1. **Product and company identification**

- **Product name**: TRYPsin TPCK TREATED
- **Product part number**: 4445250
- **Kit name**: Trypsin TPCK Treated Kit
- **Kit part number**: 4445250
- **Material uses**: For research use only. Not for use in diagnostic procedures.
- **CAS number**: 9002-07-7
- **Code**: Not available.
- **Manufacturer**: AB SCIEX Pte. Ltd.
  110 Marsh Drive
  Foster City, CA USA 94404
  1-877-740-2129
- **Validation date**: 10/21/2010.
- **Prepared by**: Atrion Regulatory Services, Inc.
- **In case of emergency**: Chemtrec : 1-800-424-9300 (24H)
  1-877-740-2129 (8:30A PT - 5:00P PT)

2. **Hazards identification**

- **Physical state**: Solid.
- **Color**: Yellow.
- **Odor**: Odorless.

**Emergency overview**
- **Signal word**: WARNING!
- **Hazard statements**: CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY REACTION. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

- **Precautions**: Do not breathe dust. Do not get on skin or clothing. Avoid contact with eyes. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

- **OSHA/HCS status**: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

- **Routes of entry**: Dermal contact. Eye contact. Inhalation. Ingestion.

**Potential acute health effects**
- **Inhalation**: Irritating to respiratory system. May cause sensitization by inhalation.
- **Ingestion**: No known significant effects or critical hazards.
- **Skin**: Irritating to skin.
- **Eyes**: Irritating to eyes.

**Potential chronic health effects**
- **Chronic effects**: May cause target organ damage, based on animal data. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- **Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: No known significant effects or critical hazards.
2. Hazards identification

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Target organs: May cause damage to the following organs: upper respiratory tract, skin, eyes.

Over-exposure signs/symptoms

Inhalation: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing
- wheezing and breathing difficulties
- asthma

Ingestion: No specific data.

Skin: Adverse symptoms may include the following:
- irritation
- redness

Eyes: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

Medical conditions aggravated by over-exposure: Pre-existing respiratory disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

United States

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trypsin</td>
<td>9002-07-7</td>
<td>60-100</td>
</tr>
</tbody>
</table>

Canada

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trypsin</td>
<td>9002-07-7</td>
<td>60-100</td>
</tr>
</tbody>
</table>

Mexico

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>UN number</th>
<th>%</th>
<th>IDLH</th>
<th>H</th>
<th>F</th>
<th>R</th>
<th>Special</th>
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</thead>
<tbody>
<tr>
<td>Trypsin</td>
<td>9002-07-7</td>
<td>Not available.</td>
<td>60-100</td>
<td>-</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
4. First aid measures

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product: No specific fire or explosion hazard.

Extinguishing media

Suitable: Use an extinguishing agent suitable for the surrounding fire.

Not suitable: None known.

Special exposure hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
6. Accidental release measures

**Large spill**

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, watercourses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

**Handling**

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Storage**

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

**United States**

No exposure limit value known.

**Canada**

**Occupational exposure limits**

No exposure limit value known.

**Mexico**

**Occupational exposure limits**

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protection**

10/21/2010. North America
8. Exposure controls/personal protection

**Respiratory**: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hands**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eyes**: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Skin**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Environmental exposure controls**: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammable limits</td>
<td>Not available.</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling/condensation point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
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</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Volatility</td>
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</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available.</td>
</tr>
<tr>
<td>LogK&lt;sub&gt;ow&lt;/sub&gt;</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

**Chemical stability**: The product is stable.

**Conditions to avoid**: Keep away from flames and hot surfaces. Keep away from sources of ignition.

**Incompatible materials**: Reactive or incompatible with the following materials: oxidizing materials.

**Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
TRYPSIN TPCK TREATED

10. Stability and reactivity

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trypsin</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5 g/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Chronic toxicity
Not available.

Irritation/Corrosion
Not available.

Sensitizer
Not available.

Carcinogenicity
Classification
Not available.

Mutagenicity
Not available.

Teratogenicity
Not available.

Reproductive toxicity
Not available.

12. Ecological information

Ecotoxicity: No known significant effects or critical hazards.

Aquatic ecotoxicity
Not available.

Persistence/degradability
Not available.

Other adverse effects: No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

13. Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

DOT/TDG/MXT/IMDG/IATA : Not regulated.

15. Regulatory information

**United States**

**HCS Classification** : Irritating material
Sensitizing material
Target organ effects

**U.S. Federal regulations**

- **TSCA 8(a) IUR**: This material is listed or exempted.
- **United States inventory (TSCA 8b)**: This material is listed or exempted.
- **SARA 302/304/311/312 extremely hazardous substances**: No products were found.
- **SARA 302/304 emergency planning and notification**: No products were found.
- **SARA 302/304/311/312 hazardous chemicals**: Trypsin

**Clean Air Act (CAA) 112 accidental release prevention**: No products were found.

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

**State regulations**

- **Massachusetts**: This material is not listed.
- **New York**: This material is not listed.
- **New Jersey**: This material is not listed.
- **Pennsylvania**: This material is not listed.
- **California Prop. 65**: None of the components are listed.

**Canada**

**WHMIS (Canada)** : Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

**Canadian lists**

- **Canadian NPRI**: This material is not listed.
  This material is not listed.

10/21/2010.
15. Regulatory information

**Canada inventory**: Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Mexico**

**Classification**

![Flammability Health Reactivity Special](image)

**International regulations**

**International lists**

- **Australia inventory (AICS)**: This material is listed or exempted.
- **China inventory (IECSC)**: This material is listed or exempted.
- **Japan inventory**: Not determined.
- **Korea inventory**: This material is listed or exempted.
- **New Zealand Inventory of Chemicals (NZIoC)**: This material is listed or exempted.
- **Philippines inventory (PICCS)**: This material is listed or exempted.
- **United States inventory (TSCA 8b)**: This material is listed or exempted.
- **Europe inventory**: This material is listed or exempted.
- **Canada inventory**: Not determined.

**Chemical Weapons Convention List Schedule I Chemicals**: Not listed

**Chemical Weapons Convention List Schedule II Chemicals**: Not listed

**Chemical Weapons Convention List Schedule III Chemicals**: Not listed

16. Other information

**Label requirements**

CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY REACTION. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

**Hazardous Material Information System (U.S.A.)**

![Health Flammability Physical hazards](image)

**Caution**: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

**National Fire Protection Association (U.S.A.)**

16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

- Indicates information that has changed from previously issued version.

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To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.