CHEMICAL IDENTIFICATION:

Product Name: Fluoro Lactate – Fluorescent Lactate Detection Kit
Catalog # FLACT100-2
Components:

Kit Part # 1
1. Part # 4026. Detection reagent
2. Part # 6025. Reaction enzyme solution

Kit Part # 2
3. Part # 7022. Lithium Lactate: One vial of 100X stock, 500 µl
4. Part # 6004. Horseradish Peroxidase:
5. Part # 3011. 5X Reaction Buffer.

Part# 4026.

Section 1 - Chemical Identification
Synonyms: ADHP, 10-Acetyl-3, 7-dihydroxyphenoxazine
CAS #: 119171-73-2
Chemical Formula: C_{14}H_{11}NO_{4}

Section 2 - Hazard Identification
Not known.

Section 3 - Characteristics
Red-brown powder
Boiling point °F: No data available.
Vapor pressure (mm Hg): No data available.
Vapor density: No data available.
Solubility in water: Very low.
Specific gravity: Not applicable.
% Volatile by volume: Not applicable.
Evaporation rate: No data available.
pH: Not applicable to a powder.

Section 4 - Storage, Handling, Stability
The material is air sensitive. Store dry material at 4°C.

Section 5 - Safety Control Measures
Gloves and standard laboratory protective clothing and eyewear are recommended. Safe laboratory practices should be followed.

**Section 6 - Health Hazard Data**
May enter the body through inhalation, ingestion, eye, and skin contact. To our knowledge the hazards of this material have not been fully tested. Handle material with caution.

RTECS Number: None known
Toxicity: We are not aware of any toxicity data for this product.
Health Hazards: We are not aware of any reported health hazards for this product. We recommend treating all chemicals with caution.
Potential Hazards: To our knowledge, the health hazards have not been thoroughly investigated.
Carcinogenicity: Not listed by NTP, IARC or OSHA.

**Section 7 - First Aid Measures**
Avoid prolonged or repeated exposure. Remove contaminated clothing and shoes, and wash before reuse.
Skin: Wash skin thoroughly with soap and water.
Eyes: Flush with water for at least 15 minutes.
Ingestion: Seek medical attention.
Inhalation: Remove to fresh air. Seek medical attention.

**Section 8 - Fire/Explosion Hazard Data**
Use any means suitable for extinguishing surrounding fire. It is not necessary to use any special firefighting procedures. Water spray, carbon dioxide, dry chemical powder or appropriate foam can all be used.
Thermal Decomposition: No decomposition if used according to specifications.
Dangerous Reactions: None identified.
Dangerous Products of Decomposition: No dangerous decomposition products identified.

**Section 9 - Accidental Release Measures**
For release of large amounts of material, wear safety glasses and rubber gloves. Stop source of leak and isolate spill area. Collect material in an appropriate container and dispose all waste in accordance with applicable laws. Dispose of all waste in accordance with all national, state, and local regulations.

**Part# 6025 and 6004: Enzyme Mix**

**Section 1 - Identification**
CAS No.: NA
Molecular Weight: NA
Chemical Formula: NA
Section 2 - Hazard Identification
Harmful if swallowed. May cause irritation, avoid breathing vapors or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed

Section 3 - First Aid Measures
Harmful if swallowed. May cause irritation, avoid breathing vapors or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed
FIRST AID: SKIN: Wash exposed area with soap and water. If irritation persists, seek medical attention.
EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen
INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

Section 4 - Fire Fighting Measures
Fire Extinguisher Type: Any means suitable for extinguishing surrounding fire
Fire/Explosion Hazards: Thermal decomposition produces highly toxic fumes.
Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

Section 5 - Accidental Release Measures
Absorb spill with inert material, then place in a chemical waste container. Dispose of in a manner consistent with federal, local law.

Section 6 - Handling and Storage
Store in a cool dry place. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling

Section 7 - Exposure Controls & Personal Protection
Ventilation: Local Exhaust
Use Gloves, Safety Glasses with side shield.
Other Protective Equipment: Use safe laboratory handling procedures.

