SAFETY DATA SHEET
according to Hazardous Products Regulations (HPR)

Half Fraser (Demi-Fraser) Broth

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>Half Fraser (Demi-Fraser) Broth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>NCM0001</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

<table>
<thead>
<tr>
<th>Product Use</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites; [PC21] Laboratory chemicals; [PROC15] Use as laboratory reagent;</td>
<td>Intended for laboratory use only. For in vitro use only.</td>
</tr>
</tbody>
</table>

1.3. Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Company</th>
<th>Neogen Corporation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>620 Lesher Place</td>
</tr>
<tr>
<td></td>
<td>Lansing MI 48912</td>
</tr>
<tr>
<td></td>
<td>USA</td>
</tr>
<tr>
<td>Web</td>
<td><a href="http://www.neogen.com">www.neogen.com</a></td>
</tr>
<tr>
<td>Telephone</td>
<td>517-372-9200/800-234-5333</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:SDS@neogen.com">SDS@neogen.com</a></td>
</tr>
</tbody>
</table>

1.4. Emergency telephone number

24 hours:
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

Further information

Manufactured By:
Neogen Corporation
740 East Shiawassee
Lansing, MI 48912 U.S.A.

Neogen Corporation
1 Quest Park-Moss Hall Road
Heywood Lancashire BL97JJ UK.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008

| STOT SE 3: H335; |

2.2. Label elements
Half Fraser (Demi-Fraser) Broth

2.2. Label elements

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Word</td>
<td>Warning</td>
</tr>
<tr>
<td>Hazard Statement</td>
<td>STOT SE 3: H335 - May cause respiratory irritation.</td>
</tr>
<tr>
<td>Precautionary Statement: Response</td>
<td>P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 - Call a POISON CENTER or doctor/physician if you feel unwell.</td>
</tr>
<tr>
<td>Precautionary Statement: Storage</td>
<td>P403+P233 - Store in a well-ventilated place. Keep container tightly closed.</td>
</tr>
<tr>
<td>Precautionary Statement: Disposal</td>
<td>P501 - Dispose of contents/container to an approved waste disposal facility in accordance with local and national regulations.</td>
</tr>
</tbody>
</table>

2.3. Other hazards

Other hazards Dust may be irritating if inhaled. Contains substance(s) which are hazardous to the environment.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Index No.</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>REACH Registration Number</th>
<th>Conc. (%w/w)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium Chloride</td>
<td></td>
<td>7447-41-8</td>
<td>231-212-3</td>
<td></td>
<td>1 - 10%</td>
<td>Acute Tox. 4: H302; Skin Irrit. 2: H315; Eye Irrit. 2: H319; STOT SE 3: H335; Aquatic Acute 3: H402;</td>
</tr>
</tbody>
</table>

Description

Concentrations listed are not product specifications.

Further information

Full text of Hazard Statements listed in this Section is provided in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

| Inhalation | Move the exposed person to fresh air. If breathing is difficult give oxygen. If breathing stops, provide artificial respiration. Seek medical attention if irritation or symptoms persist. |
| Eye contact | Rinse immediately with plenty of water. Contact lenses should be removed. Seek medical attention if irritation or symptoms persist. |
| Skin contact | Remove contaminated clothing. Wash with soap and water. Seek medical attention if irritation or symptoms persist. |
| Ingestion | Do not induce vomiting unless told to do so by the poison control center or doctor. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell. |

4.2. Most important symptoms and effects, both acute and delayed
Half Fraser (Demi-Fraser) Broth

4.2. Most important symptoms and effects, both acute and delayed

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>May cause irritation to respiratory system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>May cause irritation to eyes.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause irritation to skin.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Ingestion may cause nausea and vomiting.</td>
</tr>
</tbody>
</table>

4.3. Indication of any immediate medical attention and special treatment needed

Remove the affected person from the source of contamination immediately. Transfer to hospital if there are burns or symptoms of poisoning. Seek medical attention if irritation or symptoms persist. If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Use extinguishing media appropriate to the surrounding fire conditions.

5.2. Special hazards arising from the substance or mixture

Avoid formation of dust. Do not allow undiluted product to be released to ground water, water course or sewage system.

