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

1.1 Product Identifiers
Product Number M417
Product Name Vitamin B₁₂ Agar
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]
Sensitisation, Skin, (Category 1), H317

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

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>Signal word</th>
<th>Hazard Statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>Warning</td>
<td>H317 May cause an allergic skin reaction</td>
</tr>
</tbody>
</table>

Precautionary Statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 IF ON SKIN: wash with plenty of soap and water.
P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

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>Sodium thioglycollate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=1.0 - &lt;=10.0%</td>
</tr>
<tr>
<td>CAS No. : 367-51-1</td>
<td>Acute Tox.oral. 3; Skin Sens. 1 H301; H317</td>
<td></td>
</tr>
<tr>
<td>EC No. : 206-696-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferrous sulphate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.01 - &lt;=0.1%</td>
</tr>
<tr>
<td>CAS No. : 7720-78-7</td>
<td>Acute Tox.oral 4; Skin Irrit. 2; Eye Irrit.</td>
<td></td>
</tr>
<tr>
<td>EC No. : 231-753-5</td>
<td>2A H302; H315; H319</td>
<td></td>
</tr>
<tr>
<td>Index-No : 026-003-00-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular Formula : FeSO₄</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manganese sulphate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.01 - &lt;=0.01%</td>
</tr>
<tr>
<td>CAS No. : 10034-96-5</td>
<td>STOT RE 2; Aquatic Chronic 2 H373; H411</td>
<td></td>
</tr>
<tr>
<td>EC No. : 232-089-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index-No : 025-003-00-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guanine hydrochloride</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.001 - &lt;=0.01%</td>
</tr>
<tr>
<td>CAS No. : 635-39-2</td>
<td>Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3</td>
<td></td>
</tr>
<tr>
<td>EC No. : 211-235-5</td>
<td>H315; H319; H335</td>
<td></td>
</tr>
<tr>
<td>Niacin</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.001 - &lt;=0.01%</td>
</tr>
<tr>
<td>CAS No. : 59-67-6</td>
<td>Eye Irrit. 2A H319</td>
<td></td>
</tr>
<tr>
<td>EC No. : 200-441-0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Refer Section 16 for complete statement of H codes & classification.

### 4 First Aid Measures
#### 4.1 Description of first aid measures

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash with plenty of soap and water. Consult a physician.

In case of eye contact
Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.

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

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of immediate medical attention and special treatment needed
No data available.

5 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, Sodium oxides, Sulphur oxides, Oxides of phosphorus, Potassium 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 absorbent material. 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. **Recommended Storage Temperature**: On receipt store between 2-8°C

### 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 of 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><strong>Appearance</strong></td>
<td>Off-white to yellow homogeneous powder having a tendency to form soft lumps, which can be easily broken down to powder form.</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Odour Threshold</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>6.00 - 6.40</td>
</tr>
<tr>
<td><strong>Melting/freezing point</strong></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
No data available
10.3 Possibility of hazardous reactions
None
10.4 Conditions to avoid
Avoid dust formation. Avoid using in areas having high humidity (> 80% RH) Exposure to moisture Direct sources of heat.
10.5 Incompatible materials
Strong oxidizing agents, Strong reducing agents, Strong acids, Strong bases
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
Mixture may cause skin irritation.
Serious eye damage/eye irritation
No data available
Respiratory or skin sensitisation
Mixture may cause skin sensitisation.
Germ cell mutagenicity
No data available
Carcinogenicity

No data available
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or Reproductive toxicity
No data available
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
Additional Information
RTECS: No data available

11.2 Components
Sodium Thioglycollate
Acute oral toxicity
Rat LD50: 50-200 mg/kg (As per OECD Test Guideline 423)
Acute dermal toxicity
Rat LD50: >1000-2000 mg/kg (As per OECD Test Guideline 402)
Skin irritation
Rabbit: Slight irritation (As per OECD Test Guideline 404)
Eye irritation
Rabbit: Slight irritation (As per OECD Test Guideline 405)
Sensitization
Local Lymph Node Assay (LLNA)
Mouse: Positive (As per OECD Test Guideline 429)

Germ cell mutagenicity
Genotoxicity in vivo
In vivo micronucleus test: Mouse (male & female)
Oral Result: Negative method (As per OECD Test Guideline 474)
Genotoxicity in vitro
Ames Test: Salmonella Typhimurium
Result: Negative (As per OECD Test Guideline 471)

Additional information:
RTECS: AI7700000
Ferrous sulphate
Acute Oral Toxicity
Mouse LD50: 1.520 mg/kg

