

**Section 1. Product and Manufacturer Identification**

**Product Name:** Cell Freezing Medium

**Catalog Number:** 79796-1, 79796-2

**CAS number:** Not available.

**Recommended Usage:** This product is intended for use in a research setting for the growth of cell culture.

This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, and agricultural applications.

**Manufacturer Information:** BPS Bioscience, Inc.  
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San Diego, CA 92121 USA.  
Tel: 1-858-202-1401  
[www.bpsbioscience.com](http://www.bpsbioscience.com)

For a complete list of components shipped with a product, please review the product datasheet, which is available on our website at [www.bpsbioscience.com](http://www.bpsbioscience.com). A safety datasheet for each component is available upon request.

**Section 2. Hazard(s) Identification**

**Hazard Classification**

Not a hazardous substance or mixture according to United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).

**Signal Word:** Warning

**Hazard Pictograms:**



<b>Health Hazards:</b>	Eye irritation	Category 2
	Skin irritation	Category 2
	Specific Target Organ Toxicity – Single Exposure Respiratory Tract	Category 3

**Physical Hazards:** None known

**Environmental Hazards:** None known

**Hazard Statement(s):** H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.

**Precautionary statements**

**Prevention:** P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response:</b>	<b>IF ON SKIN</b>	P302 + P352: Wash with plenty of soap and water. P308 + P313: IF exposed or concerned: Get medical advice/attention.  P363: Wash contaminated clothing before reuse.
	<b>IF SWALLOWED</b>	P301 + P310: Immediately call a POISON CENTER or doctor/physician.  P330 - Rinse mouth with copious amounts of water.
	<b>IF IN EYES</b>	P305 + P351 + P338: Rinse cautiously with water for several minutes. Remove

	contact lenses, if present and easy to do. Continue rinsing.
<b>IF INHALED</b>	<p>P304 + P340: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P330: Rinse mouth with copious amounts of water.</p> <p>P342 + P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.</p>

**Storage:** Follow storage recommendations from product datasheet.

**Disposal:** P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Hazards:** Not Applicable

**HMIS**

<b>Health</b>	<b>2</b>
<b>Flammability</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>

**Section 3. Composition and Information on Ingredients**

Component	CAS No.	Common Name	EINECS-No	Classification	Weight-%
Dimethyl sulfoxide	67-68-5	DMSO	200-664-3	Eye irritation 2 Skin irritation 2 STOT-SE 3	>= 5, <15%

Contains fetal bovine serum or calf serum. The physical properties of this product have not been investigated thoroughly. We recommend handling all chemicals with caution according to good lab practices, with proper personal protective equipment, proper engineering controls, and within the parameters of the purchaser's chemical hygiene plan.

Serum is ISIA-certified and sourced from the United States of America. No viruses or bacteria are known to be present; however, appropriate precautions for biological materials should be used. This product is intended for research only and is not for direct administration into animals or humans.

#### **Section 4. First Aid Measures**

##### **Description of First Aid measures**

**Skin contact:** Remove and wash affected articles of clothing immediately and rinse skin with water for 15 minutes. Immediate medical attention is not required.

**Eye contact:** Rinse immediately with water for at least 15 minutes, including under the eyelids. Remove contact lenses, if present and easy to do. Immediate medical attention is not required.

**Ingestion:** Seek medical advice or call POISON CONTROL immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**Notes to Physician:** Treat symptomatically.

##### **Most important symptoms and effects, both acute and delayed:**

No known significant effects or critical hazards.

##### **Indication of any immediate medical attention and special treatment needed:**

None.

**Section 5. Fire Fighting Measures**

<b>Conditions of flammability</b>	This product is not flammable.
<b>Suitable extinguishing media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Foam. Dry chemical.
<b>Unsuitable extinguishing media</b>	No data available.
<b>Special hazards arising from the substance or mixture</b>	None known.
<b>Special protective equipment for firefighters</b>	Standard procedure for chemical fires.

**Section 6. Accidental Release Measures**

<b>Personal precautions and protective equipment</b>	Ensure adequate ventilation, and avoid breathing vapors, mist or gas. Avoid dust/aerosol formation. Always wear recommended Personal Protective Equipment. See section 8 for more information.
<b>Emergency procedures</b>	No special emergency precautions required.
<b>Environmental precautions</b>	No special environmental precautions required.
<b>Methods and material for containment and cleaning up</b>	Soak up with inert absorbent material.
<b>Reference to other sections</b>	See section 8 for more information.