5.3. Advice for firefighters

Do not breathe dust or vapour. Wear suitable respiratory equipment when necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid formation of dust. Use as appropriate: Protective equipment, Protective clothing. Ensure adequate ventilation of the working area. Avoid prolonged or repeated exposure.

6.2. Environmental precautions

Prevent further spillage if safe. Clean spillage area thoroughly with plenty of water. Do not flush into surface water. Do not let product contaminate subsoil.

6.3. Methods and material for containment and cleaning up

Avoid formation of dust. Clean spillage area thoroughly with plenty of water. Do not contaminate water by cleaning of equipment or disposal of wastes.

6.4. Reference to other sections

See Section(s) 2, 8, and 13 for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid contact with eyes. Do not eat, drink or smoke in areas where this product is used or stored. Ensure adequate ventilation of the working area. Do not contaminate water by cleaning of equipment or disposal of wastes. Use as appropriate: Protective clothing.

Read the entire label and follow all use directions, restrictions, and precautions.

7.2. Conditions for safe storage, including any incompatibilities

Store in correctly labelled containers. Keep container tightly closed. Do not contaminate water, food, or feed by storage or disposal. Follow label instructions.

7.3. Specific end use(s)

See Section(s) 1.2 for further information.
### SECTION 8: Exposure controls/personal protection

#### 8.2. Exposure controls

<table>
<thead>
<tr>
<th>8.2.1. Appropriate engineering controls</th>
<th>8.2.2. Individual protection measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure adequate ventilation of the working area.</td>
<td>Use as appropriate: Protective equipment.</td>
</tr>
<tr>
<td>Use as appropriate: Protective equipment.</td>
<td>Use as appropriate: Suitable eye protection.</td>
</tr>
<tr>
<td>Use as appropriate: Chemical-resistant gloves made of any waterproof material.</td>
<td>Use as appropriate: Protective clothing.</td>
</tr>
<tr>
<td>In case of insufficient ventilation, wear suitable respiratory equipment.</td>
<td>Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. Protect clothing from contact with the product. Provide chemical shower. Provide eye wash station.</td>
</tr>
</tbody>
</table>

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Powder</td>
</tr>
<tr>
<td>Colour</td>
<td>Beige</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic/Mild</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>7 - 7.4</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Explosive</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
</tbody>
</table>
Half Fraser (Demi-Fraser) Broth

9.2. Other Information

<table>
<thead>
<tr>
<th>Benzene Content</th>
<th>Not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead content</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>VOC (Volatile organic compounds)</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4. Conditions to avoid

Keep away from extreme temperatures, Moisture.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

**Acute toxicity**

Based on available data, the classification criteria are not met. However, this product does contain substance(s) that are classified as hazardous. For more information, see Section 3.

**Skin corrosion/irritation**

May cause irritation to skin.

**Serious eye damage/irritation**

May cause irritation to eyes.

**Respiratory or skin sensitisation**

May cause allergic reactions in susceptible people.

**Germ cell mutagenicity**

No mutagenic effects reported.

**Carcinogenicity**

No components at >0.01% are listed in the American Conference of Governmental Industrial Hygienists (ACGIH) Guide to Occupational Exposure Values.

No components at >0.01% are listed in the International Agency for Research on Cancer (IARC) Monographs.

No components at >0.01% are listed in the National Toxicology Program (NTP) Report on Carcinogens.

Not listed in the OSHA standard 1910.1003 Carcinogens.

**Reproductive toxicity**

No teratogenic effects reported.

**STOT-single exposure**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**STOT-repeated exposure**

No Significant Hazard.

**Aspiration hazard**

No Significant Hazard.

**Repeated or prolonged exposure**

Avoid prolonged or repeated exposure. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible.

11.1.2. Mixtures

See Section(s) 3 for further information.
### 11.1.3. Hazard Information
See Section(s) 2 and 3 for further information.

### 11.1.4. Toxicological Information
No data available

### 11.1.5. Hazard Class
See Section(s) 2 and 14 for further information.

### 11.1.6. Classification Criteria
Based on the Globally Harmonised System (GHS) considerations for the classification of mixtures. See Section 15 for regulatory citations.

