SAFETY DATA SHEET
Cat# K287-100, Cytochrome Oxidase Activity Colorimetric Assay Kit

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>PRODUCT NAME:</th>
<th>Cytochrome Oxidase Activity Colorimetric Assay Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT CODES:</td>
<td>Cat# K287-100</td>
</tr>
<tr>
<td>MANUFACTURER:</td>
<td>BioVision, Inc.</td>
</tr>
<tr>
<td>ADDRESS:</td>
<td>155 S. Milpitas Blvd. Milpitas, CA 95035</td>
</tr>
<tr>
<td>MANUFACTURER:</td>
<td>BioVision, Inc.</td>
</tr>
<tr>
<td>ADDRESS:</td>
<td>155 S. Milpitas Blvd. Milpitas, CA 95035</td>
</tr>
<tr>
<td>EMERGENCY PHONE:</td>
<td>858-373-8066</td>
</tr>
<tr>
<td>CHEMTREC PHONE:</td>
<td></td>
</tr>
<tr>
<td>OTHER CALLS:</td>
<td>408-493-1800</td>
</tr>
<tr>
<td>FAX PHONE:</td>
<td>408-493-1801</td>
</tr>
</tbody>
</table>

SECTION 2: HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Volume</th>
<th>Safety Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cytochrome Oxidase Assay Buffer</td>
<td>Proprietary Buffer</td>
<td>25 ml</td>
<td>No hazards</td>
</tr>
<tr>
<td>Enzyme Dilution Buffer</td>
<td>Proprietary Buffer</td>
<td>8 ml</td>
<td>No hazards</td>
</tr>
<tr>
<td>DTT</td>
<td>Solution in H2O (1 M)</td>
<td>1 ml</td>
<td>See below</td>
</tr>
<tr>
<td>Cytochrome C</td>
<td>Liquid</td>
<td>2 vials</td>
<td>No hazards</td>
</tr>
<tr>
<td>96-well Plate</td>
<td>--</td>
<td>1 plate</td>
<td>No hazards</td>
</tr>
</tbody>
</table>

DTT:
Emergency Overview
GHS Classification:  Acute toxicity, Oral (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2A)

GHS Label elements, including precautionary statements
Pictogram:

Signal word: Warning
Hazard statement(s): H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation.

Precautionary statement(s): P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification
Health hazard: 2
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 2
Fire: 0
Reactivity Hazard: 0

Potential Health Effects
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.
Ingestion: Harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>EC-No.</th>
<th>Molecular Weight</th>
<th>Chemical Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTT</td>
<td>3483-12-3</td>
<td>222-468-7</td>
<td>154.25</td>
<td>C₄H₁₀O₂S₂</td>
</tr>
</tbody>
</table>
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: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE-FIGHTING MEASURES

Condition of flammability: Not flammable or combustible.
Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.
Hazardous combustion products: Hazardous combustion products formed under fire conditions—no data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: -20 °C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
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.
Eye protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin and body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>DTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>pH</td>
<td>3.0-5.0</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>Highly soluble</td>
</tr>
<tr>
<td>Other Solubility:</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point (°C):</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point (°C):</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point (°C):</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition Temp. (°C):</td>
<td>No data available</td>
</tr>
<tr>
<td>Density:</td>
<td>1.035 g/cm³</td>
</tr>
</tbody>
</table>
SECTION 10: STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>DTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stability:</td>
<td>Stable under recommended storage conditions</td>
</tr>
<tr>
<td>Conditions to Avoid:</td>
<td>No data available</td>
</tr>
<tr>
<td>Materials to Avoid:</td>
<td>Bases, oxidizing agents, reducing agents, alkali metals</td>
</tr>
<tr>
<td>Hazardous decomposition: products:</td>
<td>Carbon oxides, sulfur oxides, hydrogen sulfide gas</td>
</tr>
</tbody>
</table>

SECTION 11: TOXICOLOGICAL INFORMATION

**DTT:**
- **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
- **Teratogenicity:** no data available

**Potential Health Effects**
- **Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.
- **Skin:** May be harmful if absorbed through skin. Causes skin irritation.
- **Eyes:** Causes eye irritation.
- **Ingestion:** Harmful if swallowed.

**Signs and Symptoms of Exposure:** Exposure may cause central nervous system depression. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects:** no data available

**Additional information:** RTECS: not available

SECTION 12: ECOLOGICAL INFORMATION

**DTT:**
- **Persistence and degradability:** no data available
- **Toxicity:** no data available
- **Bioaccumulative potential:** no data available
- **Mobility in soil:** no data available
- **PBT and vPvB assessment:** no data available
- **Other adverse effects:** no data available

SECTION 13: DISPOSAL CONSIDERATIONS

**Product:** Observe all federal, state, and local environmental regulations.

**Contaminated packaging:** Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

**DTT:**
- **DOT (US):** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

**SARA 302 Components:** SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title II, Section 313.

**SARA 311/312 Hazards:**
- **DTT: Acute Health Hazard, Chronic Health Hazard**

**Massachusetts Right To Know Components:** No components are subject to the Massachusetts Right to Know Act.
EU regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Risk Phrases</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTT</td>
<td>R22, R36/37/38</td>
<td>S26, S36</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION:

OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.