

# SAFETY DATA SHEET

Cat# K256-25,-100 Mitochondria/Cytosol Fractionation Kit

SDS DATE: 18MAY2015

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Mitochondria/Cytosol Fractionation Kit  
**PRODUCT CODES:** Cat# K256-25,-100  
**MANUFACTURER:** BioVision, Inc.  
**DIVISION:**  
**ADDRESS:** 155 S. Milpitas Blvd. Milpitas, CA 95035  
**EMERGENCY PHONE:** 858-373-8066  
**CHEMTREC PHONE:**  
**OTHER CALLS:** 408-493-1800  
**FAX PHONE:** 408-493-1801

## SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
Mitochondria Extraction Buffer	Proprietary Buffer (contains Triton X-100 >=1%)	K256-25: 2.5 ml K256-100: 10 ml	See below
5X Cytosol Extraction Buffer	Proprietary Buffer	K256-25: 5.0 ml K256-100: 20 ml	No hazards
Dithiothreitol (DTT)	Solution in H <sub>2</sub> O (DTT >1%)	K256-25: 110 µl K256-100: 110 µl	See below
Protease Inhibitor Cocktail	Lyophilized (contains PMSF)	K256-25: 1 vial K256-100: 1 vial	See below

### Triton X-100:

#### Emergency Overview

**OSHA Hazards:** Irritant, Harmful by ingestion

**GHS Classification:** Serious eye damage (Category 1)  
Skin irritation (Category 3)  
Acute aquatic toxicity (Category 3)  
Chronic aquatic toxicity (Category 3)

#### GHS Label elements, including precautionary statements

##### Pictogram:



**Signal word:** Warning

**Hazard statement(s):** H302: Harmful if swallowed  
H316 Causes mild skin irritation.  
H320: Causes eye irritation.

**Precautionary statement(s):** P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.  
P264 Wash hands thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### HMIS Classification

**Health hazard:** 2  
**Flammability:** 1  
**Physical hazards:** 0

#### NFPA Rating

**Health Hazard:** 2  
**Fire:** 1  
**Reactivity Hazard:** 0

#### Potential Health Effects

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

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

**Eyes:** Causes eye irritation.

**Ingestion:** Harmful if swallowed.

### PMSF:

#### Emergency Overview

##### Synonyms:

α-Toluenesulphonyl fluoride, phenylmethylsulfonyl fluoride, Benzylsulfonyl fluoride

**OSHA Hazards:** acute toxicity, skin corrosion, serious eye damage

**GHS Classification:** Acute toxicity (Category 3)  
Serious eye damage (Category 1)  
Skin irritation (Category 1B)

#### GHS Label elements, including precautionary statements

##### Pictogram:



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**Signal word:** Danger  
**Hazard statement(s):** H302: Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
**Precautionary statement(s):** P260 Do not breathe dust or mist.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/ physician.  
P363 Wash contaminated clothing before reuse..

## HMIS Classification

Health hazard: 2

Flammability: 0

Physical hazards: 0

## NFPA Rating

Health Hazard: 2

Fire: 0

Reactivity Hazard: 0

## Potential Health Effects

**Inhalation:** May be harmful if inhaled.

**Skin:** Causes skin corrosion.

**Eyes:** Causes serious eye damage.

**Ingestion:** May be harmful if swallowed.

## DTT:

### Emergency Overview

**OSHA Hazards:** Target organ effect, Harmful by ingestion, Irritant

**Target Organs:** Central nervous system

**GHS Classification:** Acute toxicity, Oral (Category 4)  
Skin irritation (Category 2)  
Eye irritation (Category 2A)

**GHS Label elements, including precautionary statements**

**Pictogram:**



**Signal word:** Warning  
**Hazard statement(s):** H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335: May cause respiratory irritation

**Precautionary statement(s):** P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## HMIS Classification

Health hazard: 2

Chronic Health Hazard: \*

Flammability: 0

Physical hazards: 0

## NFPA Rating

Health hazard: 2

Fire: 0

Reactivity Hazard: 0

## Potential Health Effects

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes:** Causes eye irritation.

**Ingestion:** Harmful if swallowed.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Triton X-100	9002-93-1	--	--	--
PMSF	329-98-6	206-350-2	174.19	C7H7FO2S

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DTT	3483-12-3	222-468-7	154.25	C <sub>4</sub> H <sub>10</sub> O <sub>2</sub> S <sub>2</sub>
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## 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:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed:** DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## SECTION 5: FIRE-FIGHTING MEASURES

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

**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 fire fighting if necessary.

**Hazardous combustion products:** Hazardous decomposition products formed under fire conditions— see section 10.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Use personal protective equipment. 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. Discharge into the environment must be avoided.

**Methods for cleaning up:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

## SECTION 7: HANDLING AND STORAGE

### PMSF:

#### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

#### Conditions for safe storage

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

Moisture sensitive.

Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials.