**Protective Action Criteria for Chemicals**

Chemical Name	CAS#	PAC-1	PAC-2	PAC-3
Dimethyl sulfoxide	67-68-5	150 ppm	290 ppm	1,800 ppm

**Section 7. Handling and Storage**

<b>Precautions for Safe Handling</b>	Use personal protective equipment as required. No special handling advice is necessary.
<b>Precautions for protection against explosions and fires</b>	Not applicable.
<b>Precautions for minimizing the release of the chemical into the environment</b>	No special environmental precautions are needed.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep container tightly sealed in a dry, cool and well-ventilated place. Recommended storage temperature: As described in technical data sheet.
<b>Specific end use(s)</b>	For research use only. Serum and blood proteins are not for direct administration into humans or animals.

## **Section 8. Exposure Controls, Personal Protection**

### **Control Parameters**

<b>Chemical Name</b>	<b>OSHA PEL</b>	<b>OSHA PEL (Ceiling)</b>	<b>ACGIH OEL (8-hour TWA)</b>	<b>ACGIH OEL (STEL)</b>
Dimethyl sulfoxide	-	-	250 ppm [USA WEELs, AIHA 2003]	-

The lists that were valid during the creation of this document were used as basis.

<b>Engineering Measures</b>	Ensure adequate ventilation, especially in confined areas. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
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### **Exposure Controls**

#### **Personal Protective Equipment (PPE)**

<b>Respiratory protection</b>	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standard, such as NIOSH (US) or CEN (EU).
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<b>Hand protection</b>	Handle with suitable chemical resistant gloves. Gloves must be inspected prior to use. Use proper glove removal Wash and dry hands.
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<b>Eye protection</b>	Tight sealing safety goggles with side-shields conforming to NIOSH (US) or EN 166(EU).
<b>Body protection</b>	Wear suitable impervious protective clothing.
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	No special environmental precautions are needed.

### **Section 9. Physical and Chemical Properties**

#### **Physical and chemical properties**

<b>Physical state</b>	Frozen liquid
<b>Odor</b>	No data available
<b>Odor threshold</b>	No data available
<b>pH</b>	6-8
<b>Molecular weight</b>	No data available
<b>Melting Point / melting range</b>	-10°C to 2°C
<b>Boiling point / boiling range</b>	No data available
<b>Flash point</b>	No data available
<b>Autoignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor density</b>	No data available
<b>Relative density</b>	No data available
<b>Specific gravity</b>	No data available
<b>Solubility</b>	No data available

<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Other information</b>	No data available

### **Section 10. Stability and Reactivity**

<b>Chemical Stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	No data available
<b>Incompatible materials</b>	Strong oxidizing agents
<b>Hazardous decomposition products</b>	No data available
<b>Polymerization</b>	Hazardous polymerization does not occur under conditions of normal use.

### **Section 11. Toxicological Information**

#### **Information on toxicological effects**

There is no evidence available indicating acute toxicity.

#### **Acute toxicity**

<b>Chemical Name</b>	<b>Oral LD50</b>	<b>Dermal LD50</b>	<b>Inhalation LD50</b>	<b>Concentration / %</b>
Dimethyl Sulfoxide (DMSO)	Acute oral toxicity Species: Rat Value: >20mL/kg Species: Mouse Value: 20mL/kg	LD50 Species: Rat Value: 40-50 g/kg  LD50 40 g/kg Species: mouse	Mild pulmonary irritation (edema) LC0 Species: Rat Value: 1600 mg/m <sup>3</sup> Exposure time: 4 h Value: 2900 mg/m <sup>3</sup> Exposure time: 24 h Value: 2000 mg/m <sup>3</sup> Exposure time: 48 h	>= 5%, < 15%

<b>Skin corrosion / irritation</b>	Chemical Name: DMSO Species: Rabbit Result: Mild skin irritation Method: OECD Test Guideline 404
<b>Serious eye damage / irritation</b>	Chemical Name: DMSO Species: Rabbit Result: Mild eye irritation Method: OECD Test Guideline 405
<b>Respiratory or skin sensitization</b>	Chemical Name: DMSO Species: Guinea pig Result: Does not cause skin sensitization. Method: OECD Test Guideline 406
<b>Specific target organ toxicity (STOT) – single exposure</b>	No data available
<b>Specific target organ toxicity (STOT) – repeated exposure</b>	No data available
<b>Carcinogenicity</b>	No data available
<b>Germ cell mutagenicity</b>	No data available
<b>Reproductive toxicity</b>	No data available
<b>Aspiration hazard</b>	No data available
<b>Principle Routes of Exposure</b>	Respiratory organs, mouth, skin, and eyes.
<b>Symptoms of exposure</b>	No data available
<b>Additional information</b>	No data available

## **Section 12. Ecological Information**

<b>Ecotoxicity</b>	Contains no substances known to be hazardous to the environment or not degradable in wastewater treatment plants. Do not empty into drains.
<b>Persistence and degradability</b>	Persistence is unlikely
<b>Bioaccumulative potential</b>	No information available
<b>Mobility in soil</b>	log Pow: -2.03

**Results of PBT and vPvB assessment** No information available

Chemical Name	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Dimethyl Sulfoxide (DMSO)	EC50 96h 12350 - 25500 mg/L	40 g/L LC50 96 h 33-37 g/L LC50 96 h	16000 mg/L EC50 Pseudomonas putida 16 h = 32 g/L EC50 Tetrahymena pyriformis 24 h = 77 mg/L EC50 Photobacterium phosphoreum 5 min	EC50 24h 7000 mg/L

### **Section 13. Disposal Considerations**

#### **Disposal of Product**

Avoid disposal of these reagents down the drain whenever possible. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional, or national/federal regulations.

