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

1.1 Product Identifiers
- Product Number: M036
- Product Name: Vitamin B12 Assay Medium
- 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
  The product does not need to be labelled in accordance with EC directives or respective national laws.

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>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. 2A</td>
<td></td>
</tr>
<tr>
<td>EC No.: 231-753-5</td>
<td>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>
</tbody>
</table>
### Component Classification Concentration

<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 STOT RE 2; Aquatic Chronic 2  H373; H411</td>
<td>&gt;=0.01 - &lt;=0.1%</td>
</tr>
<tr>
<td>CAS No.: 10034-96-5</td>
<td></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>
</tbody>
</table>

| Guanine hydrochloride      | As Per EC Regulation 1272/2008 Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3 H315; H319; H335 | >=0.01 - <=0.1%     |
| CAS No.: 635-39-2          |                                                                               |                     |
| EC No.: 211-235-5          |                                                                               |                     |

| p-Amino benzoic acid (PABA)| As Per EC Regulation 1272/2008 Skin Irrit. 2; Skin Sens. 1; Eye Irrit. 2A H315; H317; H319 | >=0.001 - <=0.01%   |
| CAS No.: 150-13-0          |                                                                               |                     |
| EC No.: 205-753-0          |                                                                               |                     |

| Niacin                     | As Per EC Regulation 1272/2008 Eye Irrit. 2A H319                              | >=0.001 - <=0.01%   |
| CAS No.: 59-67-6           |                                                                               |                     |
| EC No.: 200-441-0          |                                                                               |                     |

Refer Section 16 for complete statement of H codes and its classification

### 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 off with soap and plenty of 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
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, Nitrogen oxides (NOx), Sulphur oxides, Potassium oxides, Hydrogen chloride gas, Sodium oxides, Magnesium oxide, Manganese/manganese oxides, Oxides of phosphorus, Iron oxides, Calcium oxide
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.
**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 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>Cream to yellow homogeneous soft lumps which can be easily broken down to a powder form</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>5.90 - 6.30</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>
</tbody>
</table>
Vapour density: No data available
Thermal decomposition: No data available

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
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. Other Decomposition products not known.

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

**Additional Information**
RTECS : No data available

11.2 Components

**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)

**PABA (Para aminobenzoic acid)(4-aminobenzoic acid)**
*Acute oral toxicity*
Rat LD50 : 6gm/kg(RTECS)
Mouse LD50 : 2850mg/kg
Rabbit LD50 : 1830 mg/kg
Dog LD50 : 1000 mg/kg

*Acute inhalation toxicity*
No data available
*Acute dermal toxicity*
No data available
*Skin irritation*
No data available
*Eye irritation*
No data available
*Sensitisation*
STOT : May cause respiratory irritation
*Genetic toxicity(in-vitro)*
Ames Test
Negative (National Toxicological Program)
Germ cell mutagenicity
Mouse
Causes DNA damage
**Carcinogenicity**
IARC Group 3 (it is not established as carcinogen to humans)
**Toxicity to Reproduction**
No data available
**Teratogenicity**
No data available

**Additional information:**
RTECS: No data available

12 Ecological Information

12.1 Toxicity
No data available

**Components:**
*Ferrous Sulphate, heptahydrate*
**Toxicity to fish**
Poecilia reticulata(guppy) LC50: 925 mg/l; 96 h (As Per IUCLID)
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50: 152 mg/l; 48 h (anhydrous substance) (As Per IUCLID)
Toxicity to bacteria
Pseudomonas fluorescens EC50: 100 mg/l; 24 h (anhydrous substance) (As Per IUCLID)

**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**
*PABA (Para aminobenzoic acid) (4-aminobenzoic acid)*
**Toxicity to daphnia and other aquatic invertebrates**
Daphnia magna (Water flea) EC50 : 546 mg/l; 24 h.
**Toxicity to Bacteria**
*Phytobacterium phosphoreum* EC50: 27.4 mg/l; 30 mins.

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
16 Other information

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
<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>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.