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GHS Safety Data Sheets

The Mystery of Lyle and Louise DNA Typing

This document contains material safety data sheets for the following kit items:

- **Agarose**
- **BlueVis**
- **DNA**
- **Ladder**

Safety Data Sheet

Crosscutting Concepts, LLC · P.O. Box 349 · Huntington, WV 25708

Phone: 888-221-4344 · Fax: 888-221-4344, Ext. 804

Section 1 - Chemical Product and Company Identification

Name: Pre-melted Agarose

Common Synonyms: Agarose gel

Molecular Weight: N/A

Chemical Formula: C₁₂H₁₄O₅(OH)₄].

Chemtrec Phone: 800-424-9300

National Response Center 800-424-8802

Product Use: Laboratory Reagent

Section 2 - Hazard Identification

SKIN CORROSION/IRRITANT Category 3

WARNING: Causes mild skin irritation

NFPA Ratings: Health: **1** Flammability: **0** Reactivity: **0** Other: **Oxidizer**

Emergency Overview

Effects of overexposure: N/A

Inhalation: Possible irritant

Ingestion: Possible irritant

Skin Contact: Possible irritant

Eye Contact: Possible irritant

Chronic Exposure: N/A

Aggravation of Pre-existing Conditions: N/A

Section 3 - Composition / Information on Ingredients

<u>Ingredient</u>	<u>CAS No.</u>	<u>Percent</u>
Agarose	9012-36-61	0.89%

Section 4 - First Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention for any breathing difficulty.

Ingestion: Drink water to dilute. Never give anything by mouth to an unconscious person.

Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Wash/flush thoroughly with water. Get medical attention if irritation develops.

Section 5 - Fire-Fighting Measures

Fire: May ignite at high temperatures.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: Use protective clothing and equipment appropriate for the surrounding fire

Section 6 - Accidental Release Measures

Contain and clean up spill. Contain liquids using absorbents. Scrub spill area with detergent. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.

Section 7 - Handling and Storage

Keep in a tightly closed container. Protect against physical damage.

Storage Segregation Hazard Classes: N/A

Section 8 - Exposure Controls / Personal Protection

Personal Respirators: NIOSH/MSHA approved respirator. Select respiratory device based on concentrations of actual or potential airborne contaminants.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety glasses with side shields. Maintain eye wash fountain and quick-drench facilities in work area.

Airborne Exposure Limits: OSHA Permissible Exposure Limit (PEL) 8 hour: 15 mg/m³ total dust, 5 mg/m³ respirable fraction for nuisance dusts. ACGIH Threshold Limit Value (TLV): 10 mg/m³ total dust containing no asbestos and <1% crystalline silica for Particulates Not Otherwise Classified (PNOC).

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

General: Wash after handling. Avoid contact and inhalation. Avoid prolonged or repeated exposure. Keep tightly closed. Store in a cool dry place

Section 9 - Physical and Chemical Properties

Appearance: Clear or white gel

Odor: Odorless

Odor Threshold: No information found

pH: 7-8

Melting Point: No information found

Boiling Point: 102°C

Flash Point: No information found

Evaporation Rate: No information found

Flammability: Flammable at high temperatures

Flammability/explosive limits: No information found

Vapor Pressure (mm Hg): No information found

Vapor Density (Air=1): No information found

Relative Density/Specific Gravity: 0.93 g/mL

Solubility: soluble in water.

Partition Coefficient: No information found.

Auto-ignition Temperature: No information found.

Decomposition Temperature: No information found.

Viscosity: N/A

Section 10 - Stability and Reactivity

Reactivity: Non-reactive

Stability: Stable under ordinary conditions of use and storage.

Hazardous Reactions: No information found

Conditions to Avoid: None known based on information supplied.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon oxides.

Hazardous Polymerization: Hazardous polymerization does not occur.

Section 11- Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

Toxicological Data: No information found.
Reproductive Toxicity: No information found).
Carcinogenicity: No information found:
 EPA / IRIS classification: Group B2 - Probable human carcinogen, sufficient animal evidence.

Section 12 - Ecological Information

Environmental Fate: The environmental impact of this product has not been fully investigated.
Environmental Toxicity: No information found.

Section 13 - Disposal Considerations

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations.
 Contaminated Packaging Dispose of in accordance with all federal, state and local regulations

Section 14 - Transport Information

IATA Not regulated
DOT Not regulated

Section 15 - Regulatory Information

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Agarose	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals
Agarose 9012-36-6 (95-100)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Section 16 - Other Information

Updated May 29, 2015

WHMIS:

This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.

The above information has been developed based upon currently available scientific data. New information may be developed from time to time which may render the conclusions of this report

obsolete. Therefore, no warranty is extended as to the applicability of this information to the user's intended purpose or for the consequences of its use or misuse. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Crosscutting Concepts, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.

