1 Identification of the substances/ mixture and of the company/ undertaking

1.1 Product Identifiers
Product Number       M410
Product Name         WL Differential Broth
REACH Registration Number
This product is a mixture. Reach registration number is not available for this mixture.

1.2 Relevant identified uses of the substance or mixture and uses advised against
1.2.1 Relevant identified uses
Laboratory Chemicals, Analytical Purpose, Biochemical Analysis

1.3 Details of the supplier of the safety data sheet
Produced by          HiMedia Laboratories Private Limited
Address              23, Vadhani Industrial Estate, LBS Marg, Ghatkopar (W), Mumbai - 400 086
                     India
Tel. No.             +91-22-2500 0970, +91-22-2500 1607
Fax No.              +91-22-25002468
Mail Id              info@himedialabs.com
Website              www.himedialabs.com

1.4 Emergency Tel. No.
Emergency Tel. No.    Please contact the regional HiMedia representation in your country

2 Hazards Identification

2.1 Classification of the substance or mixture
CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]
Not a hazardous substance or mixture according to Regulation (EC) No.1272/2008.

2.2 Label elements
Labeling according to Regulation (EC) No.1272/2008

2.3 Other Hazards
None

3 Composition/Information On Ingredients

3.2 Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride, anhydrous</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.1 - &lt;=1.0%</td>
</tr>
<tr>
<td>CAS No. :</td>
<td>10043-52-4</td>
<td></td>
</tr>
<tr>
<td>EC No. :</td>
<td>233-140-8</td>
<td></td>
</tr>
<tr>
<td>Ferric chloride</td>
<td>Eye Irrit. 2A H319</td>
<td></td>
</tr>
</tbody>
</table>

Revision : 00001
Date of Revision : 08.07.2019
<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese sulphate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.001 - &lt;=0.01%</td>
</tr>
</tbody>
</table>

### Fire Fighting Measures

#### 5.1 Extinguishing media

*Suitable extinguishing media*

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

*Unsuitable extinguishing media*

No data available.
5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx), Potassium oxides, Oxides of phosphorus, Calcium oxide, Magnesium oxide, Iron oxides, Manganese/manganese oxides

5.3 Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary

5.4 Further information
No data available

6 Accidental Release Measures
6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert adsorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see Section 13.

7 Handling and Storage
7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end uses
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure Controls/Personal Protection
8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the products.

Personal protective equipment
Hygiene measure
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with the product.

Eye/face protection
Tightly fitting safety goggles; Faceshield (8-inch minimum). 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 contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425/EEC and the standard EN ISO 374-1/2016 derived from it.

Body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environment exposure controls
Do not empty into drains.

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>Appearance</td>
<td>Light yellow to light green coloured homogeneous free flowing powder</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>5.30 - 5.70</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (Solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2 Other safety information
No data available

10 Stability and Reactivity
10.1 Reactivity
No data available

10.2 Chemical stability
10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
Refer Section 5.2

11 Toxicological Information
11.1 Information on toxicological effects

Acute toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

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.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Aspiration hazard
No data available

Potential Health Effects

Inhalation
REFER SECTION 2

Skin
REFER SECTION 2

Eyes
REFER SECTION 2

Ingestion
REFER SECTION 2

11.2 Components
Calcium chloride

Acute oral toxicity
Rat LD50: 1,000 mg/kg
(As per IUCLID)

*Acute dermal toxicity*
Rat LD50: 2,630 mg/kg
(As per IUCLID)

*Skin irritation*
Rabbit
Result: No irritation
(As per OECD Test Guideline 404)

*Eye irritation*
Rabbit
Result: Eye irritation
(As per OECD Test Guideline 405)

Causes serious eye irritation.

**Additional Information**
RTECS: EV9800000

---

**Ferric chloride**

*Acute oral toxicity*
Rat LD50: 3,200 mg/kg (As per OECD Guideline 401)

*Acute inhalation toxicity*
No data available

*Acute dermal toxicity*
Rabbit LD50: > 559 mg/kg (As per EPA OPP 81-2)

*Skin irritation*
Rabbit Result: Non Irritant (As per OECD Guideline 404)

*Eye irritation*
Rabbit Result: Irreversible effects on the eye (ECHA)

*Sensitisation*
Guinea pig Result: Not sensitising

*Genetic toxicity (in-vitro)*
Mammalian cell gene mutation assay
Mouse lymphoma cells Result: Negative

*Genetic toxicity (in-vivo)*
Mouse Result: Positive (ECHA)

*Carcinogenicity*
No data available

*Toxicity to Reproduction*
No data available

**Teratogenicity**
No data available

**Additional information:**
RTECS: LJ9100000

---

**Manganese sulphate**
**Acute oral toxicity**
Rat LD50: 2,150 mg/kg
(As per IUCLID)

**Acute Dermal Toxicity**
Rat LD50: Not determined.

**Acute Inhalation Toxicity**
Rat LC50: > 4.45 mg/l
(As per OECD Test Guideline 403)

**Additional Information**
RTECS: OP1050000

---

**Cycloheximide**

**Acute Toxicity**
LD50 Oral rat: 2mg/kg

**Skin Corrosion/Irritation**
Skin-rabbit Result - Skin irritation-24 h

**Germ cell mutagenicity**
Lab experiments have shown mutagenic effects
Invitro tests showed mutagenic effects

**Reproductive toxicity**
May cause congenital malformation in the fetus.
Presumed human reproductive toxicant.
Liver-irregularities-Based on human Evidence

