

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date: 24 April 2018

Revision: 18 December 2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
 - Trade name: Liver Perfusion Solution I
 - Product code: CQ-PIB-1000
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 - **Application of the substance / the mixture:**
A proprietary buffer mixture intended for initiation of mammalian liver cell dissociation
 - **Uses advised against:** For Research Use, Not for Diagnostic or Therapeutic Use.
- **1.3 Details of the supplier of the Safety Data Sheet**
 - **Manufacturer/Supplier:**
chemQ bioscience LLC
6 Davis Drive, Suite 200
Durham, NC 27713
919-230-1617
vitroprep@chemqbioscience.com
- **1.4 Emergency telephone number:** 919-230-1617



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**
The product is not classified as hazardous according to the Globally Harmonized System (GHS).
The product is not classified as hazardous according to OSHA GHS regulations within the United States. The product is not classified as hazardous according to the CLP regulation.
- **2.2 Label elements**
 - **Labelling according to Regulation (EC) No 1272/2008**
This product does not have a classification according to the CLP regulation.
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
 - **Hazard pictograms** Not Regulated
 - **Signal word** Not Regulated
 - **Hazard statements** Not Regulated.
- **2.3 Other hazards** There are no other hazards not otherwise classified that have been identified.
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
 - **Components:** None in reportable quantities.

(Cont'd. on page 2)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date: 24 April 2018

Revision: 18 December 2025

Trade name: Liver Perfusion Solution I

(Cont'd. from page 1)

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Generally the product does not irritate the skin. Wash with soap and water.

If skin irritation is experienced, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

Gastric or intestinal disorders when ingested.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:**

The product is not flammable.

Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents:** None.

· 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

· 5.3 Advice for firefighters

· **Protective equipment:**

Wear self-contained respiratory protective device. Wear fully protective suit.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Use personal protective equipment as required.

· 6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up

Wipe up small spills with paper towel and discard.

For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard. Dispose of the material collected according to regulations.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Cont'd. on page 3)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date: 24 April 2018

Revision: 18 December 2025

Trade name: Liver Perfusion Solution I

See Section 13 for disposal information.

(Cont'd. from page 2)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Open and handle receptacle with care.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Storage area should be dry and well-ventilated. Containers should be tightly sealed.
- **Information about storage in one common storage facility:** No further relevant information available.
- **Further information about storage conditions:**
Storage Temperatures: 2-8 °C.
Protect from heat and direct light.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **8.2 Exposure controls**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed.
- **Respiratory protection:** Not required under normal conditions of use.
- **Protection of hands:**



Protective gloves

- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:** No special requirements.
- **Risk management measures:** No special requirements.

SECTION 9: Physical and chemical properties

(Cont'd. on page 4)

Safety Data Sheet

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Printing date: 24 April 2018

Revision: 18 December 2025

Trade name: Liver Perfusion Solution I

(Cont'd. from page 3)

· 9.1 Information on basic physical and chemical properties

· Appearance

Form: Liquid

Colour: Clear

· Odour: Not determined.

· Odour threshold: Not determined.

· pH-value: 7,20-7,40

· Melting point/freezing point: Not determined.

· Initial boiling point and boiling range: Not determined.

· Flash point: The product is not flammable.

· Flammability (solid, gas): Not applicable.

· Auto/Self-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· Oxidising properties: Not determined.

· Vapour pressure: Not determined.

· Density:

Relative density: Not determined.

Vapour density: Not determined.

Evaporation rate: Not determined.

· Solubility in / Miscibility with water: Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity

Dynamic: Not determined.

Kinematic: Not determined.

· 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** The product is non-reactive under normal conditions of use, storage and transport.

· **10.2 Chemical stability** Stable under normal temperatures and pressures.

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

· **10.3 Possibility of hazardous reactions**

Toxic fumes may be released if heated above the decomposition point.

· **10.4 Conditions to avoid**

(Cont'd. on page 5)

Safety Data Sheet

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Printing date: 24 April 2018

Revision: 18 December 2025

Trade name: Liver Perfusion Solution I

(Cont'd. from page 4)

Excessive heat.

Direct light.

- **10.5 Incompatible materials** No further relevant information available.
- **10.6 Hazardous decomposition products** No further relevant information available.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect**
- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

- **Probable routes of exposure:**
- Eye contact.
- Skin contact.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Avoid release to the environment.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

(Cont'd. on page 6)

Safety Data Sheet

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Trade name: Liver Perfusion Solution I

(Cont'd. from page 5)

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· Uncleaned packaging:

· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number

· DOT, ADR, IMDG, IATA Not Regulated

· 14.2 UN proper shipping name

· DOT, ADR, IMDG, IATA Not Regulated

· 14.3 Transport hazard class(es)

· DOT, ADR, IMDG, IATA

· Class Not Regulated

· 14.4 Packing group

· DOT, ADR, IMDG, IATA Not Regulated

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user Not applicable.

· 14.7 Transport in bulk according to Annex II
of Marpol and the IBC Code Not applicable.

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· United States (USA)

· SARA

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

(Cont'd. on page 7)

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Revision: 18 December 2025

Trade name: Liver Perfusion Solution I

(Cont'd. from page 6)

- **Proposition 65 (California):**

- **Chemicals known to cause cancer:**

- None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity for females:**

- None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity for males:**

- None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

- None of the ingredients are listed.

- **EPA (Environmental Protection Agency)**

- None of the ingredients are listed.

- **IARC (International Agency for Research on Cancer)**

- None of the ingredients are listed.

- **Canadian Domestic Substances List (DSL)**

- All ingredients are listed.

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients are listed.

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

- None of the ingredients are listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

- **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

(Cont'd. on page 8)

Safety Data Sheet
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Trade name: Liver Perfusion Solution I

(Cont'd. from page 7)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN:
978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers