

**1 Identification of the substances/ mixture and of the company/ undertaking****1.1 Product Identifiers**

Product Number PT129  
Product Name Murashige & Skoog Medium  
(Modification No. 10)  
w/ ½ NH<sub>4</sub>NO<sub>3</sub> & ½ KNO<sub>3</sub>;  
w/o Vitamins, Sucrose & Agar

REACH Registration Number Reach registration number is not available for this mixture. According to REACH regulation EC 1907/2006 this product is exempted from registration. The annual tonnage does not require a REACH registration or it is envisaged for a later registration deadline.

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

**1.2.1** Relevant identified uses Laboratory chemicals, Manufacture of substances

**1.2.2** Uses advised against No data available

**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.  
Mail Id [ptc@himedialabs.com](mailto:ptc@himedialabs.com) Website : [www.himedialabs.com](http://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]**

Oxidising solids, (Category 3), H272

Skin corrosion or irritation, (Category 2), H315

Serious eye damage or eye irritation, (Category 2A), H319

Specific target organ toxicity, single exposure, Respiratory tract irritation, (Category 3), H335

**2.2 Label elements**

**Labeling according to Regulation (EC) No.1272/2008**



Pictogram

Signal word Warning

#### Hazard Statement(s)

|      |                                  |
|------|----------------------------------|
| H272 | May intensify fire; oxidizer     |
| H315 | Causes skin irritation           |
| H319 | Causes serious eye irritation    |
| H335 | May cause respiratory irritation |

#### Precautionary Statement(s)

|                |                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| P210           | Keep away from heat/sparks/open flames/hot surfaces. — No smoking.                                                               |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.                                                       |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P370 + P378    | In case of fire: Use suitable extinguishing media for extinction.                                                                |

### 2.3 Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 3 Composition/Information On Ingredients

### 3.2 Mixture

| Component                                 | Classification                                           | Concentration |
|-------------------------------------------|----------------------------------------------------------|---------------|
| Potassium nitrate                         |                                                          |               |
| CAS No. : 7757-79-1<br>EC No. : 231-818-8 | <b>As Per EC Regulation 1272/2008</b><br>Ox. Sol. 3 H272 | >=30 - <=40%  |

| Component                                 | Classification                                                                                                         | Concentration |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------|
| Ammonium nitrate                          |                                                                                                                        |               |
| CAS No. : 6484-52-2<br>EC No. : 229-347-8 | <b>As Per EC Regulation 1272/2008</b><br>Ox. Sol. 3; Skin Irrit. 2; Eye Irrit. 2A;<br>STOT SE 3 H272; H315; H319; H335 | >=30 - <=40%  |

| Component                                  | Classification                                              | Concentration |
|--------------------------------------------|-------------------------------------------------------------|---------------|
| Calcium chloride, anhydrous                |                                                             |               |
| CAS No. : 10043-52-4<br>EC No. : 233-140-8 | <b>As Per EC Regulation 1272/2008</b><br>Eye Irrit. 2A H319 | >=10 - <=15%  |

| Component          | Classification | Concentration |
|--------------------|----------------|---------------|
| Manganese sulphate |                |               |

|            |              |                                       |                |
|------------|--------------|---------------------------------------|----------------|
| CAS No. :  | 10034-96-5   | <b>As Per EC Regulation 1272/2008</b> | >=0.6 - <=0.8% |
| EC No. :   | 232-089-9    | STOT RE 2; Aquatic Chronic 2 H373;    |                |
| Index-No : | 025-003-00-4 | H411                                  |                |

| Component  |              | Classification                                          | Concentration  |
|------------|--------------|---------------------------------------------------------|----------------|
| Boric acid |              |                                                         |                |
| CAS No. :  | 10043-35-3   | As Per EC Regulation 1272/2008<br>Repr.Tox. 1A, 1B H360 | >=0.2 - <=0.3% |
| EC No. :   | 233-139-2    |                                                         |                |
| Index-No : | 005-007-00-2 |                                                         |                |

| Component        |           | Classification                                                                                    | Concentration    |
|------------------|-----------|---------------------------------------------------------------------------------------------------|------------------|
| Potassium iodide |           |                                                                                                   |                  |
| CAS No. :        | 7681-11-0 | As Per EC Regulation 1272/2008<br>Acute Tox.oral 4; Skin Irrit. 2; Eye Irrit. 2A H302; H315; H319 | >=0.03 - <=0.05% |
| EC No. :         | 231-659-4 |                                                                                                   |                  |

| Component                   |              | Classification                                                                                        | Concentration  |
|-----------------------------|--------------|-------------------------------------------------------------------------------------------------------|----------------|
| Zinc sulphate, heptahydrate |              |                                                                                                       |                |
| CAS No. :                   | 7446-20-0    | As Per EC Regulation 1272/2008<br>Acute Tox.oral 4; Eye Dam. 1; Aquatic<br>Chronic 1 H302; H318; H410 | >=0.3 - <=0.5% |
| EC No. :                    | 231-793-3    |                                                                                                       |                |
| Index-No :                  | 030-006-00-9 |                                                                                                       |                |

For the full text of the H-Statements and classification mentioned in this Section, see Section 16

## 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**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

#### **4.3 Indication of immediate medical attention and special treatment needed**

Treat symptomatically.

---

### **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**

Magnesium oxides, Sulphur oxides, Sodium oxides, Iron oxides, Calcium Oxide, Cobalt oxides, Copper oxides, Manganese oxides,, Molybdenum oxides, Oxides of Phosphorus, Potassium oxides, Zinc oxides

#### **5.3 Precautions for fire-fighters**

Cool closed containers exposed to fire with water spray.

