Product Title: Agarose Gel Extraction Kit

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Title: Agarose Gel Extraction Kit
Item number: AGEK-Preps
Document Number: MSDS-029  Version 001
Relevant identified uses of the substance or mixture and uses advised against
Application of the substance / the mixture
Details of the supplier of the safety data sheet
Manufacturer/Supplier: Empirical Bioscience
2007 Eastcastle Dr. SE
Grand Rapids, MI 49508 U.S.A.
1-877.479.9949
MSDS author; customer.service@empiricalbioscience.com

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Ingredients (specific)</th>
<th>%</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Void</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 3 — HAZARDS IDENTIFICATION

Classification of the substance or mixture Classification according to the Hazard Communication Standard (HCS).
The product is not classified as hazardous according to the HCS regulation. This substance is not classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No. 1272/2008 (EU-GHS/CLP).
Labelling according to Regulation (EC) No 1272/2008 Void
Hazard pictograms Void
Signal word Warning.
Hazard statements H302 Harmful if swallowed. H312 Harmful in contact with skin. H332 Harmful if inhaled. H315 causes skin irritation. H319 Causes serious eye infection. H317 May cause an allergic reaction. H335 May cause respiratory irritation.
Classification system: NFPA ratings (scale 0 - 4)
Health = 4
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 4
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable
Target Organ(s): Respiratory system
Other hazards. May be harmful if inhaled and can cause irritation to the respiratory tract. May be harmful if absorbed through the skin causing skin irritation. May cause eye irritation. May be harmful if swallowed.
Results of PBT and vPvB assessment
PBT: Not applicable
vPvB: Not applicable
**SECTION 4 — FIRST AID MEASURES**

<table>
<thead>
<tr>
<th>Description of first aid measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>General information: No special measures required.</td>
</tr>
<tr>
<td>After inhalation: If breathed in, move person into fresh air. If not breathing give artificial respiration.</td>
</tr>
<tr>
<td>After skin contact: Wash with soap and plenty of water.</td>
</tr>
<tr>
<td>After eye contact: Flush with water as a precaution.</td>
</tr>
<tr>
<td>After swallowing: Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult doctor.</td>
</tr>
<tr>
<td>Information for doctor:</td>
</tr>
<tr>
<td>Most important symptoms and effects, both acute and delayed: None</td>
</tr>
<tr>
<td>Indication of any immediate medical attention and special treatment needed: No further relevant information available</td>
</tr>
</tbody>
</table>

**SECTION 5 — FIRE FIGHTING MEASURES**

<table>
<thead>
<tr>
<th>Extinguishing media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable extinguishing agents: dry chemical or CO₂, alcohol-resistant foam or water spray.</td>
</tr>
<tr>
<td>Special hazards arising from the substance or mixture: None</td>
</tr>
<tr>
<td>Other hazards:</td>
</tr>
<tr>
<td>Advice for firefighters: No special advice</td>
</tr>
<tr>
<td>Protective equipment: Wear a breathing apparatus that is self contained.</td>
</tr>
</tbody>
</table>

**SECTION 6 — ACCIDENTAL RELEASE MEASURES**

| Personal precautions, protective equipment and emergency procedures: Avoid dust formation. |
| Environmental precautions: Do not allow to enter sewers/drainage or ground water. |
| Methods and material for containment and cleaning up: Sweep up. Keep in a suitable closed container for disposing. |
| Reference to other sections: No dangerous substances are released. |
| See Section 7 for information on safe handling. |
| See Section 13 for disposal information. |

**SECTION 7 — HANDLING AND STORAGE**

| Handling: |
| Precautions for safe handling: Provide exhaust ventilation where dust forms. |
| Information about protection against explosions and fires: Use normal fire protection measures. |
| Conditions for safe storage, including any incompatibilities: |
| Storage: Store in a well ventilated, cool place while keeping the container tightly closed. |
| Requirements to be met by storerooms and receptacles: No special requirements. |
| Information about storage in one common storage facility: Recommended storage at ambient temperature. |
| Further information about storage conditions: None. |
| Specific end use(s): No further relevant information available. |
MATERIAL SAFETY DATA SHEET

