Mueller Hinton Agar Plate

For the determination of susceptibility microorganisms to antimicrobial agents.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef, infusion from</td>
<td>300.000</td>
</tr>
<tr>
<td>Casein acid hydrolysate</td>
<td>17.500</td>
</tr>
<tr>
<td>Starch</td>
<td>1.500</td>
</tr>
<tr>
<td>Agar</td>
<td>17.000</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**

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate

**Principle And Interpretation**

The Mueller Hinton formulation was originally developed as a simple, transparent agar medium for the cultivation of pathogenic *Neisseria* species (1). Other media were subsequently developed that replaced the use of Mueller Hinton Agar for the cultivation of pathogenic *Neisseria* species, but it became widely used in the determination of sulfonamide resistance of gonococci and other organisms. Mueller Hinton Agar is now used as a test medium for antimicrobial susceptibility testing (2). Mueller Hinton Agar is recommended for the diffusion of antimicrobial agents impregnated on paper disc through an agar gel as described in CLSI Approved Standard (3). Mueller Hinton Agar has been selected by the CLSI for several reasons:

i. It demonstrates good batch-to-batch reproducibility for susceptible testing.

ii. It is low in sulfonamide, trimethoprim and tetracycline inhibitors.

iii. It supports the growth of most non-fastidious bacterial pathogens and iv. Many data and much experience regarding its performance have been recorded (9).

**Quality Control**

**Appearance**

Sterile Mueller Hinton Agar in 90 mm disposable plate.
**Colour**
Light amber coloured medium.

**Quantity of Medium**
25ml of medium in 90 mm plate.

**Reaction**
7.20 - 7.40

**Cultural response**
Cultural characteristics observed after incubation at 35-37°C for 18 -24 hours.

**Sterility test**
Passes release criteria

**Cultural Response**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli ATCC</em> 25922</td>
<td>Luxuriant</td>
</tr>
<tr>
<td><em>Enterococcus faecalis ATCC</em> 29212</td>
<td>Luxuriant</td>
</tr>
<tr>
<td><em>Neisseria gonorrhoeae ATCC</em> 49226</td>
<td>Luxuriant</td>
</tr>
<tr>
<td><em>Staphylococcus aureus ATCC</em> 25923</td>
<td>Luxuriant</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa ATCC</em> 27853</td>
<td>Luxuriant</td>
</tr>
</tbody>
</table>

**Storage and Shelf Life**
Store between 15-25°C. Use before expiry date on the label.

**Reference**

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