#### **5.4 Further information**

Wear self-contained breathing apparatus for firefighting if necessary.

---

### **6 Accidental Release Measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personnel protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

#### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into environment must be avoided.

#### **6.3 Methods and materials for containment and cleaning up**

Keep in suitable, closed containers for disposal. Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). 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 formation of dust and aerosols. Wear protective gloves and eye/face protection. Use only in well ventilated areas. Keep away from heat, sparks and open flame.

#### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool/well-ventilated place. Storage class (TRGS 510): Oxidizing Solids

***Recommended Storage Temperature*** : 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**

### **8.2 Exposure controls**

#### ***Appropriate engineering controls***

Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks, immediately after handling the products and at the end of workday.

#### ***Personal protective equipment***

##### ***Eye/face protection***

Safety glasses with side-shields conforming to EN 166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Have eye-washing facilities readily available where eye contact can occur.

##### ***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 89/686/EEC and the standard EN 374 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 particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### ***Environment exposure controls***

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

---

## **9 Physical and chemical properties**

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

|                                              |                                       |
|----------------------------------------------|---------------------------------------|
| Appearance                                   | White to off-white, homogenous powder |
| Odour                                        | No data available                     |
| Odour Threshold                              | No data available                     |
| pH                                           | 3.6 - 4.6                             |
| Melting/freezing point                       | No data available                     |
| Initial boiling point and boiling range      | No data available                     |
| Flash point                                  | No data available                     |
| Upper/lower flammability or explosive limits | No data available                     |
| Evaporation rate                             | No data available                     |
| Flammability (Solid, gas)                    | No data available                     |
| Vapour pressure                              | No data available                     |
| Relative density                             | No data available                     |
| Water Solubility                             | Soluble in water                      |
| Autoignition Temperature                     | No data available                     |
| Decomposition Temperature                    | No data available                     |
| Viscosity                                    | No data available                     |

|                       |                   |
|-----------------------|-------------------|
| Explosive properties  | No data available |
| Oxidizing properties  | No data available |
| 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

Stable under recommended storage conditions.

### 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

Hazardous decomposition products formed under fire conditions - Nitrogen oxides(NOx), Sulphur oxides, Oxides of phosphorus,. Potassium oxides, Magnesium oxide, Cobalt/cobalt oxides, Calcium oxide, Copper oxides

## 11 Toxicological Information

### 11.1 Information on toxicological effects

#### **Acute toxicity**

No data available

Remarks : No data available

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 - repeated exposure**

No data available

#### **Aspiration hazard**

No data available

**Additional Information**

RTECS : NotApplicable

---

**12 Ecological Information**

**12.1 Toxicity**

No data available

**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) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

---

**13 Disposal Considerations**

**13.1 Waste treatments methods**

**Product**

Dispose of as unused product.

**13.2 Contaminated packaging**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licenced professional waste disposal service to dispose off this material.

---

**14 Transport Information**

**14.1 UN-No**

ADNR : 1477 ADR : 1477 IATA\_C : 1477 IATA\_P : 1477 IMDG : 1477 RID : 1477

**14.2 UN proper shipping name**

ADNR : Nitrates, inorganic, n.o.s.  
ADR : Nitrates, inorganic, n.o.s.  
IATA\_C : Nitrates, inorganic, n.o.s.  
IATA\_P : Nitrates, inorganic, n.o.s.  
IMDG : Nitrates, inorganic, n.o.s.  
RID : Nitrates, inorganic, n.o.s.

**14.3 Transport hazard class(es)**

ADNR : 5.1 ADR : 5.1 IATA\_C : 5.1 IATA\_P : 5.1 IMDG : 5.1 RID : 5.1

**14.4 Packaging group**

ADNR : II      ADR : II      IATA\_C : II      IATA\_P : II      IMDG : II      RID : II

**14.5 Environmental hazards**

ADR : No IMDG : Marine Pollutant : No IATA\_C : 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**

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out.

**16 Other information**

|                   |                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------|
| H272              | May intensify fire; oxidizer                                                              |
| H302              | Harmful if swallowed                                                                      |
| H315              | Causes skin irritation                                                                    |
| H318              | Causes serious eye damage                                                                 |
| H319              | Causes serious eye irritation                                                             |
| H335              | May cause respiratory irritation                                                          |
| H360              | May damage fertility or the unborn child                                                  |
| H373              | May cause damage to organs through prolonged or repeated exposure                         |
| H410              | Very toxic to aquatic life with long lasting effects                                      |
| H411              | Toxic to aquatic life with long lasting effects                                           |
| Acute Tox.oral 4  | Acute toxicity, oral, Category 4                                                          |
| Aquatic Chronic 1 | Hazardous to the aquatic environment, long term hazard, Category 1                        |
| 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                                         |
| Ox. Sol. 3        | Oxidising solids, Category 3                                                              |
| Repr.Tox. 1A, 1B  | Reproductive toxicity, Category 1A, 1B                                                    |
| Skin Irrit. 2     | Skin corrosion or irritation, Category 2                                                  |
| STOT RE 2         | Specific target organ toxicity, repeated exposure, Category 2                             |
| STOT SE 3         | Specific target organ toxicity, single exposure, Respiratory tract irritation, Category 3 |

**Further Information**

Copyright 2010 HiMedia Laboratories Pvt. Ltd. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. HiMedia Laboratories, shall not be held liable for any damage resulting from handling or from contact with

the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

---