1 Identification

- **Product identifier**
  - **Trade name:** RPMI 1640 Medium, W/O glutamine, W/O phenol red
  - **Article number:** 01-103-1

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Biological Industries Israel Beit Haemek Ltd.
    BEIT HAEMEK 25115
    ISRAEL
    michalb@bioind.com
  - **Information department:** Product safety department.
  - **Emergency telephone number:** During normal opening times: +972/4/9962467

2 Hazard(s) identification

- **Classification of the substance or mixture**
  The product is not classified according to the Globally Harmonized System (GHS).

- **Label elements**
  - **GHS label elements** Void
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void
  - **Classification system:**
    - **NFPA ratings (scale 0 - 4)**
      - Health = 0
      - Fire = 0
      - Reactivity = 0
    - **HMIS-ratings (scale 0 - 4)**
      - Health = 0
      - Fire = 0
      - Reactivity = 0

- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Void

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
Safety Data Sheet
acc. to OSHA HCS

Printing date 02/19/2018
Reviewed on 02/19/2018

Trade name: RPMI 1640 Medium, W/O glutamine, W/O phenol red

(Contd. of page 1)

46.0.19

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.

Information for doctor:
- Most important symptoms and effects, both acute and delayed: No further relevant information available.
- Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up: No special measures required.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

  PAC-1:
  - 144-55-8 sodium hydrogencarbonate: 13 mg/m³
  - 7647-01-0 hydrogen chloride: 1.8 ppm
  - 13477-34-4 Calcium nitrate tetrahydrate: 12 mg/m³
  - 10034-99-8 MAGNESIUM SULFATE HEPTAHYDRATE: 33 mg/m³
  - 150-13-0 4-aminobenzoic acid: 15 mg/m³
  - 1310-73-2 sodium hydroxide: 0.5 mg/m³
  - 98-92-0 nicotinamide: 5.6 mg/m³

  PAC-2:
  - 144-55-8 sodium hydrogencarbonate: 140 mg/m³
  - 7647-01-0 hydrogen chloride: 22 ppm
  - 13477-34-4 Calcium nitrate tetrahydrate: 130 mg/m³
  - 10034-99-8 MAGNESIUM SULFATE HEPTAHYDRATE: 370 mg/m³
  - 150-13-0 4-aminobenzoic acid: 69 mg/m³
  - 1310-73-2 sodium hydroxide: 5 mg/m³
  - 98-92-0 nicotinamide: 62 mg/m³

  PAC-3:
  - 144-55-8 sodium hydrogencarbonate: 840 mg/m³

(Contd. on page 3)
7 Handling and storage

- **Handling:**
  - **Precautions for safe handling:** No special measures required.
  - **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** 2-8 °C
  - **Information about storage in one common storage facility:** Not required
  - **Further information about storage conditions:** Not required
  - **Specific end use(s)**: No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
  - **General protective and hygienic measures:**
    The usual precautionary measures for handling chemicals should be followed.
  - **Breathing equipment:** Not required.
  - **Protection of hands:**
    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - **Material of gloves:**
    The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - **Penetration time of glove material**
    The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
### 9 Physical and chemical properties

**General Information**
- **Appearance:** Fluid
- **Color:** Colorless
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.

**Change in condition**
- **Melting point/Melting range:** 0 °C (32 °F)
- **Boiling point/Boiling range:** 100 °C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.

**Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

**Density:** Not determined.
- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.

**Solubility in / Miscibility with Water:** Fully miscible.

**Partition coefficient (n-octanol/water):** Not determined.

**Viscosity:**
- **Dynamic at 20 °C (68 °F):** 0.952 mPas
- **Kinematic:** Not determined.

**Solvent content:**
- **Water:** >98.0 %
- **VOC content:** 0.00 %
- **Solids content:** <2.0 %
- **Other information** No further relevant information available.
10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
  - Possibility of hazardous reactions: No dangerous reactions known.
  - Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - Primary irritant effect:
      - on the skin: No irritant effect.
      - on the eye: No irritating effect.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    The product is not subject to classification according to internally approved calculation methods for preparations:
    When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    7647-01-0 hydrogen chloride 3
    150-13-0 4-aminobenzoic acid 3
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
    - Bioaccumulative potential: No further relevant information available.
    - Mobility in soil: No further relevant information available.
  - Additional ecological information:
    - General notes: Generally not hazardous for water
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

(Contd. on page 6)
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**: Smaller quantities can be disposed of with household waste.