Section 8 - Stability and Reactivity Information
Stability: Stable
Conditions to Avoid: Avoid contact with incompatible materials.
Materials to Avoid: Strong acids, aluminum and steel
Hazardous Decomposition Products: Thermal decomposition may produce toxic gases.
Hazardous Polymerization: Will Not Occur
Condition to Avoid: None known
Section 9 - Additional Information
Conditions aggravated/target organs: Persons with pre-existing eye and skin conditions will be more susceptible. Acute: Skin irritation, mild eye irritation, ingestion of large quantities may cause potassium poisoning. Chronic: Dermatitis, eye damage.
DOT Classification: Not Regulated

Part# 7022

Section 1 - Identification
Synonyms: L-Lactic acid lithium salt, Sarcolactic acid lithium salt
Formula: $C_3H_5LiO_3$
Molecular Weight: 96.01 g/mol

Section 2 - Composition/Information on Ingredients
Ingredient | CAS No | Concentration | Hazardous
--- | --- | --- | ---
Lithium Lactate | 27848-80-2 | 4 mM | No
Water | 7732-18-5 | | No

Section 3 - Hazards Identification
- Emergency Overview:
OSHA Hazards
No known OSHA hazards
Not a dangerous substance according to GHS.

HMIS Classification:
Health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating:
Health hazard: 0
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Potential Health Effects:
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: May be harmful if swallowed throat, and abdomen. May also cause abdominal pain, vomiting, and diarrhea.
Skin contact: May be harmful if absorbed through skin. May cause skin irritation.
Eye Contact: May cause eye irritation.

Section 4 - First Aid Measures
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water.
Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.
Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**Section 5 - Fire Fighting Measures**
Fire: Not considered to be a fire hazard.
Not flammable or combustible.

Explosion: Not considered to be an explosion hazard. Drying of concentrated hydrogen peroxide on clothing or other combustible materials may cause fire or explosion.

Fire Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special protective equipment for firefighters. Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Lithium oxides

**Section 6 - Accidental Release Measures**

Personal precautions: Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Sweep up and shovel. Keep in suitable, closed containers for disposal.

**Section 7 - Handling and Storage**
Store in a cool, well-ventilated dark area. Protect from freezing.

Recommended storage temperature: 2 - 8 °C

**Section 8 - Exposure Controls/Personal Protection**
Airborne Exposure Limits:
- OSHA Permissible Exposure Limit (PEL): 1 ppm (TWA).
- ACGIH Threshold Limit Value (TLV): 1 ppm (TWA), A3: Animal carcinogen.

Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. 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. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate
government standards such as NIOSH (US) or CEN (EU).

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

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**Section 9 - Physical and Chemical Properties**

**Appearance:** Form powder

**Color:** white

**Safety data**

- **pH:** no data available
- **Melting point/freezing point:** no data available
- **Boiling point:** no data available
- **Flash point:** no data available
- **Ignition temperature:** no data available
- **Autoignition/temperature:** no data available
- **Lower explosion limit:** no data available
- **Upper explosion limit:** no data available
- **Vapour pressure:** no data available
- **Density:** no data available
- **Water solubility:** no data available
- **Partition coefficient/ n-octanol/water:** no data available
- **Relative vapour density:** no data available
- **Odour:** no data available
- **Odour Threshold:** no data available
- **Evaporation rate:** no data available

**Section 10 - Stability and Reactivity**

**Stability:** Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:** Hazardous decomposition products formed under fire conditions. - Carbon oxides, Lithium oxides

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Heat, reducing agents, organic materials, dirt, alkalis, rust, and many metals.

**Conditions to Avoid:** Light, heat, incompatibles.

**Section 11 - Disposal Considerations**

Dilute with water and flush to sewer if local ordinances allow, otherwise, whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**Section 12 - Transport Information**

Not regulated.
DISCLAIMER
For R&D use only. Not for drug, household or other uses.

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