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

1.1 Product Identifiers

Product Number  ML172
Product Name  0.1M Citrate Buffer, pH 4.8
REACH Registration Number  Reach registration number is not available for this mixture. 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

1.3 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
Tel. No.  +91-22-2500 0970, +91-22-2500 1607
Mail Id  mb@himedialabs.com
Phone No.  +91-22-25002468
Fax No.  +91-22-25002468
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]
Carcinogenicity, (Category 2), H351
Specific target organ toxicity - repeated exposure (Category 2), H373

2.2 Label elements

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

Pictogram
Signal word  Warning
Hazard Statement(s)
H351 Suspected of causing cancer
H373 May cause damage to organs through prolonged or repeated exposure
Precautionary Statement(s)
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid anhydrous For Molecular Biology</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=1 - &lt;=5%</td>
</tr>
<tr>
<td>CAS No. : 77-92-9</td>
<td>Eye Irrit. 2A H319</td>
<td></td>
</tr>
<tr>
<td>EC No. : 201-069-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular Formula : C₆H₈O₇</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular Weight : 192.12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
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
Carbon oxides, Hydrogen chloride gas

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

Use personnel protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

6.2 Environmental precautions

No special environmental precautions required.

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. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): Non Combustible Liquids

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 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 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 let product enter 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>Liquid</td>
</tr>
<tr>
<td>Odour</td>
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</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4.7 - 4.9</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>Evaporation rate</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>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition 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>

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

Strong bases, Bases, Oxidizing agents, Reducing agents, Strong oxidizing agents, Strong acids, Magnesium, Aluminum, Potassium, Sodium/sodium oxides

#### 10.6 Hazardous decomposition products

No data available
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

**Additional Information**
RTECS : Not Applicable

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
No data available

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.

#### 13.2 Contaminated packaging
Dispose of as unused product.

<table>
<thead>
<tr>
<th>14</th>
<th>Transport Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1</td>
<td>UN-No</td>
</tr>
<tr>
<td>ADNR : ADR : IATA_C : IATA_P : IMDG : RID :</td>
<td></td>
</tr>
</tbody>
</table>

| 14.2 | UN proper shipping name |
| ADNR : ADR : IATA_C : IATA_P : IMDG : RID : |

| 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 : ADR : IMDG : Marine pollutant : IATA_C : IATA_P : RID : |

| 14.6 | Special precautions for use |
| No data available |

<table>
<thead>
<tr>
<th>15</th>
<th>Regulatory Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.1</td>
<td>Safety health and environment regulations/legislation specific for the substance or mixture</td>
</tr>
<tr>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

| 15.2 | Chemical Safety Assessment |
| No data available |

<table>
<thead>
<tr>
<th>16</th>
<th>Other information</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319 Causes serious eye irritation</td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2A Serious eye damage or eye irritation, Category 2A</td>
<td></td>
</tr>
</tbody>
</table>

### Further Information
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