SECTION 1: Identification

1.1. Identification

Product form: Mixture
Trade name: truPOP Cell Lysis Buffer
Product code: 190636

1.2. Recommended use and restrictions on use

Recommended use: Scientific research and development
Restrictions on use: None known

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
Eye irritation Category 2 H319 Causes serious eye irritation
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): H319 - Causes serious eye irritation
Precautionary statements (GHS US): P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards which do not result in classification

No additional information available

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>Edetic acid (EDTA)</td>
<td>CAS-No.: 60-00-4</td>
<td>1 – 5</td>
</tr>
<tr>
<td>Lauramine Oxide</td>
<td>CAS-No.: 1643-20-5</td>
<td>1 – 5</td>
</tr>
<tr>
<td>Trisodium phosphate</td>
<td>CAS-No.: 7601-54-9</td>
<td>1 – 5</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 after inhalation: Remove person to fresh air and keep comfortable for breathing. 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: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

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: Causes eye irritation. May cause slight irritation to the skin.

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.

Ingestion: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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. Self-contained breathing apparatus.
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

Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes.

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

For containment: Collect spillage.

Methods for cleaning up: Take up liquid spill into absorbent material.

Other information: Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). 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. Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Wash hands with water and soap.

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: No special storage required.

Incompatible materials: None known.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

truPOP Cell Lysis Buffer

No additional information available

Edetic acid (EDTA) (60-00-4)

No additional information available

Trisodium phosphate (7601-54-9)

USA - OSHA - Occupational Exposure Limits

Local name: Particulates not otherwise regulated (PNOR)
Trisodium phosphate (7601-54-9)
OSHA PEL (TWA) : 15 mg/m³ (Total dust)
                   : 5 mg/m³ (Respirable fraction)
Regulatory reference (US-OSHA) : OSHA Annotated Table Z-1

Lauramine Oxide (1643-20-5)
No additional information available

8.2. Appropriate engineering controls
Appropriate engineering controls : No particular/specific measures required. Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear suitable gloves

Eye protection:
Chemical goggles. Use suitable eye protection. Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. 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.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Clear, colorless liquid.
Color : Colorless
Odor : None
Odor threshold : No data available
pH : 8
Melting point : Not applicable
Freezing point : No data available
Boiling point : 100 °C
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : Not applicable.
Vapor pressure : No data available
Relative vapor density at 20°C : No data available
Relative density: 0.992
Solubility: Soluble in water.
Partition coefficient n-octanol/water (Log Pow): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosion limits: No data available
Explosive properties: No data available
Oxidizing properties: No data available

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

Edetic acid (EDTA) (60-00-4)
LD50 oral rat 4500 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
ATE US (oral) 4500 mg/kg body weight

Trisodium phosphate (7601-54-9)
LD50 oral rat > 2000 mg/kg
LD50 dermal rat > 2000 mg/kg
Trisodium phosphate (7601-54-9)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC₅₀ Inhalation - Rat (Dust/Mist)</td>
<td>&gt; 0.83 mg/l/4h</td>
</tr>
</tbody>
</table>

Lauramine Oxide (1643-20-5)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD₅₀ oral rat</td>
<td>&gt; 1065 mg/kg</td>
</tr>
<tr>
<td>LD₅₀ dermal rat</td>
<td>&gt; 2000 mg/kg body weight</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH</td>
<td>8</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>pH</td>
<td>8</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Trisodium phosphate (7601-54-9)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOT-single exposure</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Edetic acid (EDTA) (60-00-4)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEC (inhalation, rat, dust/mist/fume, 90 days)</td>
<td>0.015 mg/l air Animal: rat, Animal sex: female, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)</td>
</tr>
<tr>
<td>NOAEL (oral, rat, 90 days)</td>
<td>≥ 500 mg/kg body weight Animal: rat</td>
</tr>
<tr>
<td>Additional information</td>
<td>respiratory tract</td>
</tr>
</tbody>
</table>

Trisodium phosphate (7601-54-9)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOAEL (subchronic, oral, animal/male, 90 days)</td>
<td>322.88 mg/kg body weight (Dog)</td>
</tr>
<tr>
<td>NOAEL (subchronic, oral, animal/female, 90 days)</td>
<td>492.77 mg/kg body weight (Dog)</td>
</tr>
</tbody>
</table>