### 11.1.7. Information on likely routes of exposure
Eye contact. Skin contact. Inhalation. Ingestion.

### 11.1.8. Symptoms related to the physical, chemical and toxicological characteristics
See Section(s) 4.2 for further information.

### 11.1.9. Delayed and immediate effects as well as chronic effects from short and long-term exposure
See Section(s) 4.2 for further information.

### 11.1.10. Interactive effects
No data available.

### 11.1.11. Absence of specific data
<1% of this mixture consists of ingredients of unknown acute toxicity.

### 11.1.12. Mixture versus substance information
See Section(s) 3 for further information.

### 11.1.13. Other information
No data available.

### SECTION 12: Ecological information

#### 12.1. Toxicity
No data available

#### 12.2. Persistence and degradability
No data is available on this product.

#### 12.3. Bioaccumulative potential
No data is available on this product.

#### Partition coefficient
| Half Fraser (Demi-Fraser) Broth | No data available |

#### 12.4. Mobility in soil
No data is available on this product.

#### 12.5. Results of PBT and vPvB assessment
No data is available on this product.

#### 12.6. Other adverse effects
### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods
- Dispose of in compliance with all local and national regulations. Follow label instructions.

**Disposal methods**
- Do not contaminate water by cleaning of equipment or disposal of wastes. Do not flush into surface water. Dispose of in compliance with all local and national regulations.

**Disposal of packaging**
- Nonrefillable container. Do not reuse or refill this container. If empty: Do not reuse this container. Place in trash or offer for recycling, if available. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**Further information**
- Refer to product label and/or package insert for additional information. Follow label instructions.

### SECTION 14: Transport information

#### 14.1. UN number
- The product is not classified as dangerous for carriage.

#### 14.2. UN proper shipping name
- The product is not classified as dangerous for carriage.

#### 14.3. Transport hazard class(es)
- The product is not classified as dangerous for carriage.

#### 14.4. Packing group
- The product is not classified as dangerous for carriage.

#### 14.5. Environmental hazards
- The product is not classified as dangerous for carriage.

#### 14.6. Special precautions for user
- The product is not classified as dangerous for carriage.

#### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- The product is not classified as dangerous for carriage.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
- **Regulations**
  - WHMIS 2015 requirements as specified in the Hazardous Products Act (HPA) and the Hazardous Products Regulations (HPR).
  - --International--.
  - Basel Convention (Hazardous Waste): Not applicable.
  - Chemical Weapons Convention (OPCW): This product does not contain reportable substances at >0.0001% concentration.
  - Kyoto Protocol Greenhouse Gases: This product does not contain reportable substances at >0.0001% concentration.
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Mercosur Agreement: Not applicable.
Montreal Protocol: This product does not contain reportable substances at >0,0001% concentration.
The Rotterdam Convention: This product does not contain reportable substances at >0,0001% concentration.
The Stockholm Convention: This product does not contain reportable substances at >0,0001% concentration.

--Asia and the ASEAN Nations--.
Catalog of Hazardous Chemicals (China): This product does not contain reportable substances at >0,0001% concentration.
Regulation of Minister of Trade of the Republic of Indonesia, Number 75, Year 2014, regarding The Second Amendment of Minister of Trade, Number 44, Year 2009, Regarding Provision, Distribution, and Control of Hazardous Substances: This product does not contain reportable substances at >0,0001% concentration.
Air Pollution Control Law (Japan): This product does not contain reportable substances at >0,0001% concentration.
Chemical Substances Control Law (Japan): This product does not contain reportable substances at >0,0001% concentration.
Industrial Safety and Health Act, Dangerous Substances (Japan): This material contains no reportable components.
Poisonous and Deleterious Substances Act (Japan): This product does not contain reportable substances at >0,0001% concentration.
Soil Contamination Countermeasures Act (Japan): This product does not contain reportable substances at >0,0001% concentration.
Water Pollution Control Law (Japan): This product does not contain reportable substances at >0,0001% concentration.
Chemical Substances Subject to Permission (Korea): This product does not contain reportable substances at >0,0001% concentration.
Restricted or Prohibited Substances (Korea): This product does not contain reportable substances at >0,0001% concentration.
Use and Standards of Exposure of Chemicals Hazardous to Health (USECHH), Regulation 2000 (Malaysia): This product does not contain reportable substances at >0,0001% concentration.
Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients listed or exempt.
Taiwan Toxic and Concerned Chemical Substances Control Act (TCCSCA): This product does not contain reportable substances at >0,0001% concentration.
Hazardous Substances Act (Thailand): This product does not contain reportable substances at >0,0001% concentration.
Law on Chemicals (Vietnam): This product does not contain reportable substances at >0,0001% concentration.

