

Material Safety Data Sheet

mFreSR™ Defined Cryopreservation Medium for hESCs
& hiPSCs

Cat. No: 05853, 05854, 05855

1 Product and Company Identification

- 1.1 Product Name:** mFreSR™ Defined Cryopreservation Medium for hESCs & hiPSCs
- 1.2 Catalog Number:** 05853, 05854, 05855
- 1.3 Synonyms:** Not Available
- 1.4 Product Use:** Cell Cryopreservation
- 1.5 Manufacturer/Supplier:** StemCell Technologies Inc.
Suite 400, 570 West 7th Avenue
Vancouver, BC V5Z 1B3
Canada
- 1.6 In Case of Emergency Call:** 604-877-0713
- 1.7 Date Prepared:** September 29, 2010
- 1.8 Prepared By:** Quality Control

2 Composition / Information on Ingredients

2.1 Component	CAS No.	%W/W
Potentially biohazardous material derived from human blood.	Not Available	Not Available
Dimethyl Sulfoxide (DMSO)	67-68-5	10%

3 Hazards Identification

- 3.1 Emergency Overview:** Contains components derived from human blood. As with all human derivatives, universal handling precautions are recommended. This product is a potential irritant to eyes, respiratory system, and skin. This product may also be harmful if ingested. Complete toxicological properties have yet to be determined. DMSO is readily absorbed through skin. Target organs (DMSO): eyes, skin.
- 3.2 Routes of Exposure:** Absorbed through skin, eye contact, inhalation, and ingestion.
- 3.3 Potential Health Effects:**
- 3.3.1 Eye:** May cause eye irritation.
- 3.3.2 Skin:** May cause skin irritation. May be harmful if absorbed through the skin.
- 3.3.3 Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
- 3.3.4 Ingestion:** May be harmful if swallowed.
- 3.4 Chronic Effects/Carcinogenicity:** Not Available
- 3.5 OSHA Regulatory Status:** Not Available

4 First Aid Measures

- 4.1 Eyes:** In case of contact with eyes, flush thoroughly with water for at least 15 minutes. Call a physician.

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- 4.2 Skin:** In case of contact with skin, wash the affected area with soap and copious amounts of water. Should irritation occur, contact a physician.
- 4.3 Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.
- 4.4 Inhalation:** If inhaled, remove person to fresh air. If breathing becomes difficult, 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 Applicable
- 5.2 Explosive Limits:**
- 5.2.1 Upper:** Not Applicable
- 5.2.2 Lower:** Not Applicable
- 5.3 Autoignition Temperature:** Not Applicable
- 5.4 Hazardous Combustion Products:** Not Applicable
- 5.5 Conditions of Flammability:** Not Applicable
- 5.6 Extinguishing Media:** Use whatever is appropriate to the surrounding fire.
- 5.7 Fire Fighting Procedures:** Not Applicable – No toxic waste in run-off.
- 5.8 Explosion Data:**
- 5.8.1 Sensitivity to Mechanical Impact:** Not Applicable
- 5.8.2 Sensitivity to Static Discharge:** Not Applicable
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6 Accidental Release Measures

- 6.1 Leak and Spill Procedure:** Wear chemical-resistant gloves. Soak up with inert absorbent material and place in closed container for disposal. Ventilate and wash area thoroughly after clean-up is complete.
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7 Handling and Storage

- 7.1 Handling:** Contains components prepared from human blood. Donors have been tested for hepatitis B surface antigen (HBsAg) and anti-HIV-1 and/or HIV-1 antigen. However, this product should be considered potentially infectious and treated in accordance with universal handling precautions. May cause allergic reaction in sensitized individuals.
- Do not breathe vapor. Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body. Avoid prolonged or repeated exposure.
- 7.2 Storage:** Store at -20°C.
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8 Exposure Controls/Personal Protection

- 8.1 Engineering Controls:** Use with adequate ventilation.

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8.2 Personal Protective Equipment:

8.2.1 Respiratory Protection: This is a laboratory-use product for which no industrial protective equipment has been designated.

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.

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: Transparent red fluid

9.2 Odor: None

9.3 Physical State: Liquid

9.4 pH: ~7.5

9.5 Boiling Point: Not Available

9.6 Melting Point: Not Applicable

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: Not Available

9.13 Odor Threshold: Not Applicable

9.14 Coefficient of Water/Oil Distribution: Not Available

10 Stability/Reactivity:

10.1 Chemical Stability: Stable

10.2 Conditions to Avoid: Not Applicable

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

10.4 Hazardous Decomposition/By-Products: Nature of decomposition products not known.

10.5 Hazardous Polymerization: Will not occur.

11 Toxicological Information

11.1 Effects of Short-Term Exposure: Not Available

11.2 Effects of Long-Term Exposure: Not Available

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11.3 Irritancy of Product:	Not Available
11.4 Sensitization to Product:	Not Available
11.5 Carcinogenicity:	Not Available
11.6 Reproductive Toxicity:	Not Available
11.7 Teratogenicity and Embryotoxicity:	Not Available
11.8 Mutagenicity:	Not Available
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 Not Available

13 Disposal Considerations

13.1 Waste Disposal Method: Prevent product from entering drains. 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

14.2.4 **Packing Group:** Not Available

14.2.5 **Label Statement:** Not Available

15 Regulatory Information

15.1 **WHMIS Classification:** D2B, D3, B3

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

16 Other Information

16.1 **Preparation Information:** Refer to PIS No. 05854_05855.

16.2 **This MSDS has been revised in the following section(s):** 1.1, 3.1, 7.1, 15.1

16.3 **Original Issue Date:** October 15, 2007.

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

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Prepared shown in Section 1.7 of this document and may be subject to ammendment by StemCell Technologies Inc.

16.5 Disclaimer: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT USED FOR DIAGNOSTIC OR THERAPEUTIC APPLICATIONS.