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 respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

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

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Triton X-100	PMSF	DTT
<b>Appearance:</b>	Liquid	white crystals	Clear liquid
<b>pH:</b>	9.7	No data available	3.0-5.0
<b>Water Solubility:</b>	Soluble	No data available	Highly soluble
<b>Other Solubility:</b>	No data available	No data available	No data available
<b>Boiling Point (°C)</b>	>200 °C (>392 °F)	No data available	No data available

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Melting Point (°C)	6 °C (43 °F)	92°C	No data available
Flash Point (°C)	251 °C (484 °F)	No data available	No data available
Ignition Temp. (°C)	No data available	No data available	No data available
Density:	1.070 g/ml	No data available	1.035 g/cm <sup>3</sup>

## SECTION 10: STABILITY AND REACTIVITY

Property	Triton X-100	PMSF	DTT
<b>Chemical Stability:</b>	Stable under recommended storage conditions		
<b>Conditions to Avoid:</b>	No data available	No data available	No data available
<b>Materials to Avoid:</b>	Strong oxidizing agents, strong acids, strong bases	Strong oxidizing agents, Strong bases, acids	Bases, oxidizing agents, reducing agents, alkali metals
<b>Hazardous decomposition: products:</b>	Carbon oxides	Contact with acids liberates toxic gas	Carbon oxides, sulfur oxides, hydrogen sulfide gas

## SECTION 11: TOXICOLOGICAL INFORMATION

### Triton X-100:

**Acute toxicity:** no data available

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

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

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

**Germ cell mutagenicity:** no data available

### **Carcinogenicity:**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, 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:** May be harmful if inhaled. Causes respiratory tract irritation.

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

**Eyes:** Causes eye irritation.

**Ingestion:** Harmful if swallowed.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects:** no data available

**Additional information:** RTECS: not available

### PMSF:

**Acute toxicity:** LD50 Oral - Mouse - 200 mg/kg

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

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

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

**Germ cell mutagenicity:** no data available

### **Carcinogenicity:**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, 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:** May be harmful if inhaled. Causes respiratory tract irritation.

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

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**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects:** no data available

**Additional information:** RTECS: XT8040000

## DTI:

**Acute toxicity:** no data available

**Irritation and corrosion:** no data available

**Sensitization:** no data available

**Germ cell mutagenicity:** no data available

## **Carcinogenicity:**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, 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

## **Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes:** Causes eye irritation.

**Ingestion:** Toxic if swallowed.

**Synergistic effects:** no data available

**Additional information:** RTECS: not available

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## **SECTION 12: ECOLOGICAL INFORMATION**

### Triton X-100:

**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:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

### DTI:

**Persistence and degradability:** no data available

**Toxicity:** Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h

**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**

### Triton X-100:

**DOT (US):** UN-Number: 3082 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (p-tertiary-Octylphenoxy polyethyl alcohol)

Marine pollutant: Marine pollutant

Poison Inhalation Hazard: No

**IMDG:** UN-Number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-tertiary-Octylphenoxy polyethyl alcohol)

Marine pollutant: Marine pollutant

**IATA:** UN-Number: 3082 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (p-tertiary-Octylphenoxy polyethyl alcohol)

### PMSF:

**DOT (US):** UN number: 2928 Class: 6.1 (8) Packing group: II

Proper shipping name: Toxic solids, corrosive, organic, n.o.s. ( $\alpha$ -Toluenesulphonyl fluoride)

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

**IMDG:** UN number: 2928 Class: 6.1 (8) Packing group: II EMS-No: F-A, S-B

Proper shipping name: TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. ( $\alpha$ -Toluenesulphonyl fluoride)

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IATA: UN number: 2928

Class: 6.1 (8)

Packing group: II

Proper shipping name: Toxic solid, corrosive, organic, n.o.s. ( $\alpha$ -Toluenesulphonyl fluoride)

## DTT:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

## SECTION 15: REGULATORY INFORMATION

**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:** Triton X-100: Acute Health Hazard

DTT: Acute Health Hazard, Chronic Health Hazard

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

**Pennsylvania Right To Know Components:** Triton X-100, CAS-No. 9002-93-1

DTT, CAS-No. 3483-12-3

$\alpha$ -Toluenesulphonyl fluoride: CAS-No. 329-98-6

**New Jersey Right To Know Components:** Triton X-100, CAS-No. 9002-93-1

DTT, CAS-No. 3483-12-3

$\alpha$ -Toluenesulphonyl fluoride: CAS-No. 329-98-6

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

## EU regulations

Component	Risk Phrases	Safety Phrases
Triton X-100	R22, R52/53	S22, S36/37/39, S45
PMSF	R25, R34	S26, S36/37/39, S45
DTT	R22, R36/37/38	S26, S36

## SECTION 16: OTHER INFORMATION:

### OTHER INFORMATION:

### PREPARATION INFORMATION:

### 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.