

**SAFETY DATA SHEET**

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

**Cryo Human Hepatocytes**

Version 3.0

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**SECTION 1. IDENTIFICATION**

Product name : Cryo Human Hepatocytes  
Synonyms : Cryo Human Hpctyes, Pltable, Q:. Ind  
Material number : HUCPI

**Manufacturer or supplier's details**

Company : Lonza Ltd  
Muenchensteinerstrasse 38  
CH-4002 Basel  
Switzerland  
Business Telephone +41 61 316 81 11

Lonza Inc. - Rockland  
191 Thomaston Street  
Rockland, ME 04841-2994  
USA  
Business Telephone: 1-207-594-3400

Lonza Inc. - Walkersville  
8830 Biggs Ford Road  
Walkersville, MD 21793-0127  
USA  
Business Telephone 1-301-898-7025

E-mail address : prodinfo@lonza.com  
Emergency telephone number : +41 61 313 94 94 (24h )

**Recommended use of the chemical and restrictions on use**

Recommended use : Scientific research and development

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**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

**GHS label elements**

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

**Other hazards**

None known.

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
Dimethyl sulfoxide ;DMSO	67-68-5	9.8399
Calcium chloride dihydrate	10035-04-8	0.8199
Sucrose	57-50-1	0.8199

### SECTION 4. FIRST AID MEASURES

If inhaled : No special precautions required.

In case of skin contact : Wash with water and soap as a precaution.  
If skin irritation persists, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water.  
If eye irritation persists, consult a specialist.

If swallowed : Immediately give large quantities of water to drink.  
Do not induce vomiting without medical advice.  
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : No information available.

Notes to physician : No information available.

### SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray  
Dry powder  
Foam

Specific hazards during firefighting : Heating or fire can release toxic gas.

Further information : Use water spray to cool unopened containers.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Environmental precautions : Prevent product from entering drains.

Methods and materials for containment : Contain spillage, and then collect with non-combustible ab-

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ment and cleaning up

sorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Take precautionary measures against static discharges.

Advice on safe handling : No special precautions required.

Conditions for safe storage : No special storage conditions required.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Dimethyl sulfoxide	67-68-5	TWA	250 ppm	WEEL
Sucrose	57-50-1	TWA	10 mg/m <sup>3</sup>	ACGIH
		REL (Respirable.)	5 mg/m <sup>3</sup>	NIOSH/GUIDE
		REL (Total)	10 mg/m <sup>3</sup>	NIOSH/GUIDE
		PEL (Total dust.)	15 mg/m <sup>3</sup>	OSHA_TRANS
		PEL (Respirable fraction.)	5 mg/m <sup>3</sup>	OSHA_TRANS
		TWA (Total dust.)	15 mg/m <sup>3</sup>	Z1A
		TWA (Respirable fraction.)	5 mg/m <sup>3</sup>	Z1A

**Engineering measures** : Avoid splashes.

#### Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : Wear suitable gloves. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection : Tightly fitting safety goggles

Skin and body protection : Choose body protection according to the amount and con-

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	centration of the dangerous substance at the work place. No special protective equipment required.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Aqueous solution
Colour	: light brown
Odour	: no data available
Odour Threshold	: no data available
pH	: 6.8 - 7.2
Freezing point	: no data available
Boiling point/boiling range	: no data available
Flash point	: does not flash
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Flammability (liquids)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: no data available
Density	: no data available
Water solubility	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Decomposition temperature	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available

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### SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	no data available
Conditions to avoid	:	None known.
Incompatible materials	:	None known.
Hazardous decomposition products	:	no data available

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
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#### 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.

##### OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

##### 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.

##### 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.

#### Further information

Remarks: No data is available on the product itself.

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### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Toxicity to fish	:	Remarks: no data available
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#### Persistence and degradability

Biodegradability	:	Result: no data available
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#### Bioaccumulative potential

Bioaccumulation	:	Remarks: no data available
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#### Components:

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**Dimethyl sulfoxide:**

Partition coefficient: n-octanol/water : log Pow: -1.35

**Sucrose:**

Partition coefficient: n-octanol/water : log Pow: -3.70

**Mobility in soil**

Distribution among environmental compartments : Remarks: no data available

**Other adverse effects**Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B)  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).Additional ecological information : no data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**Waste from residues : Dispose of in accordance with local regulations.  
Contact waste disposal services.

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**SECTION 14. TRANSPORT INFORMATION**

DOT : Not dangerous goods

UN number : Not applicable

Proper shipping name : Not applicable

Transport hazard class : Not applicable

Packing group : Not applicable

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<b>TDG</b>	:	Not dangerous goods
<b>UN number</b>	:	Not applicable
<b>Proper shipping name</b>	:	Not applicable
<b>Transport hazard class</b>	:	Not applicable
<b>Packing group</b>	:	Not applicable
<b>IATA</b>	:	Not dangerous goods
<b>UN number</b>	:	Not applicable
<b>Proper shipping name</b>	:	Not applicable
<b>Transport hazard class</b>	:	Not applicable
<b>Packing group</b>	:	Not applicable
<b>IMDG</b>	:	Not dangerous goods
<b>UN number</b>	:	Not applicable
<b>Proper shipping name</b>	:	Not applicable
<b>Transport hazard class</b>	:	Not applicable
<b>Packing group</b>	:	Not applicable
<b>ADR</b>	:	Not dangerous goods
<b>UN number</b>	:	Not applicable
<b>Proper shipping name</b>	:	Not applicable
<b>Transport hazard class</b>	:	Not applicable
<b>Packing group</b>	:	Not applicable
<b>RID</b>	:	Not dangerous goods
<b>UN number</b>	:	Not applicable
<b>Proper shipping name</b>	:	Not applicable
<b>Transport hazard class</b>	:	Not applicable
<b>Packing group</b>	:	Not applicable
<b>Special precautions for user</b>	:	none
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	:	Not applicable

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### SECTION 15. REGULATORY INFORMATION

#### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

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### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

### 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.

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Components	CAS-No.	Concentration
Dimethyl sulfoxide	67-68-5	>= 5 - < 10 %

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

### Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components	CAS-No.	Component RQ (lbs)
Potassium hydroxide	1310-58-3	1000
Sodium hydroxide	1310-73-2	1000

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components	CAS-No.	Concentration
Potassium hydroxide	1310-58-3	<0.0001%
Sodium hydroxide	1310-73-2	<0.0001%

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

### US State Regulations

#### Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know

Components	CAS-No.
Water	7732-18-5

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Fetal Bovine Serum	Not Assigned
Dimethyl sulfoxide	67-68-5
Dextran	9004-54-0
4-O-.beta.-D-Galactopyranosyl-D-gluconic acid	96-82-2

### California Prop. 65

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

### Canadian lists

No substances are subject to a Significant New Activity Notification.

### NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

ACGIH	:	US. ACGIH Threshold Limit Values
NIOSH/GUIDE	:	US. NIOSH: Pocket Guide to Chemical Hazards
OSHA_TRANS	:	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
WEEL	:	US. AIHA Workplace Environmental Exposure Level (WEEL) Guides
Z1A	:	US. OSHA Table Z-1-A (29 CFR 1910.1000)

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-

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Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

WARNING: This product contains human source material, treat as potentially infectious. Product should be handled at the Biological Safety Level 2 to minimize exposure of potentially infectious products, as recommended in the CDC-NIH Manual, "Biosafety in Microbiological and Biomedical laboratories".

Frozen cell culture suspension contains Dimethyl sulfoxide (DMSO).  
Revision Date : 2018.08.29

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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