SAFETY DATA SHEET
Santa Cruz Biotechnology, Inc.
Revision date 13-Dec-2019
Version 1.1

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

Product identifier
Product Name
Cadmium acetate dihydrate
Product Code
SC-210996

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 considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification
Acute toxicity - Oral
Category 4
Acute toxicity - Dermal
Category 4
Acute toxicity - Inhalation (Dusts/Mists)
Category 4
Germ Cell Mutagenicity
Category 1A
Carcinogenicity
Category 1A
Specific target organ toxicity (repeated exposure)
Category 1

Label elements
Signal word
Danger
Hazard statements
May cause genetic defects
May cause cancer
Causes damage to organs through prolonged or repeated exposure
Harmful in contact with skin
Harmful if inhaled
Harmful if swallowed

Symbols/Pictograms

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Other hazards
Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<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>Cadmium acetate dihydrate</td>
<td>5743-04-4</td>
<td>&gt;98</td>
<td>= 360 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures
General advice
Consult a physician if necessary. Remove to fresh air.

Eye contact
Wash with plenty of water.

Skin Contact
Wash skin with soap and water.

Inhalation
Remove to fresh air if breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Ingestion
Never give anything by mouth to an unconscious person. Clean mouth with water.

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 Carbon oxides.

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 Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions 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 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

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium acetate dihydrate</td>
<td>TWA: 0.01 mg/m³ Cd TWA: 0.002 mg/m³ Cd respirable particulate matter</td>
<td>-</td>
<td>IDLH: 9 mg/m³ Cd dust and fume</td>
</tr>
</tbody>
</table>

NIOSH IDLH  Immediately Dangerous to Life or Health
Appropriate engineering controls

Engineering Controls
- Showers
- Eyewash stations
- Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection
- Wear safety glasses with side shields (or goggles).

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
- Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>crystalline powder</td>
</tr>
<tr>
<td>Odor</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
- Extremes of temperature and direct sunlight.

Incompatible materials
- Strong oxidizing agents.

Hazardous Decomposition Products
- Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
No data available.

Eye contact
No data available.

Skin Contact
No data available.

Ingestion
No data available.

**Information on toxicological effects**

**Symptoms**
No information available.

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

**Chronic Toxicity**
May cause adverse effects on the bone marrow and blood-forming system.

**Target Organ Effects**
Blood, Respiratory system, Kidney, Prostate, Lungs.

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium acetate dihydrate</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
</tbody>
</table>

**ACGIH (American Conference of Governmental Industrial Hygienists)**
A2 - Suspected Human Carcinogen

**IARC (International Agency for Research on Cancer)**
Group 1 - Carcinogenic to Humans

**NTP (National Toxicology Program)**
Known - Known Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**
X - Present

**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) 360 mg/kg
- ATEmix (dermal) 1100 mg/kg
- ATEmix (inhalation-dust/mist) 1.5 mg/l

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**
Very toxic to aquatic life with long lasting effects

0% 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.

**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.

**14. TRANSPORT INFORMATION**

**DOT**
UN/ID no
UN2570
Hazard Class
6.1
Packing Group
III
Proper shipping name
Cadmium compounds
Description UN2570, Cadmium compounds (Cadmium acetate dihydrate), 6.1, III
Marine pollutant This product contains a chemical which is listed as a severe marine pollutant according to DOT
Emergency Response Guide Number 154

IMDG
UN/ID no UN2570
Hazard Class 6.1
Packing Group III
Proper shipping name Cadmium compound
Description UN2570, Cadmium compound (Cadmium acetate dihydrate), 6.1, III, Marine pollutant
Special Provisions 223, 274
EmS-No F-A, S-A

IATA
UN/ID no UN2570
Hazard Class 6.1
Packing Group III
Proper shipping name Cadmium compound
Description UN2570, Cadmium compound, 6.1, III
ERG Code 6L

15. REGULATORY INFORMATION

International Inventories
All of the components in the product are on the following Inventory lists
Australia (AICS) China (IECSC) Philippines (PICCS)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium acetate dihydrate</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

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 Yes
Chronic Health Hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive hazard No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium acetate dihydrate 5743-04-4</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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>
</thead>
<tbody>
<tr>
<td>Cadmium acetate dihydrate - 5743-04-4</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

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>Cadmium acetate dihydrate 5743-04-4</td>
<td>X</td>
<td>Not Listed</td>
<td>X</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