Product Title: Agarose Gel Extraction Kit

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Control parameters
Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
Breathing equipment: For protection from dusts, use type N95 (US) or type P1 (EN 143) dust masks.
Protection of hands: Use protected gloves for prolonged or repeated exposure.
Protective gloves: Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Safety goggles are recommended.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
General Information
Appearance:
Form: Liquid
Color: White
Odor: Odorless

pH-value at 20 °C (68 °F): Not determined
Change in condition
Melting point/Melting range: Not determined
Boiling point/Boiling range: Not determined
Flash point: Not applicable
Flammability (solid, gaseous): Not applicable
Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Product is not self-igniting
Danger of explosion: Product does not present an explosion hazard
Explosion limits:
Lower: Not determined
Upper: Not determined

Vapor pressure at 20 °C (68 °F): Not determined
Density at 20 °C (68 °F): Not determined
Relative density: Not determined
Vapour density: Not determined
Evaporation rate: Not determined

Solubility in / Miscibility with Water: Not determined
Partition coefficient (n-octanol/water): Not determined
Viscosity:
Dynamic: Not determined
Kinematic: Not determined

Solvent content:
Organic Solvents: 0.00%
Water: No data available
Solids content: No data available

Other information: No further relevant information available
SECTION 10 — STABILITY AND REACTIVITY

Reactivity
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid Strong oxidizing agents.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: Hazardous decomposition products are formed in fire conditions including Carbon Oxides, NOx, Phosphorous oxides, and Lithium oxides.

SECTION 11 — TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: Skin irritation.
on the eye: Eye irritation.
Sensitization: No sensitizing effects known.
Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
Carcinogenic categories IARC (International Agency for Research on Cancer)
None of the ingredients are listed.
NTP (National Toxicology Program)
None of the ingredients are listed.

SECTION 12 — ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity: Not available.
Persistence and degradability Not available.
Behavior in environmental systems:
Bioaccumulative potential Not known.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.
Product Title: Agarose Gel Extraction Kit

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation: Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.
Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14 — TRANSPORT INFORMATION

UN-Number: None
DOT, ADR, ADN, IMDG, IATA: Void
UN proper shipping name: None
DOT, ADR, ADN, IMDG, IATA: Void
Transport hazard class(es): None
DOT, ADR, ADN, IMDG, IATA Class: Void
Packing group: None
DOT, ADR, IMDG, IATA: Void
Environmental hazards:
Marine pollutant: No
Special precautions for user: Not applicable
Transport in bulk according to Annex II of MARPOL73/78 and the IBC code: Not applicable
UN "Model Regulation": -

SECTION 15 — REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:
Sara Section 355 (extremely hazardous substances): None of the ingredients are listed.
Section 313 (Specific toxic chemical listings): None of the ingredients are listed.
TSCA (Toxic Substances Control Act): All of the ingredients are listed.
Proposition 65
Chemicals known to cause cancer: None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.
Chemicals known to cause developmental toxicity: None of the ingredients are listed.
Cancerogenuity categories
EPA (Environmental Protection Agency) None of the ingredients are listed.
TLV (Threshold Limit Value established by ACGIH) None of the ingredients are listed.
MAK (German Maximum Workplace Concentration) None of the ingredients are listed.
NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients are listed.
OSHA-Ca (Occupational Safety & Health Administration) None of the ingredients are listed.
National regulations:
Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out. This product does not need to be labeled in accordance with EC directives.
**Product Title: Agarose Gel Extraction Kit**

**SECTION 16 — OTHER INFORMATION**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Empirical Bioscience
2007 Eastcastle Dr. SE
Grand Rapids, MI 49508 U.S.A.
1-877.479.9949

Abbreviations and acronyms:
- **ADR:** Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- **IMDG:** International Maritime Code for Dangerous Goods
- **DOT:** US Department of Transportation
- **IATA:** International Air Transport Association
- **CAS:** Chemical Abstracts Service (division of the American Chemical Society)
- **NFPA:** National Fire Protection Association (USA)
- **HMIS:** Hazardous Materials Identification System (USA)
- **LC50:** Lethal concentration, 50 percent
- **LD50:** Lethal dose, 50

* Data compared to the previous version altered