SAFETY DATA SHEET
Date Revised: May 22, 2013

1. PRODUCT AND COMPANY IDENTIFICATION
   
   Product Name: Calcium Calibration Buffer
   Catalog Number: 59100
   Unit Size: 50mL
   Manufacturer/Supplier: Biotium, Inc.
   46117 Landing Parkway, Fremont, CA 94538, U.S.A.
   Phone: 1-510-265-1027, Fax: 1-510-265-1352
   Web: http://www.biotium.com

Component A: Zero mM CaEGTA (10 mM K2H2EGTA, 100 mM KCl and 10mM MOPS; pH 7.20) 50mL

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

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 67/548/EEC</th>
<th>Classification according to regulation (EC) No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol-bis(2-aminoethylether)-N,N,N',N'-tetraacetic acid</td>
<td>67-42-5</td>
<td>-</td>
<td>-</td>
<td>&lt;1%</td>
<td>-</td>
<td>Acute toxicity, Oral (Category 5)</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>7447-40-7</td>
<td>231-211-8</td>
<td>-</td>
<td>&lt;1%</td>
<td>-</td>
<td>Acute toxicity, Oral (Category 5) Acute aquatic toxicity (Category 3)</td>
</tr>
<tr>
<td>4-</td>
<td>1132-</td>
<td>214-</td>
<td>-</td>
<td>&lt;1%</td>
<td>-</td>
<td>Acute toxicity,</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 4 °C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>Ethylene glycol-bis(2-aminoethylether)-N,N,N',N'-tetraacetic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS no.</td>
<td>67-42-5</td>
</tr>
<tr>
<td>Control parameter</td>
<td>No information available</td>
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<tr>
<th>Substance</th>
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<tbody>
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<td>CAS no.</td>
<td>7447-40-7</td>
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<tr>
<td>Control parameter</td>
<td>No information available</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>4-morpholinepropanesulfonic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS no.</td>
<td>1132-61-2</td>
</tr>
<tr>
<td>Control parameter</td>
<td>No information available</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.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Zero mM CaEGTA</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>7.2</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>
</tbody>
</table>
Explosive limits | No information available
--- | ---
Vapor pressure | No information available
Vapor density | No information available
Relative density | No information available
Solubility | No information available
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

11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>None</td>
</tr>
<tr>
<td>Inhalation LC50</td>
<td>None</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>None</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**
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

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

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 transportation

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: No chemicals were found.
16. OTHER INFORMATION

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

Prepared by: Regulatory Department
Biotium Inc.
Version no. 2
Reason for revision Application of CLP labeling and corresponding 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.

Component B: 10 mM CaEGTA (10 mM CaEGTA, 100 mM KCl and 10mM MOPS; pH 7.20) 50mL

1. HAZARDS IDENTIFICATION

Classification according to Regulation (EC) No 1272/2008[CLP]
None
Classification according to Directive 1999/45/EC
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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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**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
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<td>Viscosity</td>
<td>No information available</td>
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<td>Explosive properties</td>
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<td>Oxidizing properties</td>
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### 9. 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

### 10. 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
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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.
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Eyes May cause eye irritation.

Additional Information
RTECS: None

11. 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

12. DISPOSAL CONSIDERATIONS

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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

14. REGULATION INFORMATION

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