

MATERIAL SAFETY DATA SHEET

1. Identification of the substance/preparation and of the company/undertaking

Product name	: Virstatin	Catalog #	: sc-358715
Chemical formula	: C ₁₆ H ₁₃ NO ₄	Supplier	: Santa Cruz Biotechnology, Inc. 2145 Delaware Avenue Santa Cruz, California 95060 800.457.3801 or 831.457.3800
Synonym	: 4-(N-(1,8-Naphthalimide))-n-butyric acid	Emergency	: ChemWatch Within the US & Canada: 877-715-9305 Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

2. Composition / information on ingredients

Substance/Preparation : Substance

Chemical name*	CAS No.	EC Number	Symbol	R-Phrases
4-(N-(1,8-Naphthalimide))-n-butyric acid	88909-96-0	Not available.	Xn	R20/21/22, R36/37/38

3. Hazards identification

Physical/chemical hazards : Not applicable.

Human health hazards : CAUTION!
MAY BE HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED.
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

4. First-aid measures

First-Aid measures

- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion** : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin Contact** : In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
- Eye Contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Effects and symptoms

- Inhalation** : Hazardous in case of inhalation (lung irritant).
- Ingestion** : Hazardous in case of ingestion.
- Skin Contact** : Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
- Eye Contact** : Hazardous in case of eye contact (irritant).
- Aggravating conditions** : Repeated or prolonged exposure is not known to aggravate medical condition.

5. Fire-fighting measures

Flammability of the Product : May be combustible at high temperature.

Extinguishing Media

- Suitable** : SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Hazardous thermal (de)composition products : These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Special fire-fighting procedures : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Protection of fire-fighters : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

- Personal precautions** : Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
- Small Spill and Leak** : Use appropriate tools to put the spilled solid in a convenient waste disposal container.
- Large Spill and Leak** : Use a shovel to put the material into a convenient waste disposal container.

7. Handling and storage

- Handling** : Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 4°C (39.2°F).
- Packaging materials**
- Recommended use** : Use original container.

8. Exposure controls/personal protection

- Engineering measures** : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
- Hygiene measures** : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
Virstatin	Not available.

Personal protective equipment

- Respiratory system** : Dust respirator. Be sure to use an approved/certified respirator or equivalent.
- Skin and body** : Lab coat.
- Hands** : Gloves.
- Eyes** : Splash goggles.
- Protective Clothing (Pictograms)** :



9. Physical and chemical properties

- Physical state** : Solid. (Solid powder.)
- Color** : Yellow. (Light.)
- Molecular Weight** : 283.3 g/mole
- Solubility** : Not available.
- Flash point** : Not available.
- Explosive properties** : Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

10. Stability and reactivity

- Stability** : The product is stable.
- Conditions to avoid** : Not available.
- Hazardous Decomposition Products** : These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

11. Toxicological information

- RTECS #** : Not available.
- Local effects**
- Skin irritation** : Hazardous in case of skin contact (irritant).
- Acute toxicity** : LD50: Not available.
LC50: Not available.

Chronic toxicity	: Repeated or prolonged exposure is not known to aggravate medical condition.
Other Toxic Effects on Humans	: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant). To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.
Carcinogenic effects	: Not available.
Mutagenic effects	: Not available.
Reproduction toxicity	: Not available.
Teratogenic effects	: Not available.

12. Ecological information

Ecotoxicity	: Not available.
Toxicity of the Products of Biodegradation	: The products of degradation are less toxic than the product itself.

13. Disposal considerations

Methods of disposal; Waste of residues; Contaminated packaging	: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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14. Transport information

International transport regulations

Land - Road/Railway

ADR/RID Class	: Not controlled under ADR (Europe).
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Sea


IMDG Class	: Not controlled under IMDG.
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Air

IATA-DGR Class	: Not controlled under IATA.
Special Provisions for Transport	: Not applicable.

15. Regulatory information

EU Regulations

Hazard symbol(s)	: 
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Classification	: Harmful
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Risk Phrases	: R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin.
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Safety Phrases	: S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
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Contains	: - Virstatin
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U.S. Federal Regulations

: TSCA: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
SARA 313 toxic chemical notification and release reporting: No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No products were found.
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.

HCS Classification	: CLASS: Irritating substance.
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State Regulations	:
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WHMIS (Canada)	: Not controlled under WHMIS (Canada). No products were found.
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16. Other information

**Hazardous Material
Information System
(U.S.A.)**

Health	2
Fire Hazard	1
Reactivity	0
Personal Protection	E

**National Fire
Protection Association
(U.S.A.)**



Notice to Reader

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

10/11/2010