1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name: Phosphatase Inhibitor Cocktail A
Product Code: SC-45044

Recommended use of the chemical and restrictions on use
For research use only. Not intended for diagnostic or therapeutic use.

Details of the supplier of the safety data sheet
Santa Cruz Biotechnology, Inc.
10410 Finnell Street
Dallas, TX 75220
831.457.3800
800.457.3801
scbt@scbt.com

Emergency telephone number
Chemtrec
1.800.424.9300 (Within USA)
+1.703.527.3887 (Outside USA)

2. HAZARDS IDENTIFICATION

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

Classification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements
Signal word: Not classified
Hazard statements: Not classified
Symbols/Pictograms: Not classified

Precautionary Statements - Prevention: Wash hands thoroughly after handling
Precautionary Statements - Response: IF exposed or concerned: Get medical advice/attention

Hazards not otherwise classified (HNOC)
Hazard classification: Not applicable

Other Information
NFPA Health hazards 0 Flammability 2 Stability 0 Physical and chemical properties -
HMIS Health hazards 0 Flammability 2 Physical hazards 0 Personal protection -

3. COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight: No information available
Formula: No information available

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane, 1,1'-sulfinylbis-</td>
<td>67-68-5</td>
<td>&gt;98</td>
<td>= 14500 mg/kg (Rat) = 28300 mg/kg (Rat)</td>
<td>= 40 g/kg (Rat)</td>
<td>&gt; 5.33 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>
### 4. FIRST AID MEASURES

**First Aid Measures**

**General advice**
If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

**Eye contact**
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

**Skin Contact**
Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediate medical attention is not required.

**Inhalation**
Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

**Ingestion**
Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

**Self-protection of the first aider**
Use personal protective equipment as required.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**
No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians**
Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**
No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical**
No information available.

**Hazardous combustion products**
No information available.

**Explosion data**

**Sensitivity to Mechanical Impact**
No information available.

**Sensitivity to Static Discharge**
No information available.

**Protective equipment and precautions for firefighters**

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 6. ACCIDENTAL RELEASE MEASURES
Personal precautions, protective equipment and emergency procedures

Personal precautions
Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. Dam up.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Protect from moisture. Store at -20 °C.

Incompatible materials
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls
Engineering Controls
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment
Eye/face protection
Tight sealing safety goggles. Face protection shield.
Skin and Body Protection
Wear protective gloves and protective clothing.
Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State
liquid
Appearance: No information available
Odor: No information available

**Property**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Liquid Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper flammability limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity: Not applicable

- **Chemical stability**: Stable under recommended storage conditions.
- **Possibility of Hazardous Reactions**: None under normal processing.
- **Hazardous polymerization**: No information available.
- **Conditions to avoid**: Exposure to air or moisture over prolonged periods.
- **Incompatible materials**: Strong oxidizing agents.
- **Hazardous Decomposition Products**: None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

<table>
<thead>
<tr>
<th>Route</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No data available.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No data available.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>No data available.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

**Information on toxicological effects**

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No information available.</td>
</tr>
</tbody>
</table>

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

- **Chronic Toxicity**: Avoid repeated exposure.
- **Carcinogenicity**: This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microcystin LR</td>
<td>-</td>
<td>Group 2B</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>101043-37-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cantharidin</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>50-25-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Numerical measures of toxicity - Product Information**

Unknown acute toxicity: No information available.

The following values are calculated based on chapter 3.1 of the GHS document:

- ATEmix (oral): 14515
- ATEmix (dermal): 40040 mg/kg
- ATEmix (inhalation-vapor): 5.3

**12. ECOLOGICAL INFORMATION**

Ecotoxicity: May cause long lasting harmful effects to aquatic life.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane, 1,1'-sulfinylbis-67-68-5</td>
<td>12350 - 25500: 96 h Skeletonema costatum mg/L EC50</td>
<td>34000: 96 h Pimephales promelas mg/L LC50 41.7: 96 h Cyprinus carpio g/L LC50 40: 96 h Lepomis macrochirus g/L LC50 33 - 37: 96 h Oncorhynchus mykiss g/L LC50 static</td>
<td>-</td>
<td>7000: 24 h Daphnia species mg/L EC50</td>
</tr>
</tbody>
</table>

0.1% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence and degradability: No information available.

Bioaccumulation: No information available.

Mobility: No information available.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane, 1,1'-sulfinylbis-67-68-5</td>
<td>-2.03</td>
</tr>
</tbody>
</table>

**13. DISPOSAL CONSIDERATIONS**

- Disposal of wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.
- Contaminated packaging: Do not reuse container.
- Other Information: Waste codes should be assigned by the user based on the application for which the product was used.

**14. TRANSPORT INFORMATION**

DOT: Not regulated

IMDG: Not regulated

IATA: Not regulated

**15. REGULATORY INFORMATION**

- International Inventories: All of the components in the product are on the following Inventory lists; No information available.
US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute health hazard: Yes
Chronic Health Hazard: No
Fire hazard: Yes
Sudden release of pressure hazard: No
Reactive hazard: No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane, 1,1'-sulfinylbis-67-68-5</td>
<td>X</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Revision note
No information available

Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet