

# MATERIAL SAFETY DATA SHEET

Cat# 1543-025, Okadaic acid

MSDS DATE: Jan 16, 2012

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Okadaic acid  
**PRODUCT CODES:** Cat# 1543-025  
**MANUFACTURER:** BioVision, Inc.  
**ADDRESS:** 155 S. Milpitas Boulevard, Milpitas, CA 95035  
**EMERGENCY PHONE:** 858-373-8066  
**CHEMTREC PHONE:**  
**OTHER CALLS:** 408-493-1800  
**FAX PHONE:** 408-493-1801

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	Description	Volume	Safety Information
Okadaic acid	Solid	25 µg	See below

## SECTION 3: HAZARDS IDENTIFICATION

Product Name/Chemical Name	CAS Number	EC-No.	MW	Chemical Formula
Okadaic acid	78111-17-8	--	805.0	C <sub>44</sub> H <sub>68</sub> O <sub>13</sub>

### Okadaic acid:

#### Emergency Overview

**OSHA Hazards:** Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Irritant

**Target Organs:** Smooth muscle

**GHS Classification:** Acute toxicity, Oral (Category 3)  
Acute toxicity, Inhalation (Category 3)  
Acute toxicity, Dermal (Category 3)  
Skin irritation (Category 2)

#### GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger  
Hazard statement(s): H301+H311 Toxic if swallowed or in contact with skin.  
H315 Causes skin irritation.  
H331 Toxic if inhaled.  
Precautionary statement(s): P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P311 Call a POISON CENTER or doctor/physician.

#### HMIS Classification

**Health hazard:** 2  
**Flammability:** 0  
**Physical hazards:** 0

#### NFPA Rating

**Health Hazard:** 2  
**Fire:** 0  
**Reactivity Hazard:** 0

#### Potential Health Effects

**Inhalation:** Toxic if inhaled. Causes respiratory tract irritation.  
**Skin:** Toxic if absorbed through skin. Causes skin irritation.  
**Eyes:** Causes eye irritation.  
**Ingestion:** Toxic if swallowed.

## SECTION 4: FIRST AID MEASURES

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:** Flush eyes with water as a precaution.

**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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## 5: FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products:** Hazardous decomposition products formed under fire conditions— carbon oxides.

**Condition of flammability:** Not flammable or combustible.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for cleaning up:** Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measure for preventive fire protection.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20 °C

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. For prolonged or repeated contact, use protective gloves.

#### Eye protection

Safety glasses with side-shields conforming to EN166

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Okadaic acid
Appearance:	White powder
pH:	No data available
Water Solubility:	No data available
Specific Gravity (g/ml):	No data available
Boiling Point (°C):	No data available
Melting Point (°C):	No data available
Flash Point (°C):	No data available
Ignition Temperature (°C):	No data available
Density	No data available

## SECTION 10: STABILITY AND REACTIVITY

Property	Okadaic acid
Chemical stability	Stable under recommended storage conditions
Conditions to avoid:	No data available
Materials to avoid:	Strong oxidizing agents
Hazardous decomposition products:	Carbon oxides

## SECTION 11: TOXICOLOGICAL INFORMATION

### Okadaic acid:

**Acute toxicity:** LD50 Oral –mouse – 0.15 mg/kg

**Skin corrosion/irritation:** no data available

**Serious eye damage/eye irritation:** no data available

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**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** Genotoxicity in vitro – Human – lymphocyte: sister chromatic exchange  
Genotoxicity in vitro – Hamster – lungs: mutation in mammalian somatic cells

**Carcinogenicity:**

Carcinogenicity – mouse – skin

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumors

- IARC: No component of the product present at levels greater than or equal to 0.1% is identified as probable, or possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** no data available

**Teratogenicity:** no data available

**Specific target organ toxicity – single exposure (GHS):** no data available

**Specific target organ toxicity – repeated exposure (GHS):** no data available

**Aspiration hazard:** no data available

**Potential Health Effects**

**Inhalation:** Toxic if inhaled. Causes respiratory tract irritation.

**Skin:** Toxic if absorbed through skin. Causes skin irritation.

**Eyes:** Causes eye irritation.

**Ingestion:** Toxic if swallowed.

**Signs and Symptoms of Exposure:** Tumor promoter. Gastrointestinal disturbance.

**Additional information:** RTECS: AA8227800

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## SECTION 12: ECOLOGICAL INFORMATION

**Okadaic acid:**

**Persistence and degradability:** no data available

**Toxicity:** no data available

**Bioaccumulative potential:** no data available

**Mobility in soil:** no data available

**PBT and vPvB assessment:** no data available

**Other adverse effects:** no data available

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## SECTION 13: DISPOSAL CONSIDERATIONS

**Product:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging:** Dispose of as unused product.

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## SECTION 14: TRANSPORT INFORMATION

**Okadaic acid:**

**DOT (US):** UN-number: 3462, Class: 6.1, Packing group: I; Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Okadaic acid); Marine pollutant: No; Poison inhalation hazard: No

**IMDG:** UN-number: 3462, Class: 6.1, Packing group: I; EMS-No: F-A, S-A; Proper shipping name: TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (Okadaic acid); Marine pollutant: No

**IATA:** UN-Number: 3462, Class: 6.1, Packing group: I; Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Okadaic acid)

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## SECTION 15: REGULATORY INFORMATION

**Okadaic acid:**

**OSHA Hazards:** Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Irritant

**SARA 302 Components:** SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:** Acute Health Hazard

**Massachusetts Right To Know Components:** No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components:** Okadaic acid, CAS-No. 78111-17-8

**New Jersey Right To Know Components:** Okadaic acid, CAS-No. 78111-17-8

**California Prop. 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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EU regulations

Component	Risk Phrases	Safety Phrases
Okadaic acid	R23/24/25, R38	S28, S38

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## SECTION 16: OTHER INFORMATION

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### DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.