Section 1. Product and Company Identification

**Product Name**  
D-(+)-Neopterin

**Product ID**  
N1656

**Chemical Name**  
Crithidia factor

**Supplier**  
LKT Laboratories, Inc  
545 Phalen Blvd.  
St. Paul, MN 55130 USA  
Ph: 651-644-8424 Fax: 651-644-8357  
www.lktlabs.com - getinfo@lktlabs.com

**Emergency Phone #**  
1-800-424-9300

Section 2. Hazards Identification

**GHS Classification**  
Skin irritation (Category 2) H315  
Eye irritation (Category 2A) H319  
Specific target organ toxicity - single exposure (Category 3) Respiratory system H335

GHS Label elements including precautionary statements

**Pictogram**

**Signal word**  
Warning

**Hazard and precautionary statements**

**Hazard statements**
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.

**Precautionary statements**
P261 - Avoid breathing dust, fumes, gas, mist, vapors, spray.  
P264 -ash skin thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective gloves, eye protection, face protection.  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing, P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Continue rinsing.  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
P321 - Specific treatment (see supplemental first aid instructions on this label).  
P337 + P313 - If eye irritation persists: Get medical advice/attention.  
P362 - Take off contaminated clothing and wash before reuse.  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P501 - Dispose of contents/container to an approved waste disposal plant.

**HMIS Classification**
Health hazard: 2  
Chronic health hazard: *  
Flammability: 0  
Physical hazard: 0

**NFPA Rating**
Health hazard: 2  
Fire hazard: 0  
Reactivity hazard: 0

**Potential Health Effects**
Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.  
Skin - May be harmful if absorbed through skin. May cause skin irritation.  
Eyes - Causes serious eye irritation.
Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Ingredient: Title Compound</th>
<th>Percent: 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C₉H₁₁N₅O₄</td>
<td>Formula Wt. 253.21</td>
</tr>
<tr>
<td>CAS No.</td>
<td>2009-64-5</td>
<td>EC No. 217-924-7</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact

Flush eyes with plenty of water for at least 15 minutes and consult a physician.

Skin Contact

Wash off with soap and plenty of water. Consult a physician.

Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Firefighting Measures

Flash Point

Not available.

Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Firefighting Procedures

Wear self-contained breathing apparatus for firefighting if necessary.

Unusual Fire Hazards

Carbon oxides, nitrogen oxides (NOx).

Section 6. Accidental Release Measures

Personal Precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions

Do not let product enter drains.

Methods and materials for containment and cleanup

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: Ambient

Hazardous Decomposition Products

Not available.

Other Remarks
Section 8. Exposure Controls/Personal Protection

**Personal protective equipment**

**EXPOSURE CONTROLS**

Contains no substances with occupational exposure limit values. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**PERSONAL PROTECTION**

**Eye/face protection:** Use safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body protection:** Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** For nuisance exposures, use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection, use type OV/AG/P99 (US) of type ABEK-P2 (EU EN 1243) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
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</thead>
<tbody>
<tr>
<td>Solid.</td>
<td>Off white to yellow solid.</td>
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</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
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<tbody>
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<td>Not available.</td>
<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
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<tbody>
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<td>Not available.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
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</thead>
<tbody>
<tr>
<td>Soluble in 1N hydrogen chloride.</td>
<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
</tr>
</thead>
<tbody>
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<td>Not available.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower explosion limit</th>
<th>Autoignition temperature</th>
</tr>
</thead>
<tbody>
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<td>Not available.</td>
<td>Not available.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper explosion limit</th>
<th>Vapor pressure</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Not available.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Water solubility</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Relative vapor density</th>
<th>Evaporation rate</th>
</tr>
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<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
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</table>

Section 10. Stability and Reactivity

**Stability**

Stable under recommended storage conditions.

**Materials To Avoid**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Not available.
### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oral LD50</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Inhalation LC50</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Dermal LD50</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Other information on acute toxicity</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Reproductive Toxicity</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Specific organ toxicity single exposure (GHS)</strong></td>
<td>Inhalation - May cause respiratory irritation.</td>
</tr>
<tr>
<td><strong>Specific organ toxicity repeated exposure (GHS)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Teratogenicity</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Skin corrosion/irritation</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Serious eye damage/irritation</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Respiratory or skin sensitization</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Aspiration Hazard</strong></td>
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<tr>
<td><strong>Synergistic effects</strong></td>
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<tr>
<td><strong>Additional Information</strong></td>
<td>RTECS: Not available.</td>
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</table>

**Potential Health Effects**

Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.  
Skin - May be harmful if absorbed through skin. May cause skin irritation.  
Eyes - Causes serious eye irritation.  
Ingestion - May be harmful if swallowed.  
Specific target organ toxicity - single exposure - May cause respiratory irritation.

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.  
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Section 12. Ecological Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toxicity</strong></td>
<td>Not available</td>
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<tr>
<td><strong>Mobility in soil</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>PBT and vPvB assessment</strong></td>
<td>PBT/vPvB assessment not available as chemical safety assessment not required/not available</td>
</tr>
</tbody>
</table>
Section 13. Disposal Considerations

**Waste Disposal**
- Dispose of material according to all federal, state and local regulations.
- Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Section 14. Transport Information

**DOT (US)**
- Not dangerous goods.

**IATA**
- Not dangerous goods.

**IMDG**
- Not dangerous goods.

Further Information

Section 15. Regulatory Information

**Reach No.**

**SARA 302 Components**
- SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
- SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Components**
- Acute health hazard.

**Massachusetts Right To Know Components**
- No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**
- D-(-)-Neopterin  CAS #: 2009-64-5  Revision Date:

**New Jersey Right To Know Components**
- D-(-)-Neopterin  CAS #: 2009-64-5  Revision Date:

**California Prop 65 Components**
- This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

Section 16. Other Information

**Other information**
- The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.