Intended Use: 
Recommended for the isolation and maintenance of Chlorella species.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulphate</td>
<td>0.0000078</td>
</tr>
<tr>
<td>Sodium molybdate</td>
<td>0.00005</td>
</tr>
<tr>
<td>Zinc sulphate</td>
<td>0.00022</td>
</tr>
<tr>
<td>Boric acid</td>
<td>0.00028</td>
</tr>
<tr>
<td>Manganese sulphate</td>
<td>0.0014</td>
</tr>
<tr>
<td>Ferrous sulphate</td>
<td>0.0015</td>
</tr>
<tr>
<td>Potassium citrate</td>
<td>0.032</td>
</tr>
<tr>
<td>Potassium sulphate</td>
<td>0.217</td>
</tr>
<tr>
<td>Magnesium sulphate</td>
<td>2.400</td>
</tr>
<tr>
<td>Potassium dihydrogen phosphate</td>
<td>2.450</td>
</tr>
<tr>
<td>Potassium nitrate</td>
<td>2.500</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>10.000</td>
</tr>
<tr>
<td>Agar</td>
<td>17.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>4.5±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 34.6 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Chlorella is a genus of single-celled green algae, belonging to the phylum Chlorophyta. Chlorella contains the green photosynthetic pigments chlorophyll-a and chlorophyll b in its chloroplast. It depends on photosynthesis for growth and multiplies rapidly, requiring only carbon dioxide, water, sunlight, and a small amount of minerals. Chlorella has been researched as a potential source of food and energy, because its efficiency of photosynthesis can reach 8%, (6) which is comparable with other highly efficient crops such as sugarcane. Chlorella media were originally formulated by Shrift (4) and further modified for cultivation and maintenance of Chlorella species.

All algae utilize inorganic phosphates and sulphates. There is a fairly high requirement of molybdate as a trace metal in nitrogen fixation. Algae require calcium, magnesium, potassium and probably sodium. Most algae grow poorly on agar and it is best to let them become established in liquid culture before adapting them to the more rigorous conditions of an agar slant. Chlorella being photosynthetic green algae, should be cultivated in the presence of light. Bright diffuse light; fluorescent light and sunlight are satisfactory sources of light for the growth of Chlorella. The inoculated tubes/flasks should be incubated in the presence of light at 25-27°C for a week to permit good growth and pigmentation (3). Chlorella cultures can be maintained at room temperature for 2-3 months without subculturing.

Type of specimen

Soil sample

Specimen Collection and Handling:

For soil samples follow appropriate techniques for handling specimens as per established guidelines (5). After use, contaminated materials must be sterilized by autoclaving before discarding.

Please refer disclaimer Overleaf.
Warning and Precautions:
Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations:
1. This medium is general purpose medium and may not support the growth of fastidious organisms.

Performance and Evaluation
Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control
Appearance
White to cream homogeneous free flowing powder

Gelling
Firm, comparable with 1.7% Agar gel.

Colour and Clarity of prepared medium
Amber coloured, clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 3.46% w/v aqueous solution at 25°C. pH: 4.5±0.2

pH
4.30-4.70

Cultural Response
Cultural characteristics observed in presence of light, after an incubation at 25-27°C for 7 days.

Organism | Growth
--- | ---
Chlorella vulgaris ATCC 9765 | Good-luxuriant
Euglena gracilis ATCC 12716 | Good-luxuriant

Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Use before expiry date on the label.

Product performance is best if used within stated expiry period.

Disposal
User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

Revision: 02/2019
Disclaimer:

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