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

1.1 Product Identifiers
Product Number M1936
Product Name Cystine 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. 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>
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<tbody>
<tr>
<td>Ammonium chloride</td>
<td>As Per EC Regulation 1272/2008 Acute Tox.oral 4; Eye Irrit. 2A H302; H319</td>
<td>&gt;=1.0 - &lt;=10.0%</td>
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<tr>
<td>CAS No. :</td>
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<tr>
<td>Ferrous sulphate</td>
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<td>CAS No.: 7720-78-7</td>
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<tr>
<td>EC No.: 231-753-5</td>
<td>Acute Tox.oral 4; Skin Irrit. 2; Eye Irrit. 2A</td>
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<tr>
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<td>H302; H315; H319</td>
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<td>Molecular Formula: FeSO₄</td>
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<td>STOT RE 2; Aquatic Chronic 2 H373; H411</td>
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<td>Index-No: 025-003-00-4</td>
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<td>Guanine hydrochloride</td>
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<tr>
<td>EC No.: 211-235-5</td>
<td>Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3 H315; H319; H335</td>
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</table>

<table>
<thead>
<tr>
<th>Component</th>
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</thead>
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<tr>
<td>Nicotinic acid (Niacin)</td>
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<td></td>
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<tr>
<td>CAS No.: 59-67-6</td>
<td>As Per EC Regulation 1272/2008</td>
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<tr>
<td>EC No.: 200-441-0</td>
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</thead>
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<tr>
<td>p-Amino benzoic acid (PABA)</td>
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<td>CAS No.: 150-13-0</td>
<td>As Per EC Regulation 1272/2008</td>
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<td></td>
<td>H315; H317; H319</td>
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</tr>
</tbody>
</table>

Refer Section 16 for complete statement of H codes and its 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 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
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, Hydrogen chloride gas, Sodium 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 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>
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<tbody>
<tr>
<td>Appearance</td>
<td>Off-white to yellow homogenous free flowing powder</td>
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<tr>
<td>Odour</td>
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<td>Odour Threshold</td>
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<td>pH</td>
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<td>Melting/freezing point</td>
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<td>Initial boiling point and boiling range</td>
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<td>Flash point</td>
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<td>Flammability (Solid, gas)</td>
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<td>Vapour pressure</td>
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<td>Relative density</td>
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<tr>
<td>Property</td>
<td>Value</td>
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<td>----------------------------------------</td>
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<td>Water Solubility</td>
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<td>Autoignition Temperature</td>
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<td>Viscosity</td>
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<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
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<tr>
<td>Vapour density</td>
<td>No data available</td>
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<tr>
<td>Thermal decomposition</td>
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</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
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

**Additional Information**
RTECS: No data available

11.2 Components

**Ammonium Chloride**

*Acute Oral Toxicity*
Rat LD50: 1,650 mg/kg

*Irritation and corrosion*
Skin - rabbit - No skin irritation
Eyes - rabbit - Eye irritation
Sensitisation - Non sensitizer

*Chronic exposure*
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.

**Signs and Symptoms of Exposure**
No data available

**Potential Health Effects**

**Inhalation**
May be harmful if inhaled. May cause respiratory tract irritation.

**Skin**
May be harmful if absorbed through skin. May cause skin irritation.

**Eyes**
Causes eye irritation.

**Ingestion**
Harmful if swallowed

**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: OP1050000

---

**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 in vitro
Chinese hamster Ovary (CHO)
Result: Negative (ECHA)
Genotoxicity in vivo
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

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
Ammonium chloride

Toxicity to fish
Oncorhynchus mykiss (rainbow trout) LC50: 42.91 mg/l; 96 h (AS per ECHA)
Cyprinus carpio (Carp) LC50: 209.00 mg/l; 96 h
Lepomis macrochirus (Bluegill sunfish) EC10: 4.28 mg/l; 30 d (AS per ECHA)

Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50: > 100 mg/l; 48 h (AS per ECHA)
Daphnia magna (Water flea) LC50: 161 mg/l - 48 h

Toxicity to algae
Chlorella vulgaris (Fresh water algae) EC50: 1,300 mg/l; 5 d (AS per ECHA)

Toxicity to bacteria
EC50 activated sludge: 1,310 mg/l; 0.5 h (OECD Test Guideline 209)

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) EC 50: 6.15 mg/l; 48 h

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
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
Microtox test
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 treatment 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
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 exposure
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</td>
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<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>
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<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion or irritation, Category 2</td>
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<tr>
<td>Skin Sens. 1</td>
<td>Sensitisation, Skin, Category 1</td>
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<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.