SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

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

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses
No additional information available

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number

Emergency number: Chemtrec (800) 424-0900

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation/Company</th>
<th>Address</th>
<th>Emergency number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>NSW Poisons Information Centre</td>
<td>Locked Bag 4001</td>
<td>13 11 26</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Children's Hospital at Westmead</td>
<td>NSW 2145 Westmead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>National Poisons Information Centre</td>
<td>PO Box 1297</td>
<td>+353 1 809 2566</td>
<td>(Healthcare professionals-24/7)</td>
</tr>
<tr>
<td></td>
<td>Beaumont Hospital</td>
<td>Beaumont Road 9</td>
<td>+353 1 809 2166</td>
<td>(public, 8am - 10pm, 7/7)</td>
</tr>
<tr>
<td>New Zealand</td>
<td>National Poisons Centre</td>
<td>PO Box 56</td>
<td>0800 764 766</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9054 Dunedin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>Dudley Road</td>
<td>0344 892 0111</td>
<td>Only for healthcare professionals</td>
</tr>
<tr>
<td></td>
<td>(Birmingham Centre)</td>
<td>B18 7QH Birmingham</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>City Hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

- Carcinogenicity, Category 2: H351
- Reproductive toxicity, Category 2: H361
- Hazardous to the aquatic environment – Chronic Hazard, Category 3: H412

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Harmful to aquatic life with long lasting effects.
Protein Extraction Buffer TP
Safety Data Sheet
SDS EU format according to COMMISSION REGULATION (EU) 2020/878

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Hazard pictograms (CLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS08</td>
</tr>
</tbody>
</table>

Signal word (CLP): Warning
Contains: Thiourea
Hazard statements (CLP):
- 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 (CLP):
- 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 and container to an approved waste disposal plant.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 %

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>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiourea</td>
<td>CAS-No.: 62-56-6</td>
<td>15.2</td>
<td>Carc. 2, H351</td>
</tr>
<tr>
<td></td>
<td>EC-No.: 200-543-5</td>
<td></td>
<td>Repr. 2, H361d</td>
</tr>
<tr>
<td></td>
<td>EC Index-No.: 612-082-00-0</td>
<td></td>
<td>Acute Tox. 4 (Oral), H302 (ATE=2000 mg/kg bodyweight)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 2, H411</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-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: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Call a poison center or a doctor if you feel unwell.
4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects: May cause slight temporary irritation.
Chronic symptoms: Suspected of causing cancer. Suspected of damaging fertility. Suspected of damaging the unborn child.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area.

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: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment.

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. Store in a well-ventilated place. Keep cool.
7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values
No additional information available

8.1.2. Recommended monitoring procedures
No additional information available

8.1.3. Air contaminants formed
No additional information available

8.1.4. DNEL and PNEC
No additional information available

8.1.5. Control banding
No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls
Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection
Eye protection:
Safety glasses

8.2.2.2. Skin protection
Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

8.2.2.3. Respiratory protection
Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards
No additional information available

8.2.3. Environmental exposure controls
Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Odour: None.
**Protein Extraction Buffer TP**

**Safety Data Sheet**

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

---

**Odour threshold**: Not available

**Melting point**: Not available

**Freezing point**: Not applicable

**Boiling point**: Not available

**Flammability**: Non flammable.

**Explosive limits**: Not applicable

**Lower explosion limit**: Not applicable

**Upper explosion limit**: Not applicable

**Flash point**: Not applicable

**Auto-ignition temperature**: Not applicable

**Decomposition temperature**: Not available

**pH**: Not available

**pH solution**: Not available

**Viscosity, kinematic**: Not applicable

**Solubility**: Not available

**Partition coefficient n-octanol/water (Log Kow)**: Not available

**Vapour pressure**: Not available

**Vapour pressure at 50°C**: Not available

**Density**: Not available

**Relative density**: Not available

**Relative vapour density at 20°C**: Not applicable

**Particle size**: Not available

**Particle size distribution**: Not available

**Particle shape**: Not available

**Particle aspect ratio**: Not available

**Particle aggregation state**: Not available

**Particle agglomeration state**: Not available

**Particle specific surface area**: Not available

**Particle dustiness**: Not available

---

**9.2. Other information**

**9.2.1. Information with regard to physical hazard classes**

No additional information available

**9.2.2. Other safety characteristics**

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 under recommended storage and handling conditions (see section 7).

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

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

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 6810 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2800 mg/kg bodyweight</td>
<td>Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)</td>
</tr>
<tr>
<td>LC50 Inhalation - Rat</td>
<td>&gt; 0.195 mg/l air</td>
<td>Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Remarks on results: other.</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>3 - Not classifiable</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Suspected of damaging fertility or the unborn child.</td>
<td></td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
<td></td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEL (oral, rat, 90 days)</td>
<td>30 mg/kg bodyweight</td>
<td>Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
<td></td>
</tr>
</tbody>
</table>

**TP Protein Extraction Buffer**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

11.2. Information on other hazards

No additional information available

12.1. Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : 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. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number or ID number</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

No supplementary information available

14.6. Special precautions for user

**Overland transport**
Not regulated

**Transport by sea**
Not regulated

**Air transport**
Not regulated
Inland waterway transport
Not regulated

Rail transport
Not regulated

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)
Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

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

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).


Netherlands

SZW-lijs van kankerverwekkende stoffen : None of the components are listed
SZW-lijs van mutagene stoffen : None of the components are listed
SZW-lijs van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijs van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijs van reprotoxische stoffen – Ontwikkeling : Thiourea is listed
Denmark
Danish National Regulations: Young people below the age of 18 years are not allowed to use the product. Pregnant/breastfeeding women working with the product must not be in direct contact with the product. The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal.

Switzerland
Storage class (LK): LK 6.1 - Toxic materials

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Chronic 2</td>
<td>Hazardous to the aquatic environment – Chronic Hazard, Category 2</td>
</tr>
<tr>
<td>Carc. 2</td>
<td>Carcinogenicity, Category 2</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child.</td>
</tr>
<tr>
<td>H361d</td>
<td>Suspected of damaging the unborn child.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Repr. 2</td>
<td>Reproductive toxicity, Category 2</td>
</tr>
</tbody>
</table>

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

<table>
<thead>
<tr>
<th>Carc. 2</th>
<th>H351</th>
<th>Calculation method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repr. 2</td>
<td>H361</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
<td>H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Safety Data Sheet (SDS), EU

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.