Additional Information
RTECS: NO8510000
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: OP10500000

**Guanine hydrochloride**

*Acute toxicity*
Rat Intraperitoneal LD50: 200 mg/kg; 24h

*Skin irritation*
May cause skin irritation

*Eye irritation*
May cause eye irritation

*Inhalation*
May cause slight irritation

*Sensitisation*
No data available

*Repeated Exposures*
No data available

*Germ cell mutagenicity*
Genotoxicity invitro
No data available
Genotoxicity invivo
No data available

*Mutagenicity (mammal cell test): micronucleus*
No data available

*Carcinogenicity*
No data available

*Reproductive toxicity*
No data available

*Teratogenicity*
No data available

**Additional information**
RTECS MF8400000

**Niacin (Nicotinic acid)**

*Acute oral toxicity*
Rat LD50: >5000 mg/kg; 24h (ECHA)

*Acute dermal toxicity*
Rat LD50: >2000 mg/kg; 24h (ECHA)

*Acute inhalation toxicity*
Rat LD50: >3.8 mg/L; 4h (ECHA)

*Skin irritation*
Rabbit: Does not cause irritation to skin (ECHA)

*Eye irritation*
Rabbit: May cause slight to mild irritation to eyes (ECHA)
**Sensitisation**
Nonsensitizer (ECHA)
Repeated Exposures
No significant effect seen on rats (ECHA)

**Germ cell mutagenicity**
Genotoxicity invitro
Chinese hamster Ovary (CHO)
Result: Negative (ECHA)
Genotoxicity invivo
Mammalian Bone Marrow Chromosome Aberration Test
Result: Negative (ECHA)

**Mutagenicity (mammal cell test): micronucleus**
No data available

**Carcinogenicity**
No data available

**Reproductive toxicity**
No data available

**Teratogenicity**
Rats, 20 d
Result: Negative (ECHA)

**Additional information**
RTECS QT0525000

---

**12 Ecological Information**

**12.1 Toxicity**
No data available

**Components**

**Ferrous sulphate**

*Toxicity to fish*
Brook trout (Salvelinus fontinalis) LC50: 0.41 mg/l; 96h

*Toxicity to daphnia and other aquatic invertebrates*
Water flea (Daphnia magna) EC50: 6.15 mg/l; 48h

**Components**

**Manganese sulphate**

*Toxicity to Fish*
Onchorhynchus 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)

**Components**
Guanine hydrochloride
No ecotoxicological information available

Components
Niacin (Nicotinic acid)
Toxicity to fish
Brown trout (Salmo Trutta Fario) LC50: 520 mg/l; 96 h (ECHA)
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna EC50: 77 mg/L; 48 h (ECHA)
Toxicity to algae
Desmodesmus subspicatus Scenedesmus subspicatus) EC50: 89.93 mg/L 72 h (ECHA)
Toxicity to microorganisms
Pseudomonas putida EC50: 120 mg/L; 16 h (ECHA) Pseudomonas putida EC10: 88 mg/L; 16 h (ECHA)

Components
Sodium thioglycollate
Toxicity to fish
Oncorhynchus mykiss (rainbow trout) LC50: > 100 mg/l; 96 h (As per OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50: 38 mg/l; 48 h (As per OECD Test Guideline 202)
Toxicity to algae
Desmodesmus subspicatus (green algae) EC50: > 100 mg/l; 72h (As per OECD Test Guideline 201)
Toxicity to bacteria
EC50 Activated sludge: 820 mg/l; 0.5 h (As per OECD Test Guideline 209)

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 preparation contains no substance considered to be persistent, bioaccumulating or 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 disposal 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 datasheet 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
Text of H codes and classification mentioned in section 3
H301  Toxic if swallowed
H302  Harmful if swallowed
H315  Causes skin irritation
H317  May cause an allergic skin reaction
H319  Causes serious eye irritation
H335  May cause respiratory irritation
H373  May cause damage to organs through prolonged or repeated
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>Acute Tox.oral 4</td>
<td>Acute toxicity, oral, Category 4</td>
</tr>
<tr>
<td>Acute Tox.oral 3</td>
<td>Acute toxicity, oral, Category 3</td>
</tr>
<tr>
<td>Aquatic Chronic 2</td>
<td>Hazardous to the aquatic environment, long term hazard, Category 2</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage or eye irritation, Category 2A</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion or irritation, Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Sensitisation, Skin, Category 1</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>Specific target organ toxicity, repeated exposure, Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity, single exposure, Respiratory tract irritation, Category 3</td>
</tr>
</tbody>
</table>

**Further Information**

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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.