**Additional Information**
RTECS: MA4375000

---

**Chloramphenicol**

**Acute Toxicity**
LD50 Oral rat: 2.500 mg/kg
LD50 Intraperitoneal rat: 1.811 mg/kg
LD50 Intraperitoneal mouse: 1.100 mg/kg

**Respiratory or skin sensitization**
Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals

**Germ cell mutagenicity**
Lab experiments have shown mutagenic effects

**Possible human carcinogen**
IARC: Group 2A Probably carcinogenic to humans (Chloramphenicol)

**Reproductive toxicity**
May cause congenital malformation in the fetus.
Presumed human reproductive toxicant.
Liver-irregularities-Based on human Evidence

A Dose of about 1 gram can cause: Nausea, burning sensation, sores in the mouth, lesions of the Throat., sores in
the digestive tract. Tremors, convulsions, Shock, Death may result from ingestion of two to five grams. Prolonged or repeated exposure may cause; Increased; bone density, calcium deposits in the ligaments, new bone growth, vomiting, diarrhea, abdominal pain. To the best of our knowledge, the chemical's physical and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: AB6825000

12 Ecological Information
12.1 Toxicity
No data available
Components
Calcium chloride
Toxicity to fish
Lepomis macrochirus (Bluegill sunfish) LC50: 10,650 mg/l; 96 h
(As per IUCLID)
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50: 144 mg/l; 48 h
(As per IUCLID)
Toxicity to algae
Algae IC50: 3,130 mg/l; 120 h
(As per IUCLID)

Components:
Ferric chloride
Toxicity to microorganisms
Activated sludge I C50: ca. 170 mg/L (ECHA)
Components
Manganese sulphate
Toxicity to fish
Oncorhynchus mykiss (Rainbow trout) LC50: 14.5 mg/l; 96h.
Pimephales promelas (fathead minnow) LC50: 30.6 mg/l; 96 h.
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50: 8.3 mg/l; 48 h.
Acute Toxicity to Aquatic Plants
Desmodesmus subspicatus (algae) EC50: 61 mg/l; 72 h
(As per OECD Test Guideline 201)

12.2 Persistence and degradability
No data available
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available

12.5 PBT and vPvB assessment
This substance or mixture contains no components considered to be persistent, bioaccumulating nor toxic (PBT) at levels of 0.1% or higher.

12.6 Other adverse effects
No data available

13 Disposal Considerations

13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced company. Contact a licenced professional waste disposal service to dispose off this material.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information

14.1 UN-No
ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.2 UN proper shipping name
ADNR : Not dangerous goods
ADR : Not dangerous goods
IATA_C : Not dangerous goods
IATA_P : Not dangerous goods
IMDG : Not dangerous goods
RID : Not dangerous goods

14.3 Transport hazard class(es)
ADNR : - ADR : - IATA_C : - IATA_P : - IMDG : - RID : -

14.4 Packaging group
ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.5 Environmental hazards
ADNR : No ADR : No IMDG : Marine Pollutant No IATA_C : No IATA_P : No RID : No

14.6 Special precautions for use
No data available

15 Regulatory Information
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

15.1 Safety health and environment regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
No data available
16 Other information

H290 May be corrosive to metals
H300 Fatal if swallowed
H302 Harmful if swallowed
H315 Causes skin irritation
H318 Causes serious eye damage
H319 Causes serious eye irritation
H341 Suspected of causing genetic defects
H360D May damage the unborn child
H373 May cause damage to organs through prolonged or repeated exposure
H411 Toxic to aquatic life with long lasting effects
Acute Tox. oral. 1 Acute toxicity, oral, Category 1
Acute Tox. oral. 4 Acute toxicity, oral, Category 4
Aquatic Chronic 2 Hazardous to the aquatic environment, long term hazard, Category 2
Eye Dam. 1 Serious eye damage or eye irritation, Category 1
Eye Irrit. 2A Serious eye damage or eye irritation, Category 2A
Met. Corr. 1 Corrosive to metals, Category 1
Muta. 2 Germ cell mutagenicity, Category 2
Repr. 1B Reproductive toxicity, Category 1B
Skin Irrit. 2 Skin corrosion or irritation, Category 2
STOT RE 2 Specific target organ toxicity, repeated exposure, Category 2

Further Information

Copyright 2016 HiMedia Laboratories Pvt. Ltd.
The information given in this safety data sheet is believed to be correct yet does not claim to be all inclusive. This document is intended only as a guide for appropriate precautionary handling of the material by properly trained individuals, information here being commensurate with the present state of our knowledge regarding the manner and conditions of use, handling, storage or disposal.
The information provided herein shall not be considered as guarantee of the properties of the product. HiMedia Laboratories, shall not be held liable for any damage resulting from improper handling or contact with the above product. Unless explicitly stated on the product or in any of the documentation accompanying the product, it is intended for research or testing purpose only and is not to be used for any other purpose.