SAFETY DATA SHEET
Date: August 31, 2023

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: GloMelt™ Dye, 200X
Catalog Number: 99843-20uL, 99843-200uL
Unit Size: 20uL, 200uL
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
Flammable liquids - Category 4

NFPA Rating
Health hazard: 2
Fire: 2
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

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Weight %</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>67-68-5</td>
<td>200-664-3</td>
<td>20%</td>
<td>Flammable liquids - Category 4 (WHMIS)</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 -20°C.

8.  EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters  
Substance: Dimethylsulfoxide

<table>
<thead>
<tr>
<th>Country</th>
<th>Austria</th>
<th>Denmark</th>
<th>Finland</th>
<th>Germany (AGS)</th>
<th>Germany (DFG)</th>
<th>Sweden</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit value, 8 hours</td>
<td>50 ppm</td>
<td>50 ppm</td>
<td>50 ppm</td>
<td>50 ppm (1)</td>
<td>50 ppm (1)</td>
<td>50 ppm</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Limit value, short term</td>
<td>-</td>
<td>100 ppm</td>
<td>-</td>
<td>100 ppm (1)(2)</td>
<td>100 ppm (1)(2)</td>
<td>150 ppm (1)</td>
<td>100 ppm</td>
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<tr>
<td></td>
<td>160 mg/m3</td>
<td>160 mg/m3</td>
<td></td>
<td>160 mg/m3 (1)</td>
<td>160 mg/m3 (1)</td>
<td>160 mg/m3</td>
<td>160 mg/m3</td>
</tr>
<tr>
<td></td>
<td>320 mg/m3</td>
<td>320 mg/m3</td>
<td></td>
<td>320 mg/m3 (1)(2)</td>
<td>320 mg/m3 (1)(2)</td>
<td>500 mg/m3 (1)</td>
<td>320 mg/m3</td>
</tr>
</tbody>
</table>

Germany (AGS): (1) Skin (2) 15 minutes average value  
Germany (DFG): (1) Skin (2) 15 minutes average value  
Sweden: (1) 15 minutes average value

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

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

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

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

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>GloMelt™ Dye, 200X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</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>Soluble in water</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
Oral LD50 Rat – male and female – 28,300 mg/kg (OECD Test Guideline 401)
Inhalation LC50 Rat – male and female – 4 h - > 5.33 mg/l (OECD Test Guideline 403)
Dermal LD50 Rat – male and female – 40,000 mg/kg Remarks: (ECHA)
Other information on acute toxicity No data available

Skin corrosion/irritation
Skin – Rabbit
Result: slight irritation – 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes – Rabbit
Result: slight irritation – 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitization
Maximization Test – Guinea pig
Result: negative
(OECD Test Guideline 406)
Local lymph node assay (LLNA) – Mouse
Result: negative
(OECD Test Guideline 429)

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: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 479
Result: negative
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
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 - 18 Months - NOAEL (No observed adverse effect level) - 3,300 mg/kg - LOAEL (Lowest observed adverse effect level) - 9,900 mg/kg
Repeated dose toxicity - Monkey - male and female - Dermal - 18 Months - NOAEL (No observed adverse effect level) - >= 8,910 mg/kg - LOAEL (Lowest observed adverse effect level) - 990 mg/kg

Exposure to large amounts can cause; redness of skin, itching, burning, sedation,
Headache, Nausea, Dizziness
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Eyes - Eye disease - Based on Human Evidence

RTECS: PV6210000 (DMSO)

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish: static test LC50 - Danio rerio (zebra fish) - > 25,000 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates: static test EC50 - Daphnia magna (Water flea) - 24,600 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 17,000 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria EC50 - activated sludge - 10 - 100 mg/l - 30 min (ISO 8192)

Persistence and degradability
Biaccumulative potential
Bioaccumulative potential aerobic - Exposure time 28 d
Result: 31 % - Not readily biodegradable. (OECD Test Guideline 301D)

Mobility in soil
No information available
Results of PBT and vPvB assessment
No information available
Other adverse effects
No information available
Additional information
Stability in water - 0.12 - 1.2 h at 30 °C pH 7
Remarks: Hydrolyzes readily

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: DMSO: fire hazard, chronic health hazard

WHMIS Hazard Class Flammable liquids - Category 4
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) 8/31/2023 (JD)
Reason for revision Updated to new document 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: August 31, 2023

1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Goat IgG Control, 10 mg/mL
**Catalog Number:** 99844-20uL
**Unit Size:** 20 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](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
- **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 ingredients present at concentrations classified as harmful 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 -20°C.

8. **EXPOSURE CONTROLS/PERSO**

   **Components with workplace control parameters**
   Substance: none
   CAS no. 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>Goat IgG Control, 10 mg/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear solution</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
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<tr>
<td>pH</td>
<td>7.2</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>
</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
- **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

### 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 313/312: 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.**: 3
- **Revision date (Initials)**: 8/31/2023 (JD)
- **Reason for revision**: Updated to new document template.

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