

Aspiration hazard

no data available

Potential health effects

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

Ingestion May be harmful if swallowed.

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

Eyes May cause eye irritation.

Additional Information

RTECS: None

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## 12. ECOLOGICAL INFORMATION

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

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## 13. DISPOSAL CONSIDERATIONS

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

## 14. TRANSPORT INFORMATION

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

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## 15. REGULATION INFORMATION

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

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## 16. OTHER INFORMATION

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

Prepared by: Regulatory Department  
Biotium Inc.  
Version no. 2  
Reason for revision Updated to new MSDS format.

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

**MATERIAL SAFETY DATA SHEET**

Date Revised: March 21, 2016

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: AccuClear Dye, 100X in DMSO  
Catalog Number: 99977/99977-T  
Unit Size: 1 mL/0.5 mL  
Manufacturer/Supplier: Biotium, Inc.  
3159 Corporate Place, Hayward, CA 94545, USA  
Phone: 1-510-265-1027, Fax: 1-510-265-1352  
Web: <http://www.biotium.com>

**2. HAZARDS IDENTIFICATION**

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

None

Classification according to Directive 1999/45/EC

None

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

Hazard pictogram

None

Signal word None

Hazard statements None

Precautionary statements None

HMIS Classification

Health hazard: 0

Flammability: 2

Physical hazards: 0

NFPA Rating

Health hazard: 0

Fire: 2

Reactivity Hazard: 0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Name	CAS No.	EC No.	Index No.	Weight %	Classification according to regulation (EC)No1278/2008
DMSO	67-68-5	200-664-3	--	>99%	NA

**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 Dimethylsulfoxide  
CAS no. 67-68-5

country	Austria	Belgium	Denmark	European Union	France	Germany
Limit value, 8hours	160mg/m3	-	160mg/m3	-	-	160mg/m3
Limit value, short term	-	-	320mg/m3	-	-	320mg/m3

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	United Kingdom
Limit value, 8hours	-	-	-	-	160mg/m3	-	-
Limit value, short term	-	-	-	-	500mg/m3	-	-

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

short term							
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## Personal protective equipment

### Hand protection

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

### Respiratory protection

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

### Eye protection

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

### Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	AccuClear Dye, 100X in DMSO
Appearance	Orange liquid
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling point	No information available
Flash point	No information available
Evaporate rate	No information available
Flammability	No information available
Explosive limits	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Solubility	Water soluble
Partition coefficient:n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides



Other decomposition products - no data available

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**11. TOXICOLOGICAL INFORMATION****Acute toxicity DMSO**

Oral LD50 rat - 14,500 mg/kg  
Inhalation LC50 Inhalation - rat - 4 h - 40250 ppm  
Dermal LD50 rabbit - > 5,000 mg/kg  
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 Salmonella typhimurium assay (Ames test): negative (+/- activation),  
DMSO is used as a neutral solvent in the Ames mutagen test

**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 Not considered to be directly embryotoxic and has been shown to be a successful cryoprotectant for mammalian semen and embryos

**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: PV6210000 (DMSO)

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**12. ECOLOGICAL INFORMATION**

Toxicity DMSO The LC50(96hrs) for ten species of fish range from 32500 to 43000ppm

Persistence and degradability no information available

Biodegradation no information available

Mobility in soil no information available

Results of PBT and vPvB assessment no information available

Other adverse effects no information available

Additional information no information available

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### 13. DISPOSAL CONSIDERATIONS

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

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### 14. TRANSPORT INFORMATION

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

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### 15. REGULATION INFORMATION

US Federal Regulations  
US Toxic Substances Control Act (TSCA): Not listed  
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### 16. OTHER INFORMATION

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

Prepared by: Regulatory Department  
Biotium Inc.  
Version no. 5  
Reason for revision Correction to hazard classification.

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