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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name LDH-L Reagent

Other means of identification

Product Code(s) 200110LBP
TR20015

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use In vitro diagnostic

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Fisher Diagnostics
A Division of Fisher Scientific Company, LLC
A Part of Thermo Fisher Scientific, Inc.

Supplier Address 8365 Valley Pike
Middletown, VA 22645-1905

Supplier Phone Number Tel: (800) 528-0494

Emergency telephone number

Chemical Emergency Phone Number Chemtrec, US: 800-424-9300
Chemtrec Outside the US +1-703-741-5970

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Label elements, including precautionary statements



Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance White**Physical State** Powder(s) Solid**Odor** Odorless**Precautionary Statements - Prevention**

Obtain special instructions before use

Precautionary Statements - Response

None

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

None

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

55.76% of the mixture consists of ingredient(s) of unknown toxicity

Other information

May be harmful if swallowed

Harmful to aquatic life with long lasting effects

May cause slight eye irritation

Interactions with Other Chemicals

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

| Chemical Name | CAS No | Weight-% | Trade Secret |
|--|------------|----------|--------------|
| Tris hydroxymethyl aminomethane | 77-86-1 | 15 - 40 | * |
| Potassium Chloride | 7447-40-7 | 10 - 30 | * |
| Lithium (S)-lactate | 27848-80-2 | 10 - 30 | * |
| Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridiniu m, inner salt | 53-84-9 | 10 - 30 | * |
| Tris-HCL | 1185-53-1 | 1 - 5 | * |
| EGTA | 67-42-5 | 0.1 - 1 | * |

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES



First aid measures

| | |
|---------------------|---|
| Eye Contact | Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician. |
| Skin Contact | Wash with soap and water. |
| Inhalation | Remove to fresh air. |
| Ingestion | Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. |

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

No information available.

Uniform Fire Code COMBUSTIBLE DUST/POWDER

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Environmental Precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protective equipment required.

Skin and Body Protection No special protective equipment required.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.



Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Physical and Chemical Properties**

| | | | |
|-----------------------|--------------------------|-----------------------|--------------------------|
| Physical State | Powder(s), Solid | Odor | Odorless |
| Appearance | White | Odor Threshold | No information available |
| Color | No information available | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks</u> | <u>Method</u> |
|---|----------------------|-----------------------|----------------------|
| pH | No data available | None known | |
| Melting / freezing point | No data available | None known | |
| Boiling point / boiling range | No data available | None known | |
| Flash Point | No data available | None known | |
| Evaporation Rate | No data available | None known | |
| Flammability (solid, gas) | No data available | None known | |
| Flammability Limit in Air | | | |
| Upper flammability limit | No data available | | |
| Lower flammability limit | No data available | | |
| Vapor pressure | No data available | None known | |
| Vapor density | No data available | None known | |
| Specific Gravity | No data available | None known | |
| Water Solubility | Soluble in water | None known | |
| Solubility in other solvents | No data available | None known | |
| Partition coefficient: n-octanol/water | No data available | None known | |
| Autoignition temperature | No data available | None known | |
| Decomposition temperature | No data available | None known | |
| Kinematic viscosity | No data available | None known | |
| Dynamic viscosity | No data available | None known | |
| Explosive properties | No data available | | |
| Oxidizing Properties | No data available | | |

Other Information

| | |
|-----------------------------------|-------------------|
| Softening Point | No data available |
| VOC Content (%) | No data available |
| Particle Size | No data available |
| Particle Size Distribution | |

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

None known based on information supplied.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

| | |
|---------------------|---|
| Inhalation | Specific test data for the substance or mixture is not available. |
| Eye Contact | Specific test data for the substance or mixture is not available. |
| Skin Contact | Specific test data for the substance or mixture is not available. |
| Ingestion | Specific test data for the substance or mixture is not available. |

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------------------------|----------------------|-------------|-----------------|
| Potassium Chloride 7447-40-7 | = 2600 mg/kg (Rat) | - | - |

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

| | |
|---------------------------------|--|
| Reproductive Toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |
| Chronic Toxicity | No known effect based on information supplied. |
| Target Organ Effects | None known. |
| Aspiration Hazard | No information available. |

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)

4,009.00 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

| Chemical Name | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Daphnia Magna (Water Flea) |
|---------------------------------|--|--|----------------------------|---|
| Potassium Chloride 7447-40-7 | 72h EC50: = 2500 mg/L (Desmodesmus subspicatus) | 96h LC50: 750 - 1020 mg/L (Pimephales promelas) 96h LC50: = 1060 mg/L (Lepomis macrochirus) | | 48h EC50: = 825 mg/L 48h EC50: = 83 mg/L |

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Dispose of contents/containers in accordance with local regulations.

14. TRANSPORT INFORMATION

| | |
|-----------------------------|---------------|
| DOT | NOT REGULATED |
| Proper Shipping Name | NON REGULATED |
| Hazard Class | N/A |
| TDG | Not regulated |
| MEX | Not regulated |
| ICAO | Not regulated |
| IATA | Not regulated |
| Proper Shipping Name | NON REGULATED |
| Hazard Class | N/A |
| IMDG/IMO | Not regulated |
| Hazard Class | N/A |
| RID | Not regulated |
| ADR | Not regulated |
| ADN | Not regulated |

15. REGULATORY INFORMATION

International Inventories

| | |
|------|--|
| TSCA | Complies |
| DSL | All components are listed either on the DSL or NDSL. |

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

| | |
|--|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations



California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

International Regulations**Canada****WHMIS Hazard Class**

Non-controlled

| 16. OTHER INFORMATION | | | | |
|-----------------------|--|--|--|--|
|-----------------------|--|--|--|--|

| | | | | |
|-------------|-------------------------|-----------------------|--------------------------|---|
| NFPA | Health Hazards 0 | Flammability 0 | Instability 0 | Physical and Chemical Hazards - Personal Protection X |
| HMIS | Health Hazards 1 | Flammability 0 | Physical Hazard 0 | |

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Disclaimer

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End of Safety Data Sheet