Safety Data Sheet
Crosscutting Concepts, LLC · P.O. Box 349 · Huntington, WV 25708
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Section 1 - Chemical Product and Company Identification

Name: L&L DNA Ladder
Common Synonyms: None
Molecular Weight: Mixture
Chemical Formula: N/A.
Chemtrec Phone: 800-424-9300
National Response Center 800-424-8802

Product Use: Laboratory Reagent

Section 2 - Hazard Identification

SKIN CORROSION/IRRITANT Category 2

WARNING: Causes skin irritation

NFPA Ratings: Health: **2** Flammability: **0** Reactivity: **1** Other: **N/A**

Emergency Overview

Inhalation: Tris-HCl: May cause irritation to the respiratory tract.

EDTA: Mild irritant when inhaled.

Orange G: May cause irritation to the respiratory tract.

Ficoll 400: May cause allergic respiratory reaction. May cause irritation.

Ingestion: Tris-HCl: Mild alkali. May cause irritation to the mucous membranes of the mouth, esophagus, and gastrointestinal tract.

EDTA: Low toxicity by ingestion. Swallowing large amounts may cause gastric upset. Orange G: May cause irritation to the gastrointestinal tract.

Ficoll 400: May cause irritation to the gastrointestinal tract.

Skin Contact: Tris-HCl: May cause irritation with redness or pain.

EDTA: Mild irritant; may cause redness or irritation.

Orange G: May cause irritation with redness or pain.

Ficoll 400: May cause irritation.

Eye Contact: Tris-HCl: May cause redness, irritation, and pain.

EDTA: May cause irritation.

Orange G: May cause irritation, redness, and pain.

Ficoll 400: May cause irritation.

Chronic Exposure: No information available.

Aggravation of Pre-existing Conditions: No information available.

Section 3 - Composition / Information on Ingredients

<u>Ingredient</u>	<u>CAS No.</u>	<u>Percent</u>
Tris-HCl	1185-53-1	No information available
EDTA	64-02-8	No information available

Orange G	1936-15-8	No information available
Ficoll 400	26873-85-8	No information available
Section 4 - First Aid Measures		
<p>Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention for any breathing difficulty.</p> <p>Ingestion: Drink plenty of water. Do not induce vomiting. Never administer anything by mouth to an unconscious person.</p> <p>Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.</p> <p>Eye Contact: Wash/flush thoroughly with water for at least 15 minutes. Get medical attention immediately.</p>		
Section 5 - Fire-Fighting Measures		
<p>Fire: May be a fire hazard at high temperature or if ignition source is applied. May emit toxic fumes under fire conditions.</p> <p>Explosion: Not considered to be an explosion hazard.</p> <p>Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.</p> <p>Special Information: Use protective clothing and equipment appropriate for the surrounding fire.</p>		
Section 6 - Accidental Release Measures		
Contain and clean up spill immediately. Contain liquids using absorbents. Scrub spill area with detergent. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8		
Section 7 - Handling and Storage		
Keep in a tightly closed container, stored below 5°C. Protect against physical damage. Storage Segregation Hazard Classes: N/A		
Section 8 - Exposure Controls / Personal Protection		
<p>Personal Respirators: NIOSH/MSHA approved respirator. Select respiratory device based on concentrations of actual or potential airborne contaminants.</p> <p>Skin Protection: Wear protective gloves and clean body-covering clothing.</p> <p>Eye Protection: Use chemical safety glasses with side shields. Maintain eye wash fountain and quick-drench facilities in work area.</p> <p>Airborne Exposure Limits: OSHA Permissible Exposure Limit (PEL) 8 hour: 15 mg/m³ total dust, 5 mg/m³ respirable fraction for nuisance dusts. ACGIH Threshold Limit Value (TLV): 10 mg/m³ total dust containing no asbestos and <1% crystalline silica for Particulates Not Otherwise Classified (PNOC).</p> <p>Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.</p> <p>General: Wash after handling. Avoid contact and inhalation. Avoid prolonged or repeated exposure. Keep tightly closed</p>		
Section 9 - Physical and Chemical Properties		
<p>Appearance: Orange Liquid</p> <p>Odor: Odorless</p> <p>Odor Threshold: N/A</p>		

pH: Not Tested

Melting Point: Not Tested

Boiling Point: Not Tested

Flash Point: Not Tested

Evaporation Rate: N/A

Section 10 - Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Conditions to Avoid: No information available.

Incompatibilities: Tris-HCl: Copper, brass, aluminum, and oxidizing agents.

EDTA: Oxidizing agents.

Orange G: Oxidizing agents

Ficoll 400: Oxidizing agents.

Hazardous Decomposition Products: No information available

Section 11- Toxicological Information

Not a known or anticipated carcinogen, mutagen, or reproductive effector.

Section 12 - Ecological Information

Ecotoxicity: Tris-HCl: No information found.

EDTA: 96 Hr LC50 bluegill: 159 mg/L (Static).

Orange G: No information found.

Ficoll 400: No information found

Environmental: No information available

Physical: No information available.

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3.

Section 14 - Transport Information

Section 15 - Regulatory Information

Section 16 - Other Information

Updated May 22, 2015

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