Safety Data Sheet (SDS)

1. Product and Company Identification

1.1 Product identifiers
   a. Product name: D-Luciferin phosphate *CAS 145613-12-3*
   b. Product number: 12512
   c. CAS number: 145613-12-3

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses: Laboratory chemicals *For Research Use Only*

1.3 Details of the supplier of the data sheet
      520 Mercury Drive, Sunnyvale, CA 94085
   b. Telephone: 408-733-1055
   c. Fax: 408-733-1304
   d. E-Mail: info@aatbio.com

1.4 Emergency telephone number
   Emergency telephone number: 408-489-6491

2. Hazards Identification

2.1 Classification
   Not a hazardous substance or mixture

2.2 GHS label elements, including precautionary statements
   Not a hazardous substance or mixture

2.3 Hazardous not otherwise classified (HNOC) or not covered by GHS
   None

2.4 Potential health effects
   Avoid contact and inhalation. To our knowledge, the hazards of this material have not been thoroughly investigated. We recommend handling all chemicals with caution.

   a. Inhalation: No data available (may be harmful by inhalation)
   b. Ingestion: No data available (may be harmful if swallowed)
   c. Skin: No data available (may cause skin irritation in susceptible persons)
   d. Eyes: No data available (may cause eye irritation in susceptible persons)
   e. Chronic exposures: No data available (potentially harmful)
   f. Target organs: No data available (potentially harmful)
   g. Carcinogenic effects: No data available (potentially harmful)
   h. Mutagenic effect: No data available (potentially harmful)
   i. Reproductive toxicity: No data available (potentially harmful)
   j. Sensitization: No data available (potentially harmful)

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Luciferin phosphate</td>
<td>145613-12-3</td>
<td>N/A</td>
</tr>
</tbody>
</table>

4. First Aid and Measures

4.1 Skin contact
   Rinse with plenty of water. Call a physician to seek medical advice if symptoms arise.
4.2 Eye contact
Wash thoroughly after handling. If eye or skin contact occurs, immediately wash affected area with soap and copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician to seek medical advice.

4.3 Ingestion
Never give anything by mouth to an unconscious person. Call a physician to seek medical advice if symptoms arise.

4.4 Inhalation
If swallowed, wash out mouth with water provided person is conscious and call a physician to seek medical advice. If inhaled, move individual to fresh air and call a physician to seek medical advice.

4.5 Notes to physician
Treat symptomatically.

5. Fire Fighting Measures

5.1 Extinguishing media
Water spray, carbon dioxide, dry chemical powder or appropriate foam.

5.2 Special firefighting procedures
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.3 Unusual fire and explosions hazards
Emits toxic fumes under fire conditions.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Use appropriate protective equipment and methods to clean up spilled substances promptly.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so.

6.3 Methods for cleaning up
Absorb spill onto an appropriate material. Collect and dispose of all waste in accordance with applicable laws.

7. Handling and Storage

7.1 Personal precautions, protective equipment and emergency procedures
Potentially harmful. Avoid prolonged or repeated exposure. Avoid dust formation. Avoid breathing vapors, mist or gas.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry, cool and well-ventilated place. Protect material from long-term exposure to light.

8. Exposure Controls/Personal Protection

8.1 Control parameters
Contains no substances with occupational exposure limit values.

8.2 Control parameters

a. Engineering measures: General industrial hygiene practice.

b. Personal protective equipment: Wear appropriate gloves, protective clothing and eyewear and follow safe laboratory practices.

8.3 Environmental exposure control
Prevent products from entering drains.

9. Physical and Chemical Properties

Appearance: Solid
Solubility in water: Moderate
10. Stability and Reactivity

Reactivity: No data available
Chemical stability: Stable under recommended storage conditions
Possibility of hazardous reactions: No data available
Conditions to avoid: No data available
Incompatible materials: No data available
Hazardous decomposition products: No data available

11. Toxicological Information

Acute toxicity: No data available
Skin/corrosion/irritation: No data available (may cause skin irritation in susceptible persons)
Serious eye damage/irritation: No data available (may cause eye irritation in susceptible persons)
Respiratory or skin sensitization: No data available (may be harmful by inhalation)
Germ cell mutagenicity: No data available (potentially harmful)
Carcinogenicity: Not listed by NTP, IARC, or OSHA
Reproductive toxicity: No data available
Specific target organ toxicity: No data available
Aspiration hazard: No data available
RTECS: No data available

12. Ecological Information

Ecotoxicity: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
Results of PBT and vPvB assessment: No data available

13. Disposal Consideration

Do not allow product to reach ground water, water course, or sewage system. Consult local, state or national regulations for proper disposal.

14. Transport Information

DOT (US): Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

15. Regulatory Information
US Toxic Substances Control Act (TSCA): Not listed
SARA 302 components: Not listed
SARA 313 components: Not listed
SARA 311/312 components: Not listed
EEC risk statements: Not listed
Massachusetts-RTK: Not listed
New Jersey-RTK: Not listed
Pennsylvania-RTK: Not listed
California Proposition 65: Not listed

16. Other Information

16.1 HMIS Rating
Health hazard 0
Flammability 0
Reactivity 0

16.2 NFPA Rating
Health hazard 0
Flammability 0
Reactivity 0

16.3 Further Information
This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Users should make independent decisions regarding completeness of the information based on all sources available. AAT Bioquest shall not be held liable for any damage resulting from handling or from contact with the above product.