Sulpha Sensitivity Test Agar

Sulpha Sensitivity Test Agar is used to test the susceptibility of common pathogens to sulphonamides.

**Composition**

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef extract</td>
<td>10.000</td>
</tr>
<tr>
<td>Casein enzymic hydrolysate</td>
<td>10.000</td>
</tr>
<tr>
<td>Disodium phosphate</td>
<td>0.660</td>
</tr>
<tr>
<td>Monopotassium phosphate</td>
<td>0.300</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 36 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour in sterile Petri plates.

**Principle And Interpretation**

Trimethoprim/sulfamethoxazole or co-trimoxazole is a sulfonamide antibiotic. Combination of trimethoprim and sulfamethoxazole, in the ratio of 1 to 5, used in the treatment of a variety of bacterial infections (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). Sulpha Sensitivity Test Agar is used for determination of susceptibility of microorganisms to sulphonamides (1).

Casein enzymic hydrolysate and beef extract provide nitrogenous compounds, carbon, sulphur and other essential nutrients. Disodium phosphate and monopotassium phosphate buffer the medium well. A standardized suspension of the organisms is swabbed over the entire surface of the medium. Paper discs impregnated with certain amount of specific antibiotics are placed on the surface of the medium. The plates are incubated and the zones of inhibition around each disc are measured.

**Quality Control**

**Appearance**

Light yellow coloured homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**

Light amber coloured clear gel forms in Petri plates

**Reaction**

Reaction of 3.6% w/v aqueous solution at 25°C. pH : 7.3±0.2

**pH**

7.10-7.50

**Cultural Response**

M308: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
<th>Zones of inhibition with Sulfosomidine</th>
<th>Zones of inhibition with Sulphamethoxy-pyridiazine</th>
<th>Zones of inhibition with Sulphadiazine</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli ATCC 25922</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>SO (300 mcg) -22mm</td>
<td>ST (300 mcg) -20mm</td>
<td>SZ (100 mcg) -20mm</td>
</tr>
<tr>
<td><em>Staphylococcus aureus ATCC 25923</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>SO (300 mcg) -26 mm</td>
<td>ST (300 mcg) -26mm</td>
<td>SZ (100 mcg) -28mm</td>
</tr>
</tbody>
</table>

Please refer disclaimer Overleaf.
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

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