#### **Disposal of Contaminated Packaging**

Dispose of waste materials and contaminated packaging as unused components. Disposal must comply with country (e.g., Canada, EU, Japan, etc.), federal, state and local regulations. If unsure of the applicable regulatory requirements, contact the authorities for information.

### **Section 14. Transport Information**

#### **IATA / ADR / DOT-US / IMDG**

Not regulated in the meaning of transport regulation

<b>UN Number</b>	Not Regulated
<b>UN proper shipping name</b>	Not Applicable
<b>Transport hazard class(es)</b>	Not Applicable
<b>Packing group</b>	Not Applicable
<b>Special Precautions for user</b>	Not Applicable
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code</b>	Not Applicable

**Section 15. Regulatory Information**

Chemical Name	US TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Dimethyl Sulfoxide (DMSO)	Listed	Active	None

**TSCA 12(b) - Notices of Export**

Not applicable

**U.S. Federal Regulations**

**SARA 302 Components**

Not applicable

**SARA 313 Components**

Not applicable

**SARA 311/312 Hazards**

Not applicable

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs)**

Product does not contain HAPs.

**CWA (Clean Water Act)**

Not applicable

**OSHA - Occupational Safety and Health Administration**

Not applicable

**CERCLA**

Not Applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): Not applicable  
 DOT Marine Pollutant: Not applicable  
 DOT Severe Marine Pollutant: Not applicable

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**U.S. State Regulations**

**California Prop 65**

Product does not contain chemicals listed under Proposition 65.

**US State Right To Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Dimethyl Sulfoxide	Not Listed	Listed	Not Listed	Not Listed	Not Listed

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Chemical Name	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Dimethyl Sulfoxide	67-68-5	Listed	Not Listed	200-664-3	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	KE-32367

- Regulation (EC) No 1907/2006 (REACH)**  
This product complies with Regulation (EC) 1907/2006 (REACH) of the European Parliament and of the Council concerning the registration, evaluation, authorization, and restriction of chemicals.
- Regulation (EC) No 1272/2008 (CLP)**  
This substance complies with the classification, labeling, and packaging (CLP) regulations.
- Substances of Very High Concern (SVHC):**  
This product does not contain any substances that are classified as Substances of Very High Concern (SVHC) in accordance with the REACH regulation.
- Authorizations and Restrictions under REACH:**  
This product is not subject to authorization under REACH. The delivery of this Safety Data Sheet is not a mandatory requirement under REACH
- Transportation Information:** This product is not classified as a hazardous material and is not regulated for transport under the International Air Transport Association (IATA), the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), and the International Maritime Dangerous Goods (IMDG) Code.

**WHMIS Hazard Class**

Not Applicable.

## **Section 16. Other Information**

**Revision Date:** July 17, 2024

### **Contact Information:**

**Phone:** 1-858-202-1401

**Email:** support@bpsbioscience.com

### **References**

- ECHA:<http://echa.europa.eu/>
- TOXNET:<http://toxnet.nlm.nih.gov/>
- eChemPortal:<http://www.echemportal.org/>
- LOLIdatabase:<https://www.chemadvisor.com/loli-database>

### **Abbreviations and acronyms**

TWA - Time-Weighted Average

OELs - Occupational Exposure Limits

STEL - Short Term Exposure Limit

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CEPA - Canadian Environmental Protection Act

EPA - Environmental Protection Agency

OSHA - Occupational Safety and Health Administration of the US Department of Labor

IATA - International Air Transport Association

DOT - Department of Transportation

IMDG - International Maritime Dangerous Goods

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH - National Institute for Occupational Safety and Health

AIHA - American Industrial Hygiene Association

HMIS - Department of Defense Hazardous Materials Information System

NTP - National Toxicology Program

IARC - International Agency for Research on Cancer

This product is for research use only and is not intended for human or animal diagnostic or therapeutic uses. The recipient is responsible for ensuring that, where applicable, existing laws and guidelines are observed. All materials and mixtures may present unknown hazards and should be used with caution.

BPS Bioscience provides this information in good faith and is based on our present knowledge. This information shall not be taken as being all inclusive and is to be used only as a guide. This SDS does not constitute a warranty of any kind.

**End of Safety Data Sheet**