SAFETY DATA SHEET
Date Revised: May 23, 2019

1. PRODUCT AND COMPANY IDENTIFICATION

   Product Name: GelGreen™ Nucleic Acid Gel Stain, 10,000X in DMSO
   Catalog Number: 41004
   Unit Size: 0.5 mL
   Manufacturer/Supplier: Biotium, Inc.
   46117 Landing Parkway, Fremont, CA 94538, USA
   Phone: 1-510-265-1027, Fax: 1-510-265-1352
   Web: http://www.biotium.com

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

   Classification according to Regulation (EC) No 1272/2008[CLP]
   Not classified

   Classification according to Directive 1999/45/EC
   None

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

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to regulation (EC)No1278/2008</th>
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</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>67-68-5</td>
<td>200-664-3</td>
<td>-</td>
<td>&gt;99%</td>
<td>NA</td>
</tr>
</tbody>
</table>

4. FIRST- AID MEASURES

   General advice
   Remove affected clothing and launder before reuse.
   If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration and seek medical care.  
**In case of skin contact**  
Wash off with soap and plenty of water. If irritation persists, seek medical care.  
**In case of eye contact**  
Flush eyes with water for 15 minutes. If irritation persists, seek medical care.  
**If swallowed**  
Do NOT induce vomiting. Rinse mouth with water. Seek medical care.  

5. **FIREFIGHTING MEASURES**

**Suitable extinguishing media**
Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.  
**Special protective equipment for firefighters**
Burning produces poisonous gases, sulfur oxides. 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 Dimethylsulfoxide  
CAS no. 67-68-5

<table>
<thead>
<tr>
<th>country</th>
<th>Austria</th>
<th>Belgium</th>
<th>Denmark</th>
<th>European Union</th>
<th>France</th>
<th>Germany</th>
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<tbody>
<tr>
<td>Limit value,8hours</td>
<td>160mg/m³</td>
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<td>160mg/m³</td>
<td>-</td>
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<td>-</td>
<td>320mg/m³</td>
<td>-</td>
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<table>
<thead>
<tr>
<th>country</th>
<th>Hungary</th>
<th>Italy</th>
<th>Poland</th>
<th>Spain</th>
<th>Sweden</th>
<th>Netherlands</th>
<th>United Kingdom</th>
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<tr>
<td>Limit value,8hours</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>160mg/m³</td>
<td>-</td>
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</tbody>
</table>
### 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>GelGreen™ Nucleic Acid Gel Stain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
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</tr>
<tr>
<td>Odor threshold</td>
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</tr>
<tr>
<td>pH</td>
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</tr>
<tr>
<td>Melting point/freezing point</td>
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<tr>
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<td>No data available</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Evaporate rate</td>
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<tr>
<td>Flammability</td>
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<tr>
<td>Explosive limits</td>
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<tr>
<td>Vapor pressure</td>
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<tr>
<td>Vapor density</td>
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<tr>
<td>Relative density</td>
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<tr>
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<td>Partition coefficient:n-octanol/water</td>
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<tr>
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<tr>
<td>Decomposition temperature</td>
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<tr>
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<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
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</table>

### 10. STABILITY AND REACTIVITY

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

No data available

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**Limit value, short term**

<table>
<thead>
<tr>
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<th>United Kingdom</th>
<th>USA-NIOSH</th>
<th>USA-OSHA</th>
<th>Australia</th>
<th>Canada</th>
<th>Japan</th>
<th>South Korea</th>
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<tr>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
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, sulfur oxides
Other decomposition products - no data available

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 Experiments have shown reproductive toxicity effects on laboratory animals (Dimethyl sulfoxide)

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
May cause respiratory irritation

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: PV62100000 (DMSO)

12. ECOLOGICAL INFORMATION

Toxicity DMSO The LC50(96hrs) for ten species of fish range from 32500 to 43000ppm
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 good during shipping
- **UN number** None
- **UN proper shipping name** None
- **Transport hazard class** None
- **Packing group** None
- **Environmental hazards** none
- **Special precaution for user** none

15. REGULATION INFORMATION

**US Federal Regulations**
- **Us Toxic Substances Control Act (TSCA):** Not listed
- **SARA 302:** No chemicals were found.
- **SARA 313:** No chemicals were found.
- **SARA 311/312 Hazards:** DMSO: fire hazard, chronic health hazard
- **Acute Health Hazard:** Yes
- **Chronic Health Hazard:** No
- **Fire Hazard:** Yes
- **Sudden Release of Pressure Hazard:** No
- **Reactive Hazard:** No

**WHMIS classification** None

16. OTHER INFORMATION

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

Prepared by: Regulatory Department
Biotium Inc.

Version no. 4
Reason for revision Add GHS classification in section 2.

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.