- **Uncleaned packagings**:
  - **Recommendation**: Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - DOT, ADN, IMDG, IATA: not regulated

- **UN proper shipping name**
  - DOT, ADN, IMDG, IATA: not regulated

- **Transport hazard class(es)**
  - DOT, ADN, IMDG, IATA: not regulated

- **Packing group**
  - DOT, IMDG, IATA: not regulated

- **Environmental hazards**: Not applicable.

- **Special precautions for user**: Not applicable.

- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**: Not applicable.

- **UN "Model Regulation"**: not regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

  - **Section 355 (extremely hazardous substances)**:
    - 7647-01-0 hydrogen chloride

  - **Section 313 (Specific toxic chemical listings)**:
    - 7647-01-0 hydrogen chloride
    - 13477-34-4 Calcium nitrate tetrahydrate

  - **TSCA (Toxic Substances Control Act)**:
    - 7647-14-5 sodium chloride
    - 50-99-7 glucose
    - 144-55-8 sodium hydrogen carbonate
    - 7558-79-4 disodium hydrogen orthophosphate
    - 7447-40-7 potassium chloride

(Contd. on page 7)
Trade name: RPMI 1640 Medium, W/O glutamine, W/O phenol red

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrogen chloride</td>
<td>7647-01-0</td>
</tr>
<tr>
<td>L-isoleucine</td>
<td>73-32-5</td>
</tr>
<tr>
<td>L-leucine</td>
<td>61-90-5</td>
</tr>
<tr>
<td>cystine</td>
<td>56-89-3</td>
</tr>
<tr>
<td>lysine hydrochloride</td>
<td>657-27-2</td>
</tr>
<tr>
<td>myo-inositol</td>
<td>87-89-8</td>
</tr>
<tr>
<td>L-serine</td>
<td>56-45-1</td>
</tr>
<tr>
<td>L-proline</td>
<td>147-85-3</td>
</tr>
<tr>
<td>L-threonine</td>
<td>72-19-5</td>
</tr>
<tr>
<td>valine</td>
<td>72-18-4</td>
</tr>
<tr>
<td>tyrosine</td>
<td>60-18-4</td>
</tr>
<tr>
<td>glutamic acid</td>
<td>56-86-0</td>
</tr>
<tr>
<td>L-4-hydroxyproline</td>
<td>51-35-4</td>
</tr>
<tr>
<td>aspartic acid</td>
<td>56-84-8</td>
</tr>
<tr>
<td>3-phenyl-L-alanine</td>
<td>63-91-2</td>
</tr>
<tr>
<td>L-methionine</td>
<td>63-68-3</td>
</tr>
<tr>
<td>L-tryptophan</td>
<td>73-22-3</td>
</tr>
<tr>
<td>choline chloride</td>
<td>67-48-1</td>
</tr>
<tr>
<td>pyridoxine hydrochloride</td>
<td>58-56-0</td>
</tr>
<tr>
<td>THIAMINE HYDROCHLORIDE</td>
<td>67-03-8</td>
</tr>
<tr>
<td>4-aminobenzoic acid</td>
<td>150-13-0</td>
</tr>
<tr>
<td>sodium hydroxide</td>
<td>1310-73-2</td>
</tr>
<tr>
<td>folic acid</td>
<td>59-30-3</td>
</tr>
<tr>
<td>glutathione</td>
<td>70-18-8</td>
</tr>
<tr>
<td>nicotinamide</td>
<td>98-92-0</td>
</tr>
</tbody>
</table>

- **Proposition 65**
- **Chemicals known to cause cancer:**
  None of the ingredients is listed.
- **Chemicals known to cause reproductive toxicity for females:**
  None of the ingredients is listed.
- **Chemicals known to cause reproductive toxicity for males:**
  None of the ingredients is listed.
- **Chemicals known to cause developmental toxicity:**
  None of the ingredients is listed.
- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)**
    None of the ingredients is listed.
  - **TLV (Threshold Limit Value established by ACGIH)**
    - hydrochloride (7647-01-0) Category A4
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    None of the ingredients is listed.
- **GHS label elements**
  Void
Trade name: RPMI 1640 Medium, W/O glutamine, W/O phenol red

- **Hazard pictograms**: Void
- **Signal word**: Void
- **Hazard statements**: Void
- **Chemical safety assessment**: A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS**: Product safety department.
- **Contact**: Ms. BADICHI GITLIN
- **Date of preparation / last revision**: 02/19/2018 / -
- **Abbreviations and acronyms**:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - VOC: Volatile Organic Compounds (USA, EU)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit