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

1.1  Product Identifiers
Product Number  R010
Product Name  Nessler's Reagent
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 For InVitro Diagnostic Use

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]
Corrosive to metals, (Category 1), H290
Acute toxicity, Dermal, (Category 1), H310
Acute toxicity, Dermal, (Category 2), H310
Skin corrosion or irritation, (Category 1A), H314
Acute toxicity, Inhaled, (Category 3), H331
Specific target organ toxicity, repeated exposure, (Category 2), H373
Hazardous to the aquatic environment, long term hazard, (Category 1), H410

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

Pictogram
Signal word  Danger
Hazard Statement(s)
H290  May be corrosive to metals
H300  Fatal if swallowed
H310  Fatal in contact with skin
H314 Causes severe skin burns and eye damage
H331 Toxic if inhaled
H373 May cause damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects

Precautionary Statement(s)
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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>Mercuric chloride</td>
<td>As Per EC Regulation 1272/2008 H300; H314; H341; H361f; H372; H410; H411</td>
<td>&gt;=5 - &lt;=10%</td>
</tr>
<tr>
<td>CAS No. : 7487-94-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No. : 231-299-8</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium iodide</td>
<td>As Per EC Regulation 1272/2008 Acute Tox. oral 4; Skin Irrit. 2; Eye Irrit. 2A</td>
<td>&gt;=5 - &lt;=10%</td>
</tr>
<tr>
<td>CAS No. : 7681-11-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No. : 231-659-4</td>
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</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>As Per EC Regulation 1272/2008 Met. Corr. 1; Skin Corr. 1A</td>
<td>&gt;=10 - &lt;=20%</td>
</tr>
<tr>
<td>CAS No. : 1310-73-2</td>
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<td></td>
</tr>
<tr>
<td>EC No. : 215-185-5</td>
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</tr>
<tr>
<td>Index-No : 011-002-00-6</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
   Consult a physician.
   In case of skin contact
   Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.
   Take victim immediately to hospital. Consult a physician.
   In case of eye contact
   Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.
   If swallowed
   Do NOT induce vomiting. 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
   Nature of decomposition products unknown
5.3 Precautions for fire-fighters
   Wear full protective clothing and self contained breathing apparatus for fire fighting if necessary.
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
   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 dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. 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. **Recommended Storage Temperature**: On receipt store between 10-30°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**
Handle in accordance with good industrial hygiene and safety practice.

**Eye/face protection**
Faceshield and safety goggles.

**Skin protection**
Handle with gloves.

**Body protection**
Complete suit protecting against chemicals.

**Respiratory protection**
Air-purifying respirators.

**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>Pale yellow coloured solution</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>No data available</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>
</tbody>
</table>
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
Incompatible material

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
Remarks: No data available
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

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard

No data available

**Potential Health Effects**

**Inhalation**
REFER SECTION II

**Skin**
REFER SECTION II

**Eyes**
REFER SECTION II

**Ingestion**
REFER SECTION II

### 11.2 Components

**Mercuric chloride**

*Acute oral toxicity*
No data available

*Acute inhalation toxicity*
No data available

*Acute dermal toxicity*
No data available

**Skin irritation**
Rabbit Result: Causes burns

**Eye irritation**
Rabbit Result: Causes serious eye damage

**Sensitisation**
No data available

**Ames test**
Salmonella Typhimurium
Result: Positive

**Mutagenicity (mammal cell test)**
Result: Positive

**Carcinogenicity**
No data available

**Toxicity to Reproduction**
No data available

**Teratogenicity**
No data available

**Additional information:**
RTECS: OV9100000

**Sodium hydroxide**

*Acute toxicity*

**Ingestion**
Rabbit Oral; LD50: 500 mg/kg (As per OECD Test Guideline 401)

Other routes
Mouse Intraperitoneal; LD50: 40 mg/kg (ECHA)

**Eye Damage/Irritation**
No data available

**Skin Corrosion/Irritation**
Considered to be an irritant (ECHA)

**Sensitization**
Not considered to be a sensitizer (ECHA)

**Germ cell mutagenicity**
Genotoxicity in vitro
Mutagenicity (mammal cell test): micronucleus.
Result: negative

**Ames test**
Result: negative (IUCLID)

**Repeated Dose Toxicity**
No data available

**Chronic Toxicity and Carcinogenicity**
No data available

**Reproductive Toxicity**
No data available

**Mutagenicity**
There is insufficient information available to conclude that sodium hydroxide is mutagenic (ECHA)

**Additional Information**
RTECS: WB4900000

**Potassium iodide**

**Acute oral toxicity**
Rat LD50: 3118mg/kg; (As Per OECD Test Guideline 401)

**Acute intravenous toxicity**
Rat LD50: 285mg/kg

**Skin irritation**
No data available

**Eye irritation**
No data available

**Sensitisation**
No data available

**Genetic toxicity (in-vitro)**
Mammalian cell micronucleus test
Result: Negative

**Genetic toxicity (in-vivo)**
Rat Chromosome aberration assay
Result: Negative

**Carcinogenicity**
Rat
Not carcinogenic (As per OECD guideline 453)

**Teratogenicity**
Rat
No developmental toxicity/teratogenicity (ECHA)
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
PBT and vPvB assessment not available as chemical safety assessment is not required.
12.6 Other adverse effects
Discharge into the environment must be avoided.

13 Disposal Considerations
13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustive solvent and burn in chemical incinerator equipped with an afterburner and scrubber.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information
14.1 UN-No
ADNR : 2922 ADR : 2922 IATA_C : 2922 IATA_P : 2922 IMDG : 2922 RID : 2922

14.2 UN proper shipping name
ADNR : Corrosive liquids, toxic, n.o.s.
ADR : Corrosive liquids, toxic, n.o.s.
IATA_C : Corrosive liquids, toxic, n.o.s.
IATA_P : Corrosive liquids, toxic, n.o.s.
IMDG : Corrosive liquids, toxic, n.o.s.
RID : Corrosive liquids, toxic, n.o.s.

14.3 Transport hazard class(es)
ADNR : 8 ADR : 8 IATA_C : 8 IATA_P : 8 IMDG : 8 RID : 8

14.4 Packaging group
### 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

- **H290**: May be corrosive to metals
- **H300**: Fatal if swallowed
- **H302**: Harmful if swallowed
- **H314**: Causes severe skin burns and eye damage
- **H315**: Causes skin irritation
- **H319**: Causes serious eye irritation
- **H341**: Suspected of causing genetic defects
- **H361f**: Suspected of damaging fertility
- **H372**: Causes 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
- **Eye Irrit. 2A**: Serious eye damage or eye irritation, Category 2A
- **Met. Corr. 1**: Corrosive to metals, Category 1
- **Skin Corr. 1A**: Skin corrosion or irritation, Category 1A
- **Skin Irrit. 2**: Skin corrosion or irritation, Category 2

### 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.