Modified Proteose Agar

Modified Proteose Agar is used with added enrichment for the isolation and cultivation of *Neisseria* and *Haemophilus* species.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
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</thead>
<tbody>
<tr>
<td>Proteose peptone</td>
<td>20.000</td>
</tr>
<tr>
<td>Dextrose</td>
<td>0.500</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Disodium phosphate</td>
<td>5.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.3±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters**

**Directions**

Suspend 45.5 grams in 490 ml distilled water. Mix thoroughly. Heat to boiling with frequent agitation to dissolve the medium. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add 500 ml sterile 2% solution of haemoglobin (FD022) and 10 ml of Vitamino Growth Supplement (FD025). Mix thoroughly.

**Principle And Interpretation**

Most *Neisseria* and *Haemophilus* strains are nutritionally fastidious and have complex growth requirements. All *Haemophilus* species require either exogenous hemin (X-Factor), NAD (V-Factor) or both (1).

Modified Protease Agar is generally used for the isolation of *Neisseria*. With added haemoglobin and Vitamino Growth Supplement (FD025) (2, 3), the medium is used for the isolation of gonococci and *Haemophilus*.

Proteose peptone (equivalent to ProteosePeptone No.3) provides nitrogen, vitamins and amino acids. Dextrose is a carbon source. Sodium chloride maintains the osmotic balance in the medium, while disodium phosphate buffers the medium.

Modified Proteose Agar is intended for use with supplementation by 2% Haemoglobin and Vitamino Growth Supplement (FD025) which improves the growth rate of *Neisseria* and *Haemophilus* species. Haemoglobin provides X factor (hemin) required for growth of *Haemophilus* and enhances growth of *Neisseria*. Vitamino Growth supplement serves as an additional source of glutamine and co-carboxylase. Refer appropriate references for standard procedures (1, 4, 5).

**Quality Control**

**Appearance**
Cream to yellow homogeneous free flowing powder

**Gelling**
Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**
Basal medium: Light to medium amber coloured opalescent gel with slight flocculent precipitate. After addition of haemoglobin: Chocolate brown coloured opaque gel forms in Petri plates

**Reaction**
Reaction of 4.55% w/v aqueous solution at 25°C. pH : 7.3±0.2

**pH**
7.10-7.50

**Cultural Response**
M1606: Cultural characteristics observed with added 2% haemoglobin solution (FD022), Yeast autolysate Supplement (FD027) or Vitamino Growth Supplement (FD025), after an incubation at 35-37°C for 40-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
</tr>
</thead>
</table>

Please refer disclaimer Overleaf.
Neisseria gonorrhoeae  ATCC 43070  50-100  good  50-70%
Neisseria meningitidis ATCC 13102  50-100  good  50-70%
Neisseria sicca ATCC 9913  50-100  good  50-70%
Haemophilus influenzae ATCC 10211  50-100  good  50-70%

Storage and Shelf Life
Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

Disclaimer:
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