




Material Safety Data Sheet

Lithium  System
Test Kit

1. INFORMATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name	Lithium  System Test Kit
Catalog #	4090014
Kit Components	Twenty-five (25) Blood Cell Separators Twenty-five (25) Bulb Pipettes Twenty-five (25) 100µl Lithium Reagent-Filled Cuvette Pouch One (1) Control Pack consisting of: One (1) 300µL, 1mmol Lithium Chloride Control Ampoule Pipette One (1) Pipette Crusher One (1) Blood Cell Separator One (1) Bulb Pipette One (1) 100µl Lithium Reagent-Filled Cuvette Pouch
Company Identification	AKERS BIOSCIENCES, INC. 201 Grove Road Thorofare, NJ 08086 USA Tel: (856) 848-8698 or (800) 451-TEST Fax: (856) 848-0269

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL PRODUCT:

LITHIUM REAGENT

Use: Diagnostic agent
UN Number: 1824
Proper Shipping Name: SODIUM HYDROXIDE SOLUTION
Dangerous Goods Class: 8
Packing Group: III
Hazchem Code: 2R
Poison Schedule: S5



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SUBSTANCE NAME	Proportion	CAS Number
SODIUM AZIDE	0.1%	26628-22-8
SODIUM HYDROXIDE	1 to <5%	1310-73-2
WATER AND OTHER NON-HAZARDOUS SUBSTANCES	Balance	Mixture

All other ingredients determined not to be hazardous.

3. HAZARD IDENTIFICATION

Hazardous

Hazard Category: Corrosive, Harmful

ACUTE HEALTH EFFECTS

Swallowed:

Harmful if swallowed. Over exposure to sodium azide will include headache, nausea, blurred vision, dizziness and low blood pressure. This product will cause burns to mouth, throat and stomach.

Eye:

Will cause burns to the eyes, with effects including: tearing, pain, stinging, and blurred vision.

Skin:

Will cause burns to the skin, with effects including: Redness, itchiness, blotching of skin and inflammation.

Inhaled:

Mists from the product will cause irritation to the nose, throat, and respiratory system.

Chronic:

Prolonged or repeated skin contact will lead to necrosis. Prolonged or repeated exposure may lead to irreversible damage to health. Prolonged contact to the eyes will lead to permanent eye damage.

4. FIRST AID MEASURES

Swallowed:

If swallowed, **DO NOT** induce vomiting. Give 3 to 4 glasses of water to drink. Seek immediate medical assistance.

Eye:

If material is splashed into eyes, immediately, flush with plenty of water for 15 minutes, ensuring eyelids are held open. If irritation persists, transport to hospital or doctor.



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Skin:

If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly with soap and water. If irritation persists, transport to hospital or doctor.

Inhaled:

Move victim to fresh air. Apply resuscitation if victim is not breathing.

First Aid Facilities:

Eye wash fountain, safety shower and normal washroom facilities.

Advice to Doctor:

Treat symptomatically.

In case of poisoning, contact poisons Information Center.

5. FIRE-FIGHTING MEASURES

Fire/Explosion Hazard

If safe to do so, move undamaged containers from fire area.

Hazardous Decomposition Products: Decomposes on heating emitting oxides of carbon and oxides of nitrogen.

Fire Fighting Procedures: Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.

Extinguishing Media: Use extinguishing media suitable for surrounding fire situation.

Flammability

Not flammable or combustible. If involved in a fire may generate noxious and corrosive fumes. However, if the product is split onto non-ferrous metals such as aluminum, zinc, magnesium or their alloys, then flammable and potentially explosive hydrogen gas will be generated.

6. ACCIDENTAL RELEASE MEASURES

Caution! Material may be slippery when spilled. Walk cautiously. Ventilate area. Wear protective equipment to prevent skin and eye contact as outlined under personal protection in this MSDS. Bound area using vermiculite – to prevent run off into drains and waterways. Place absorbent (vermiculite or other inert material) onto spill. Use non-sparking shovel and collect and seal in properly labeled containers for disposal. Remainder of material may be neutralized by cautiously adding vinegar. Collect this material after foaming/effervescence ceases and place into above labeled container.

WARNING: Products that contain alkali hydroxide must be kept away from non-ferrous metals, as extremely flammable hydrogen gas will be generated and if the appropriate flammability limits are reached and a source of ignition is present, a violent explosion will occur.