--Australia and New Zealand--.
Australian Dangerous Goods Code: Not applicable.
Australian Inventory of Chemical Substances (AICS): All ingredients listed or exempt.
New Zealand Inventory of Chemicals (NZIoC): All ingredients listed or exempt.

--European Union (EU) and the United Kingdom (UK)--.
Authorisation List (Annex XIV of REACH): This product does not contain reportable substances at >0,0001% concentration.
Annex XVII for REACH: This product does not contain reportable substances at >0,0001% concentration.
Article 95 of the Biocidal Products Regulation (BPR): Not applicable.
Half Fraser (Demi-Fraser) Broth

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

--North America--.
Domestic/Non-Domestic Substances Lists (DSL/NDSL): All ingredients listed or exempt.
Toxic Substances Control Act (TSCA): All ingredients listed or exempt.
Massachusetts Right-to-Know Hazardous Substance List: Sodium phosphate dibasic.
New Jersey Worker and Community Right to Know Act: Sodium phosphate dibasic.
Pennsylvania Right to Know Law: Phosphoric acid, disodium salt.
Rhode Island Right-to-Know General Law: This product does not contain reportable substances at >0.0001% concentration.

**California residents please note**: WARNING: This product can expose you to chemicals, including Nalidixic acid, CAS No. 389-08-2, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

This document differs from the previous version in the following areas:
1 - Description.
1 - Product Use.
1 - Manufactured By:
2 - Other hazards.
3 - Description.
9 - 9.1. Information on basic physical and chemical properties (Odour).
9 - 9.2. Other information (Benzene Content).
9 - 9.2. Other information (Lead content).
11 - Acute toxicity.
12 - 12.1. Toxicity.
12 - 12.6. Other adverse effects.
15 -

Acronyms

ADR/RID: European Agreements Concerning the International Carriage of Dangerous Goods by Rail (RID) and by Road (ADR).
CAS No.: Chemical Abstracts Service.
CLASS: Classification, Labelling, and Safety Data Sheet of Hazardous Chemicals Regulation 2013 (Malaysia).
GHS: Globally Harmonized System.
IATA: International Air Transport Association.
ICAO: International Civil Aviation Organisation.
IMDG: International Maritime Dangerous Goods.
LD: Lethal dose.
OEL: Occupational exposure limit.
OSHA: U.S. Occupational Safety and Health Administration.
PEL: Permissible Exposure Limit.
REACH: Registration, Evaluation, Authorisation, and Restriction of Chemicals.
SVHC: Substance of very high concern.
US DOT: United States Department of Transportation.
VOC: Volatile Organic Compound.
WEL: Workplace Exposure Limit.

Text of Hazard Statements in Section 3

Acute Tox. 4: H302 - Harmful if swallowed.
Skin Irrit. 2: H315 - Causes skin irritation.
Other information

- Eye Irrit. 2: H319 - Causes serious eye irritation.
- STOT SE 3: H335 - May cause respiratory irritation.
- Aquatic Acute 3: H402 - Harmful to aquatic life.

Further information

DISCLAIMER: The information and recommendations set forth herein ("Information") are presented in good faith and believed to be correct as of the date issued. No representation is made regarding the completeness or accuracy of the Information. Further, because of the many factors that affect the use of this product, the Information is supplied upon the condition that the person(s) receiving it will make their own determination regarding its suitability for their own unique purpose(s), prior to use.

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