



INCOMPLETE LIVER LYSIS SOLUTION 2

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 02/07/2018

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : INCOMPLETE LIVER LYSIS SOLUTION 2
Other means of identification : Nusse Solution 2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Product Use: This product is for laboratory research use only and is not intended for human or animal diagnostics, therapeutic, or other clinical uses.

NOTE: This product is supplied in a kit with more than one material; therefore please refer to the SDS for each component for hazard information.

1.3. Details of the supplier of the safety data sheet

Litron Laboratories
3500 Winton Place
Rochester, NY 14623
Phone: 585-442-0930 / 877-4-LITRON

1.4. Emergency telephone number

Emergency number : 585-442-0930

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labelling

No labelling applicable

2.3. Other hazards

other hazards which do not result in classification : May cause slight temporary irritation.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
citric acid	(CAS No) 77-92-9	< 2	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Irrit. 2A, H319

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Seek medical attention if ill effect or irritation develops.

First-aid measures after skin contact : Wash off immediately with soap and plenty of water. If irritation persists, consult a doctor.

First-aid measures after eye contact : Rinse immediately and plentifully with water, also under the eyelids, for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

First-aid measures after ingestion : Rinse mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/injuries after inhalation : Inhalation of mist or aerosol may cause irritation to nose and throat.

Symptoms/injuries after skin contact : May cause slight temporary irritation.

INCOMPLETE LIVER LYSIS SOLUTION 2

Safety Data Sheet

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Symptoms/injuries after eye contact : May cause slight irritation to eyes.

Symptoms/injuries after ingestion : May cause gastric irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

Explosion hazard : No direct explosion hazard.

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

5.3. Advice for firefighters

Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Limit access only to the necessary cleaning personnel. Avoid any direct contact with the product.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing. Refer to section 8.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Contain and/or absorb spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container.

Methods for cleaning up : Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect all waste in suitable and labelled containers and dispose according to local legislation.

6.4. Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection. For disposal of residues refer to section 13: Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practices. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Incompatible materials : None known.

Storage temperature : 2 - 8 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

INCOMPLETE LIVER LYSIS SOLUTION 2

Safety Data Sheet

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8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Materials for protective clothing	: Lab coat.
Hand protection	: Protective gloves made of rubber or PVC.
Eye protection	: Safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.
Environmental exposure controls	: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Colour	: Colourless
Odour	: Odourless.
Odour threshold	: No data available
pH	: 7
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Solubility	: Water: Soluble
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional 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 conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerisation does not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

INCOMPLETE LIVER LYSIS SOLUTION 2

Safety Data Sheet

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10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact; Ingestion; Inhalation
Acute toxicity : Not classified
(Based on available data, the classification criteria are not met)

citric acid (77-92-9)	
LD50 oral rat	3 g/kg

Skin corrosion/irritation : Not classified
(Based on available data, the classification criteria are not met)
pH: 7
Serious eye damage/irritation : Not classified
(Based on available data, the classification criteria are not met)
pH: 7
Respiratory or skin sensitisation : Not classified
(Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified
(Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified
(Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified
(Based on available data, the classification criteria are not met)
Specific target organ toxicity (single exposure) : Not classified
(Based on available data, the classification criteria are not met)
Specific target organ toxicity (repeated exposure) : Not classified
(Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified
(Based on available data, the classification criteria are not met)
Symptoms/injuries after inhalation : Inhalation of mist or aerosol may cause irritation to nose and throat.
Symptoms/injuries after skin contact : May cause slight temporary irritation.
Symptoms/injuries after eye contact : May cause slight irritation to eyes.
Symptoms/injuries after ingestion : May cause gastric irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This material has not been tested for environmental effects.

citric acid (77-92-9)	
LC50 fish 1	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

citric acid (77-92-9)	
Log Pow	-1.72 (at 20 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

TDG

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

No additional information available.

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Full text of H-statements:

Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H319	Causes serious eye irritation

SDS US (GHS HazCom 2012)

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all-inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since Litron Laboratories cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.