# SAFETY DATA SHEET

Date: April 11, 2018

## 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th><strong>Product Name:</strong></th>
<th>LipidSpot 610 Lipid Droplet Stain, 1000X in DMSO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Catalog Number:</strong></td>
<td>70069-T or 70069</td>
</tr>
<tr>
<td><strong>Unit Size:</strong></td>
<td>20 uL or 125 uL</td>
</tr>
<tr>
<td><strong>Manufacturer/Supplier:</strong></td>
<td>Biotium, Inc.</td>
</tr>
</tbody>
</table>

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**: Warning
- **Health hazards**: None
- **Physical Hazards**: GHS Physical Hazard 1 - Flammable
  - GHS Physical Hazard Category 4

### Hazard statements
- H227 - Combustible liquid

### Precautionary statements
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P370 + P378 - In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction

### WHMIS classification
- Flammable liquids, category 4

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

### Classification according to Directive 1999/45/EC
- None

### HMIS Classification
- Health hazard: 1
- Flammability: 2
- Physical hazards: 0

### NFPA Rating
- Health hazard: 1
- Fire: 2
- Reactivity Hazard: 0

### Labeling according to Regulation (EC) No 1272/2008[CLP]
- **Hazard pictogram**: None
- **Signal word**: None
- **Hazard statements**: None
- **Precautionary statements**: None
1. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>67-68-5</td>
<td>200-664-3</td>
<td>-</td>
<td>&gt;99%</td>
<td>-</td>
<td>None</td>
</tr>
</tbody>
</table>

2. 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.

3. 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.

4. 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.

5. 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.
6. **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>
</tr>
</thead>
<tbody>
<tr>
<td>Limit value, 8 hours</td>
<td>160mg/m³</td>
<td>-</td>
<td>160mg/m³</td>
<td>-</td>
<td>-</td>
<td>160mg/m³</td>
</tr>
<tr>
<td>Limit value, short term</td>
<td>-</td>
<td>-</td>
<td>320mg/m³</td>
<td>-</td>
<td>-</td>
<td>320mg/m³</td>
</tr>
</tbody>
</table>

<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>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit value, 8 hours</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>160mg/m³</td>
<td>-</td>
<td>160mg/m³</td>
</tr>
<tr>
<td>Limit value, short term</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>500mg/m³</td>
<td>-</td>
<td>320mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>Limit value, 8 hours</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Limit value, short term</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</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.
7. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LipidSpot 610 Lipid Droplet Stain, 1000X in DMSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporate rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient:n-octanol/water</td>
<td>No information available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No data available</td>
</tr>
</tbody>
</table>

8. 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

9. TOXICOLOGICAL INFORMATION

Acute toxicity DMSO

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Rat - 14,500 mg/kg</td>
</tr>
<tr>
<td>Inhalation LC50</td>
<td>Inhalation - rat - 4 h - 40250 ppm</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Rabbit - &gt; 5,000 mg/kg</td>
</tr>
</tbody>
</table>

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)

10. 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

11. DISPOSAL CONSIDERATIONS

Waste treatment methods
Product  This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber by a licensed disposal company.

Contaminated packaging
Dispose of as unused product.
12. TRANSPORT INFORMATION

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

13. 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 Hazard Class:
Flammable liquids, category 4

3. OTHER INFORMATION

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

Prepared by: Regulatory Department
Biotium Inc.

Version no. 2
Revision date (Initials) 4/11/18 (LR)
Reason for revision Application of WHMIS labeling requirements

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