

# Material Safety Data Sheet

Sodium Butyrate

Cat. No: 72242

## 1 Product and Company Identification

- 1.1 Product Name:** Sodium Butyrate
- 1.2 Catalog Number:** 72242
- 1.3 Synonyms:** Butyric Acid; butanoic acid, sodium salt
- 1.4 Product Use:** Epigenetic modifier; inhibits histone deacetylase
- 1.5 Manufacturer/Supplier:** STEMCELL Technologies Inc.  
Suite 400, 570 West 7<sup>th</sup> Avenue  
Vancouver, BC V5Z 1B3  
Canada
- 1.6 In Case of Emergency Call:** 604-877-0713
- 1.7 Date Effective:** December 5, 2013
- 1.8 Prepared By:** Quality Control

## 2 Composition / Information on Ingredients

2.1 Component	CAS No.	%W/W
Sodium Butyrate	156-54-7	100

## 3 Hazards Identification

- 3.1 Emergency Overview:** This product is an irritant to eyes, skin and respiratory tract. This product may be harmful if ingested, inhaled or absorbed through skin. Suspected of causing genetic defects. The toxicological properties of this product have not been fully evaluated.
- Target organs: blood.
- 3.2 Routes of Exposure:** Absorbed through skin, eye contact, inhalation, and ingestion.
- 3.3 Potential Health Effects:**
- 3.3.1 Eye:** Causes eye irritation.
- 3.3.2 Skin:** May be harmful if absorbed through skin. Causes skin irritation.
- 3.3.3 Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.
- 3.3.4 Ingestion:** May be harmful if swallowed.
- 3.4 Chronic Effects/Carcinogenicity:** Not Available
- 3.5 OSHA Regulatory Status:** Target Organ Effect, Irritant, Mutagen

## 4 First Aid Measures

- 4.1 Eyes:** In case of contact with eyes, hold eyelids apart and flush thoroughly with water for at least 20 minutes. Call a physician.
- 4.2 Skin:** In case of contact with skin, wash the affected area immediately with soap and copious amounts of water for at least 20 minutes. Remove contaminated clothing. Call a physician.

# Material Safety Data Sheet

Sodium Butyrate

Cat. No: 72242

- 4.3 Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting unless directed to do so by medical personnel.
- 4.4 Inhalation:** If inhaled, remove person to fresh air. If not breathing, give artificial respiration. Call a physician.
- 4.5 Puncture Wounds:** Wash thoroughly with soap and water. Allow to bleed freely. Call a physician.
- 4.6 Note to Physician:** Not Available

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## 5 Fire Fighting Measures

- 5.1 Flash Point/Method:** Not Available
- 5.2 Explosive Limits:**
- 5.2.1 Upper:** Not Available
- 5.2.2 Lower:** Not Available
- 5.3 Autoignition Temperature:** Not Available
- 5.4 Hazardous Combustion Products:** Hazardous decomposition products formed under fire conditions: Carbon oxides, sodium oxides
- 5.5 Conditions of Flammability:** Not Available
- 5.6 Extinguishing Media:** Use alcohol-resistant foam, carbon dioxide, water or dry chemical spray.
- 5.7 Fire Fighting Procedures:** Not Available
- 5.8 Explosion Data:**
- 5.8.1 Sensitivity to Mechanical Impact:** Not Available
- 5.8.2 Sensitivity to Static Discharge:** Not Available

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## 6 Accidental Release Measures

- 6.1 Leak and Spill Procedure:** Use personal protective equipment as conditions warrant. Avoid raising and breathing dust and provide adequate ventilation. Take steps to avoid release into the environment, if safe to do so. Evacuate personnel to safe areas. Transfer to a chemical waste container for disposal in accordance with local regulations.

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## 7 Handling and Storage

- 7.1 Handling:** Should be handled by trained personnel observing good laboratory practices. Avoid contact with eyes and skin. Avoid formation of dust and aerosols. Avoid prolonged or repeated exposure. Provide appropriate exhaust ventilation at places where dust is formed.
- 7.2 Storage:** Store at 15 - 25°C. Strongly hygroscopic; keep in a dry place.

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## 8 Exposure Controls/Personal Protection

- 8.1 Engineering Controls:** Use mechanical exhaust or laboratory fumehood to avoid exposure.

# Material Safety Data Sheet

Sodium Butyrate

Cat. No: 72242

## 8.2 Personal Protective Equipment:

**8.2.1 Respiratory Protection:** Respirator that meets CAN/CSA Z94.4-93 (R1997) or NIOSH approved respirator, as conditions warrant.