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7. HANDLING AND STORAGE

Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from strong acids. Keep containers closed, when not using the product. Store in original packages as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

No exposure standards are available for this product, however, the following exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC) to the following components of the product:

SODIUM AZIDE

[TWA]0.11 ppm 0.3 mg/m³
[STEL]Peak limitation

References: H

SODIUM HYDROXIDE

[TWA]2 mg/m³
[STEL] Peak limitation

References: H

Engineering Controls

Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate.

Personal Protection Equipment

GLOVES: Nitrile or neoprene.

EYES: Chemical goggles or faceshield to protect eyes.

RESPIRATORY PROTECTION: Avoid breathing of vapors/mists. select and use respirators in accordance with AS/NZS 1715/1716. The use of a combined organic vapor and P1 half-face respirator is recommended. Filter capacity and respirator type depends on exposure levels and type of contaminant. If entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715/1716, or any other acceptable International Standard id recommended.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid with no odor.
Boiling Point:	Not available.
Freezing Point:	Not available.
Vapor Pressure:	Not available.
Specific Gravity:	Not available.
Flash Point:	Not applicable.
Flammability Limits:	Not applicable.
Solubility in Water:	Completely miscible.

Other Properties

pH: 12.7 – 13.2
% VOLATILES >85%

10. STABILITY AND REACTIVITY

STABILITY:

Stable under normal conditions of use.

HAZARDOUS DECOMPOSITION PRODUCTS:

Decomposes on heating emitting noxious smoke.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

Strong mineral acids (sulfuric, nitric and hydrochloric).

CONDITIONS TO AVOID:

Incompatibles.

11. TOXICOLOGICAL INFORMATION

There is no toxicological information available for this product, however, for the ingredient:

Sodium hydroxide:

According to OECD Guideline for the Testing of Chemicals (OECD 405) for eye corrosion and OECD Guideline for the Testing of Chemicals (OECD 404) for skin corrosion, both test procedures have been utilized to determine that sodium hydroxide is a confirmed corrosive substance.

This product contains approximately 2% of sodium hydroxide which is considered to be
CORROSIVE



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Sodium azide:

Oral LD50(rat): 27mg/kg
Dermal LD50(rabbit): 20 mg/kg
Oral LDLo(human): 143 mg/kg

12. ECOLOGICAL INFORMATION

No information is available for this product, however, for sodium hydroxide component:

Water pollution:

Persistence: Can persist for extended periods of time.

Effect on water treatment process: Can raise pH and interfere with coagulation.

Avoid contaminating drains, sewers and waterways.

13. DISPOSAL CONSIDERATIONS

Refer to appropriate authority in your State. Dispose of material through a licensed waste contractor.

14. TRANSPORT INFORMATION

Un Number: 1824

Proper Shipping Name: SODIUM HYDROXIDE SOLUTION

Dangerous Goods Class: 8

Packing Group: III

Hazchem Code: 2R

Classified as a CLASS 8 (CORROSIVE) Dangerous Good according to the American Code for the Transport of Dangerous Goods by Road and Rail, 6th Edition.

Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following:

- Class 1
- Class 4.3
- Class 5
- Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids
- Class 7 and are incompatible with food and food packaging in any quantity.

Emergency information (Transport):

Dangerous Goods – Initial Emergency Response Guide (SAA/SNZ HB76:1997)

For TOXIC AND/OR CORROSIVE Guide No: 37



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This product is classified as a Dangerous Good according to ICAO/IATA regulations:

PROPER SHIPPING NAME: SODIUM HYDROXIDE SOLUTION

Un No: UN1824

Class: 8

PACK GROUP: II

15. REGULATORY INFORMATION

Poison Schedule: S5

This material is a Scheduled (S5) Poison and must be stored, handled and used according to the appropriate regulations.

RISK PHRASES

R34 Corrosive.

R22 Harmful if swallowed.

SAFETY PHRASES

S1/2 Keep locked up and out of reach of children.

S26 In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Center.

S45 In case of accident or if you feel unwell, contact a doctor or Poisons Information Center immediately and show this container or label.

16. OTHER INFORMATION

Contact Point

Quality Assurance Manager:

Disclaimer

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions that are available on request.