MATERIAL SAFETY DATA SHEET

Section 1. Company Identification and Product Information

<table>
<thead>
<tr>
<th>Product Name or Identity:</th>
<th>Brain-Heart Infusion Broth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer's Name:</td>
<td>Acumedia Manufacturers, Inc.</td>
</tr>
<tr>
<td></td>
<td>740 East Shiawassee</td>
</tr>
<tr>
<td></td>
<td>Lansing, Michigan 48912</td>
</tr>
<tr>
<td>Emergency Phone No.:</td>
<td>517/372-9200</td>
</tr>
<tr>
<td>Fax No.:</td>
<td>517/372-0108</td>
</tr>
<tr>
<td>e-mail:</td>
<td><a href="mailto:foodsafety@neogen.com">foodsafety@neogen.com</a></td>
</tr>
<tr>
<td>Date Prepared or Revised:</td>
<td>December 2013</td>
</tr>
<tr>
<td>Chemtrec:</td>
<td>(800) 424-9300</td>
</tr>
<tr>
<td>Outside US and Canada:</td>
<td>(703) 527-3887</td>
</tr>
</tbody>
</table>

Section 2. Composition / Information on Hazardous Ingredients

This product is a mixture of the substances listed below with the addition of nonhazardous materials.

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS-No.</th>
<th>%</th>
<th>Hazard Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Chloride</td>
<td>7647-14-5</td>
<td>13.5%</td>
<td>Xi (Irritant)</td>
</tr>
<tr>
<td>Disodium Phosphate</td>
<td>7558-79-4</td>
<td>6.8%</td>
<td>Xi (Irritant)</td>
</tr>
</tbody>
</table>

Section 3. Health Hazard Identification

Health Hazards: (Acute and Chronic)

Information pertaining to particular dangers for man and environment.

R 36 / 37 / 38 Irritating to eyes, respiratory system and skin.

Section 4. First Aid Measures

Emergency / First Aid Procedures:

- **Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Give large amounts of water to drink. Get medical attention.
- **Inhalation:** If inhaled, supply fresh air or oxygen. Seek medical attention if breathing becomes labored or difficult.
- **Eye Contact:** Rinse opened eye for at least 15 minutes under running water, lifting lower and upper eyelids occasionally. Seek medical attention if irritation develops.
- **Skin Contact:** Remove contaminated clothing. Immediately wash with plenty of soap and water for at least 15 minutes. Wash clothing before reuse. Seek medical attention if irritation develops.

Section 5. Fire and Explosion Hazard Data

Flash Point (Method Used): N/A

Flammable Limits: LEL – N/A, UEL – N/A

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

Protective Equipment: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mood.

Unusual Fire and Explosion Hazards: During heating or in case of fire, poisonous gases may be produced.

Section 6. Accidental Release Measures

Personal Precautions: Wear suitable protective clothing. Remove contaminated clothing immediately. Avoid inhalation, contact with eyes and skin. Prevent formation of dust.

Environmental Precautions: Prevent dispersion of material. Wipe up with damp sponge or mop.

Clean-up Methods: Absorb material, ventilate area, and wash spill site after material has been cleaned up.
Section 7. Handling and Storage

**Handling:** Protect against physical damage. Ensure good ventilation / exhaustion.

**Storage:** Requirements to be met by storerooms and receptacles: 2 - 30°C
Do not store together with oxidizing agents. Store in cool, dry conditions in well sealed containers.

**Other Precautions:** No special measures required.

Section 8. Exposure Controls / Personal Protection

**Components with limit values that require monitoring:**
This product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

<table>
<thead>
<tr>
<th>OSHA–PEL</th>
<th>REL</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Additional Information:** Personal Protection listed below are general requirements for laboratory personnel. Follow the usual precautionary measures for handling chemicals / powder. Avoid contact with eyes, skin, and clothing.

**Personal Protective Equipment:**
Keep away from food, beverages, and feed. Wash hands before and after entering laboratory.

**Breathing Equipment:** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

**Hand Protection:** Use chemical resistant gloves.

**Eye Protection:** Wear safety glasses or goggles.

**Body Protection:** Wear lab coat or other protective work clothing.

Section 9. Physical and Chemical Properties

**Appearance:** Homogeneous free flowing powder, light beige

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Melting Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Auto Igniting</th>
<th>Solubility in Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product is not self-igniting</td>
<td>Soluble</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Danger of explosion</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product does not present an explosion hazard.</td>
<td>7.4 ± 0.2 @ 25°C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solvent Content</th>
<th>Solids Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic solvents – 0.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

**Stability:**

<table>
<thead>
<tr>
<th>Stability</th>
<th>Unstable</th>
<th>Stable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions to Avoid:</td>
<td>No decomposition if used according to specifications.</td>
<td></td>
</tr>
</tbody>
</table>

**Incompatibility (Materials to Avoid):** Incompatible with strong oxidizers and acids.

**Hazardous Decomposition or Byproducts:** Sodium oxides, phosphorus oxides, potassium oxides, hydrogen chloride gas.

**Hazardous Polymerization:**

<table>
<thead>
<tr>
<th>Hazardous Polymerization</th>
<th>May Occur</th>
<th>Will Not Occur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions to Avoid:</td>
<td>No dangerous reactions known.</td>
<td></td>
</tr>
</tbody>
</table>

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Rev 07, December 2013
Section 11. Toxicological Information

**LD/LC₅₀ values that are relevant:**
- **LD₅₀ ORAL-RAT:** 3,550 mg/kg (Sodium Chloride)
- **LD₅₀ ORAL-RAT:** 17 gm/kg (Disodium Phosphate)

**Carcinogenicity Classification:**
- IARC (International Agency for Research on Cancer) - Not listed
- NTP (National Toxicology Program) - Not listed

**Irritant:** Irritant to eyes, skin, and mucous membranes.

**Sensitization:** No sensitizing effects known.

**Subacute to chronic toxicity:** NA

**Additional toxicological information:** Irritant.

Section 12. Ecological Information

**Ecotoxicity Tests:**
Generally not hazardous to water. The ecological effects have not been thoroughly investigated, but currently none have been identified.

Section 13. Disposal Considerations

**Waste Disposal Method:** Dispose in accordance with all applicable federal (40 CFR 261.3), state, and local environmental regulations. Smaller quantities can be disposed of with solid waste.

RCRA Hazardous Waste: No

Contact a licensed professional waste disposal service to dispose of this material if questions arise.

**Container Information:** Do not remove labels from containers until they have been cleaned.

Section 14. Transport Information

**DOT Regulations:**
Not Regulated

**Land Transport ADR/RID (cross-border):**
Not Regulated

**Maritime Transport IMDG:**
Not Regulated

**Marine Pollutant:** No

**Air Transport ICAO-TI and IATA-DGR:**
Not Regulated

Section 15. Regulatory Information
**EU Regulations, Hazard Symbol(s):**
- **Sodium Chloride:** Xi (Irritant)
- **Disodium Phosphate:** Xi (Irritant)

**State Right-to-Know**
- **Pennsylvania**
  - Sodium Chloride CAS No. 7647-14-5
- **New Jersey**
  - Sodium Chloride CAS No. 7647-14-5

**SARA 311/312:**
- Acute Health Hazard: Yes
- Chronic Health Hazard: No
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactivity Hazard: No

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**Section 16. Other Information**
This document is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Acumedia Manufacturers, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. These suggestions should not be confused with state, municipal or insurance requirements, and constitute NO WARRANTY.