**8.2.2 Eye Protection:** Safety glasses.

**8.2.3 Skin Protection:** Lab coat, compatible chemical-resistant gloves.

**8.3 General Hygiene Considerations:** Wash hands after use. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.

## 8.4 Exposure Limits:

**8.4.1 ACGIH TLV-TWA:** Not Available

**8.4.2 OSHA PEL-TWA:** Not Available

## 9 Physical/Chemical Properties:

**9.1 Appearance:** A crystalline solid

**9.2 Odor:** Not Available

**9.3 Physical State:** Solid

**9.4 pH:** Not Available

**9.5 Boiling Point:** Not Available

**9.6 Melting Point:** 250 - 253°C (482 - 487°F) - lit.

**9.7 Freezing Point:** Not Available

**9.8 Vapor Pressure:** Not Available

**9.9 Vapor Density:** Not Available

**9.10 Specific Gravity:** Not Available

**9.11 Evaporation Rate:** Not Available

**9.12 Solubility in Water:** ~10 mg/mL in PBS (pH 7.2); ~5 mg/mL in EtOH

**9.13 Odor Threshold:** Not Available

**9.14 Coefficient of Water/Oil Distribution:** Not Available

## 10 Stability/Reactivity:

**10.1 Chemical Stability:** Stable

**10.2 Conditions to Avoid:** Not Available

**10.3 Incompatibility (Material to Avoid):** Strong oxidizing agents

**10.4 Hazardous Decomposition/By-Products:** Hazardous decomposition products formed under fire conditions - Carbon dioxide, carbon monoxide, sodium oxides

**10.5 Hazardous Polymerization:** Will not occur

# Material Safety Data Sheet

Sodium Butyrate

Cat. No: 72242

## 11 Toxicological Information

- 11.1 Effects of Short-Term Exposure:** Burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting, spasm, inflammation, and edema of the larynx and bronchi, pneumonitis, pulmonary edema. May cause respiratory irritation or may cause drowsiness and dizziness.
- 11.2 Effects of Long-Term Exposure:** Only select Registry of Toxic Effects of Chemical Substances data is presented here. See actual entry in RTECS for complete information.  
Sodium Butyrate RTECS Number: ET6400000
- 11.3 Irritancy of Product:** Not Available
- 11.4 Sensitization to Product:** Not Available
- 11.5 Carcinogenicity:** Not Available
- 11.6 Reproductive Toxicity:** Investigated as a reproductive effector.
- 11.7 Teratogenicity and Embryotoxicity:** Not Available
- 11.8 Germ Cell Mutagenicity:** Investigated as a mutagen. In vitro tests showed mutagenic effects.
- 11.9 Name of Toxicologically Synergistic Products:** Not Available
- 11.10 LD50 (specify species and route):** Not Available
- 11.11 LC50 (specify species):** Not Available

## 12 Ecological Information

- 12.1** Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
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|---|--|
| Toxicity to fish                                    | LC50 - Lepomis macrochirus - 5000 mg/L - 24 h        |
| Toxicity to daphnia and other aquatic invertebrates | EC50 - Daphnia magna (Water flea) - 1950 mg/L - 24 h |

## 13 Disposal Considerations

- 13.1 Waste Disposal Method:** Disposal should be in accordance with existing practices at your institution. Observe all Federal, Provincial/State and Local Laws.

## 14 Transport Information

### 14.1 Transport Canada

- 14.1.1 PIN No.:** Not Available.

### 14.2 U.S. Department of Transportation:

- 14.2.1 Proper Shipping Name:** Not Available.
- 14.2.2 Hazard Class:** This substance is not known to be hazardous for transport.
- 14.2.3 ID. Number:** Not Available.

# Material Safety Data Sheet

*Sodium Butyrate*

Cat. No: 72242

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**14.2.4 Packing Group:** Not Available.

**14.2.5 Label Statement:** Not Available.

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## 15 Regulatory Information

**15.1 WHMIS Classification:** D2B

**15.2 Note:** This MSDS was prepared according to the Canadian Controlled Products Regulation and contains all the information required by those regulations.

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## 16 Other Information

**16.1 Preparation Information:** Refer to PIS No. 72242

**16.2 This MSDS has been revised in the following section(s):** Not Applicable

**16.3 Original Issue Date:** December 5, 2013

**16.4 Notice:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StemCell Technologies Inc., shall not be held liable for any damage resulting from handling or from contact with the product. The information contained in this Material Safety Data Sheet (MSDS) is current as of the Date Prepared shown in Section 1.7 of this document and may be subject to ammendment by StemCell Technologies Inc.

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