Lauramine Oxide (1643-20-5)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOAEL (oral, rat, 90 days)</td>
<td>40 mg/kg body weight</td>
</tr>
</tbody>
</table>

Aspiration hazard: Not classified
Viscosity, kinematic: No data available
Symptoms/effects: Causes eye irritation. May cause slight irritation to the skin.
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.
Ingestion: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

SECTION 12: Ecological information

12.1. Toxicity

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

Edetic acid (EDTA) (60-00-4)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC₅₀ - Fish [1]</td>
<td>121 mg/l Lepomis macrochirus (Bluegill)</td>
</tr>
<tr>
<td>EC₅₀ - Crustacea [1]</td>
<td>140 mg/l Test organisms (species): Daphnia magna</td>
</tr>
</tbody>
</table>
**truPOP Cell Lysis Buffer**

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### Edetic acid (EDTA) (60-00-4)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Test organisms (species)</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 72h - Algae [1]</td>
<td>&gt; 60 mg/l</td>
<td>Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)</td>
<td></td>
</tr>
<tr>
<td>LOEC (chronic)</td>
<td>50 mg/l</td>
<td>Daphnia magna</td>
<td>'21 d'</td>
</tr>
<tr>
<td>NOEC (chronic)</td>
<td>25 mg/l</td>
<td>Daphnia magna</td>
<td>'21 d'</td>
</tr>
<tr>
<td>NOEC chronic fish</td>
<td>≥ 25.7 mg/l</td>
<td>Daphnia magna</td>
<td>'35 d'</td>
</tr>
</tbody>
</table>

### Trisodium phosphate (7601-54-9)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Test organisms (species)</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 - Fish [1]</td>
<td>&gt; 100 mg/l</td>
<td>Oncorhynchus mykiss</td>
<td></td>
</tr>
<tr>
<td>EC50 - Crustacea [1]</td>
<td>&gt; 100 mg/l</td>
<td>Daphnia magna</td>
<td></td>
</tr>
<tr>
<td>EC50 72h - Algae [1]</td>
<td>&gt; 100 mg/l</td>
<td>Desmodesmus subspicatus</td>
<td></td>
</tr>
</tbody>
</table>

### Lauramine Oxide (1643-20-5)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Test organisms (species)</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 - Fish [1]</td>
<td>134 mg/l</td>
<td>Danio rerio (Zebrafish)</td>
<td></td>
</tr>
<tr>
<td>EC50 - Crustacea [1]</td>
<td>3.9 mg/l</td>
<td>Daphnia magna</td>
<td></td>
</tr>
<tr>
<td>LC50 - Fish [2]</td>
<td>31.8 mg/l</td>
<td>Danio rerio (Zebrafish)</td>
<td></td>
</tr>
<tr>
<td>NOEC (chronic)</td>
<td>0.7 mg/l</td>
<td>Daphnia magna</td>
<td></td>
</tr>
<tr>
<td>NOEC chronic fish</td>
<td>0.42 mg/l</td>
<td>Pimephales promelas</td>
<td></td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

**Lauramine Oxide (1643-20-5)**

Persistence and degradability

Readily biodegradable.

#### 12.3. Bioaccumulative potential

**Lauramine Oxide (1643-20-5)**

Bioaccumulative potential

Low bioaccumulation potential.

#### 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
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<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not regulated for transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.2. Proper Shipping Name</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>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

No supplementary information available

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 listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

<table>
<thead>
<tr>
<th>Edetic acid (EDTA) (60-00-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERCLA RQ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trisodium phosphate (7601-54-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERCLA RQ</td>
</tr>
</tbody>
</table>
truPOP Cell Lysis Buffer
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15.2. International regulations

CANADA

Edetic acid (EDTA) (60-00-4)
Listed on the Canadian DSL (Domestic Substances List)

Trisodium phosphate (7601-54-9)
Listed on the Canadian DSL (Domestic Substances List)

Lauramine Oxide (1643-20-5)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

National regulations

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

EU-Regulations

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

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edetic acid (EDTA)(60-00-4)</td>
<td>U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td>Trisodium phosphate(7601-54-9)</td>
<td>U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
</tbody>
</table>

SECTION 16: Other information


Full text of H-phrases

H319 Causes serious eye irritation

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.