SAFETY DATA SHEET
Santa Cruz Biotechnology, Inc.
Revision date 26-Sep-2017
Version 1.1

1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Nitrofurantoin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Code</td>
<td>SC-212399</td>
</tr>
<tr>
<td>Recommended use</td>
<td>For research use only. Not intended for diagnostic or therapeutic use.</td>
</tr>
<tr>
<td>Company</td>
<td>Emergency telephone number</td>
</tr>
<tr>
<td>Santa Cruz Biotechnology, Inc.</td>
<td>Chemtrec</td>
</tr>
<tr>
<td>10410 Finnell Street</td>
<td></td>
</tr>
<tr>
<td>Dallas, TX 75220</td>
<td></td>
</tr>
<tr>
<td>831.457.3800</td>
<td></td>
</tr>
<tr>
<td>800.457.3801</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:scbt@scbt.com">scbt@scbt.com</a></td>
<td></td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Emergency Overview</th>
<th>The product contains no substances which at their given concentration, are considered to be hazardous to health</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA Regulatory Status</td>
<td>This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)</td>
</tr>
</tbody>
</table>
| Potential health effects | Eyes: May cause irritation.  
Skin: May be harmful in contact with skin.  
Inhalation: May be harmful if inhaled.  
Ingestion: Harmful if swallowed.  
Chronic Toxicity: No known effect. |

Hazard not otherwise classified (HNOC) Not applicable

Environmental Hazard See Section 12: ECOLOGICAL INFORMATION.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Stability</th>
<th>Physical and chemical properties</th>
</tr>
</thead>
<tbody>
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<tr>
<td>HMIS</td>
<td>Health hazards</td>
<td>Flammability</td>
<td>Physical hazards</td>
<td>Personal protection</td>
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</table>

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Nitrofurantoin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>238.16</td>
</tr>
<tr>
<td>Formula</td>
<td>C₈H₆N₄O₅</td>
</tr>
</tbody>
</table>
4. 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.

**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.

**Ingestion**
Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting.

**Note to physicians**
Treat symptomatically.

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

5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Dry chemical, CO₂, water spray or alcohol-resistant foam.

**Specific hazards arising from the chemical**

<table>
<thead>
<tr>
<th>Flammable properties</th>
<th>Not determined.</th>
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<tbody>
<tr>
<td>Flash point °C</td>
<td>No information available</td>
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</tbody>
</table>

**Explosion data**

<table>
<thead>
<tr>
<th>Sensitivity to Mechanical Impact</th>
<th>No information available.</th>
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</thead>
<tbody>
<tr>
<td>Sensitivity to Static Discharge</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

**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**
Ensure adequate ventilation, especially in confined areas.

**Environmental precautions**
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

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

**Methods for cleaning up**
Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

**Advice on 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.

**Storage Conditions**
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure controls**
Engineering Controls
- Showers
- Eyewash stations
- Ventilation systems

**Personal protective equipment (PPE)**
Eye/face protection
- Tight sealing safety goggles.
Skin and Body Protection
- Wear protective gloves and protective clothing.
Respiratory protection
- Ensure adequate ventilation, especially in confined areas.
General Hygiene Considerations
- Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State**
- Solid

**Appearance**
- No information available

**Odor**
- No information available

**Property**
- Values
  - pH: No information available
  - Melting point/freezing point: 213 °C
  - Boiling point: No information available
  - Flash point: No information available
  - Density: No information available
  - Evaporation rate: No information available
  - Upper flammability limits: No information available
  - Lower flammability limit: No information available
  - Vapor pressure: No information available
  - Vapor density: No information available
  - Specific gravity: No information available
  - Water solubility: No information available
  - Solubility in other solvents: No information available
  - Partition coefficient: No information available
  - Autoignition temperature: No information available
  - Decomposition temperature: 213 °C
  - Kinematic viscosity: No information available
  - Explosive properties: No information available
  - Oxidizing properties: No information available

10. STABILITY AND REACTIVITY

**Reactivity**
- Not applicable

**Stability**
- Stable under recommended storage conditions.

**Incompatible materials**
- Incompatible with oxidizing agents.

**Conditions to avoid**
- Heat, flames and sparks. Extremes of temperature and direct sunlight.

**Hazardous Decomposition Products**
- Carbon oxides. Nitrogen oxides (NOx).

**Hazardous polymerization**
- Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

**Acute toxicity**
Product Information
- Product does not present an acute toxicity hazard based on known or supplied information.
Chronic Toxicity
Carcinogenicity
Target Organ Effects

The table below indicates whether each agency has listed any ingredient as a carcinogen.

IARC (International Agency for Research on Cancer) Not classifiable as a human carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Persistence and degradability
Bioaccumulation

No information available.
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal considerations
Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.
Do not reuse container.

14. TRANSPORT INFORMATION

DOT
IATA
IMDG

Not regulated
Not regulated
Not regulated

15. REGULATORY INFORMATION

International Inventories
All of the components in the product are on the following Inventory lists

TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) ENCS (Japan):

X - Listed
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

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
Chronic Health Hazard
Fire hazard No
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 contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
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<tbody>
<tr>
<td>Nitrofurantoin - 67-20-9</td>
<td>Male Reproductive</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

Mexico Regulatory Information

Canada Regulatory Information
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class Non-controlled

16. OTHER INFORMATION

Revision date 26-Sep-2017
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