Protein Extraction Buffer TP
Safety Data Sheet
Issue date: 11/30/2022

SECTION 1: Identification

1.1. Identification

Product form: Mixture
Trade name: TP Protein Extraction Buffer
Product code: 190254

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Covaris, LLC.
14 Gill St., Unit H
Woburn, MA 01801
USA
T +1 (781) 932-3959

1.4. Emergency telephone number

Emergency number: Chemtrec (800) 424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification
Carcinogenicity Category 2: H351 - Suspected of causing cancer
Reproductive toxicity Category 2: H361 - Suspected of damaging fertility or the unborn child
Hazardous to the aquatic environment – Chronic Hazard Category 3: H412 - Harmful to aquatic life with long lasting effects

Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling
Hazard pictograms (GHS US):

Signal word (GHS US): Warning
Hazard statements (GHS US):
H351 - Suspected of causing cancer
H361 - Suspected of damaging fertility or the unborn child
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US):
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P273 - Avoid release to the environment.
P280 - Wear protective gloves.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

2.3. Other hazards which do not result in classification

No additional information available
**Protein Extraction Buffer TP**

**Safety Data Sheet**


---

**2.4. Unknown acute toxicity (GHS US)**

Not applicable

---

**SECTION 3: Composition/Information on ingredients**

**3.1. Substances**

Not applicable

**3.2. Mixtures**

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiourea</td>
<td></td>
<td>10 – 30</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

---

**SECTION 4: First-aid measures**

**4.1. Description of first aid measures**

- **First-aid measures general**: IF exposed or concerned: Get medical advice/attention.
- **First-aid measures after inhalation**: Move the affected person to fresh air. Get medical attention if symptoms occur.
- **First-aid measures after skin contact**: Gently wash with plenty of soap and water. Get medical advice if skin irritation persists.
- **First-aid measures after eye contact**: Rinse eyes with water as a precaution. Get medical attention if irritation develops and persists.
- **First-aid measures after ingestion**: Call a poison center or a doctor if you feel unwell.

**4.2. Most important symptoms and effects (acute and delayed)**

- **Symptoms/effects**: May cause slight temporary irritation.
- **Inhalation**: May cause minor irritation to the respiratory tract and to other mucous membranes.
- **Skin**: May cause slight irritation to the skin.
- **Eyes**: Causes eye irritation. May cause minor eye irritation.
- **Ingestion**: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
- **Chronic symptoms**: Suspected of causing cancer. Suspected of damaging fertility. Suspected of damaging the unborn child.

**4.3. Immediate medical attention and special treatment, if necessary**

Not required.

---

**SECTION 5: Fire-fighting measures**

**5.1. Suitable (and unsuitable) extinguishing media**

- **Suitable extinguishing media**: Use extinguishing media appropriate for surrounding fire.
- **Unsuitable extinguishing media**: None.

**5.2. Specific hazards arising from the chemical**

- **Fire hazard**: This product is not classified as flammable or combustible.
- **Hazardous decomposition products in case of fire**: Toxic fumes may be released.

**5.3. Special protective equipment and precautions for fire-fighters**

- **Protection during firefighting**: Do not attempt to take action without suitable protective equipment.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear suitable protective clothing. Avoid contact with eyes, skin and clothing.

6.1.1. For non-emergency personnel
No additional information available

6.1.2. For emergency responders
Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information : Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Wash hands with water and soap. Ensure adequate ventilation.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions : Store locked up. No special storage required.
Incompatible materials : None known.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

TP Protein Extraction Buffer
No additional information available

Thiourea (62-56-6)
No additional information available

8.2. Appropriate engineering controls
Appropriate engineering controls : No particular/specific measures required.
Environmental exposure controls : Avoid release to the environment.
8.3. Individual protection measures/Personal protective equipment

Hand protection:
No special protection required. Wear suitable gloves.

Eye protection:
None under normal use. Use suitable eye protection.

Skin and body protection:
None under normal conditions.

Respiratory protection:
Not required for normal conditions of use. Wear respiratory protection. In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>White Blue light brown</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20°C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| Acute toxicity (oral)          | : Not classified       |
| Acute toxicity (dermal)       | : Not classified       |
| Acute toxicity (inhalation)   | : Not classified       |

**Thiourea (62-56-6)**

| LD50 dermal rat                | > 6810 mg/kg           |
| LD50 dermal rabbit             | > 2800 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |
| LC50 Inhalation - Rat          | > 0.195 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Remarks on results: other: |
| ATE US (oral)                  | 2000 mg/kg body weight |

| Skin corrosion/irritation      | : Not classified       |
| Serious eye damage/irritation  | : Not classified       |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity         | : Not classified       |
| Carcinogenicity                | : Suspected of causing cancer. |

**Thiourea (62-56-6)**

| IARC group                    | 3 - Not classifiable   |
| Reproductive toxicity         | : Suspected of damaging fertility or the unborn child. |
| STOT-single exposure          | : Not classified       |
| STOT-repeated exposure        | : Not classified       |

**Thiourea (62-56-6)**

| LOAEL (oral, rat, 90 days)    | 30 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents) |

| Aspiration hazard             | : Not classified       |
| Viscosity, kinematic          | : Not applicable       |
| Symptoms/effects              | : May cause slight temporary irritation. |
Inhalation: May cause minor irritation to the respiratory tract and to other mucous membranes.
Skin: May cause slight irritation to the skin.
Eyes: Causes eye irritation. May cause minor eye irritation.
Ingestion: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic symptoms: Suspected of causing cancer. Suspected of damaging fertility. Suspected of damaging the unborn child.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
Thiourea (62-56-6)
Partition coefficient n-octanol/water (Log Pow) -1.08

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Regional legislation (waste): Dispose of in accordance with applicable federal, state, and local regulations.
Waste treatment methods: Dispose of contents/container in accordance with licensed collector’s sorting instructions.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

<table>
<thead>
<tr>
<th></th>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. Proper Shipping Name</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Protein Extraction Buffer TP
Safety Data Sheet

### DOT

<table>
<thead>
<tr>
<th>14.5. Environmental hazards</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>No supplementary information available</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 14.6. Special precautions for user

**DOT**
No data available

**TDG**
No data available

**IMDG**
No data available

**IATA**
No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

<table>
<thead>
<tr>
<th>Thiourea</th>
<th>CAS-No. 62-56-6</th>
<th>10 – 30%</th>
</tr>
</thead>
</table>

#### 15.2. International regulations

**CANADA**
No additional information available

**EU-Regulations**
No additional information available

**National regulations**

**TP Protein Extraction Buffer**
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

### SECTION 16: Other information

Protein Extraction Buffer TP
Safety Data Sheet

<table>
<thead>
<tr>
<th>Full text of H-phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>H351</td>
</tr>
<tr>
<td>H361</td>
</tr>
<tr>
<td>H412</td>
</tr>
</tbody>
</table>

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.