Stock Culture Agar

Intended Use
Stock Culture Agar is used for maintaining stock cultures of bacteria, particularly streptococci.

Summary and Explanation
Ayers and Johnson\(^1\) reported a medium that gave luxuriant growth and extended viability of streptococci and other organisms. The success of their medium can be attributed to its semisolid consistency, added casein, buffered environment and dextrose, which serves as a readily available source of energy. This study reported that pathogenic streptococci remained viable for at least four months at room temperature (24°C) in the medium. Organisms such as \textit{Streptococcus pneumoniae}, \textit{Mycobacterium} spp. and others, grew well on their medium. Stock Culture Agar is prepared to duplicate the medium described by Ayers and Johnson.\(^1\)

Stock Culture Agar may also be prepared with L-asparagine (1 g/L) for the maintenance of pathogenic and nonpathogenic bacteria, especially streptococci.\(^2\)

Principles of the Procedure
Infusion from beef heart, peptone, gelatin and isoelectric casein provide the nitrogen, vitamins and amino acids in Stock Culture Agar. Dextrose is a carbon source. Disodium phosphate is a buffering agent. Sodium citrate acts as a preservative. Agar is the solidifying agent.

Formula
\textit{Difco™ Stock Culture Agar}

Approximate Formula* Per Liter
- Beef Heart, Infusion from 500 g ................................ 10.0 g
- Proteose Peptone .................................................. 10.0 g
- Gelatin ................................................................. 10.0 g
- Isoelectric Casein .................................................... 5.0 g
- Dextrose .............................................................. 0.5 g
- Disodium Phosphate ............................................. 4.0 g
- Sodium Citrate ....................................................... 3.0 g
- Agar ................................................................. 7.5 g

*Adjusted and/or supplemented as required to meet performance criteria.

Directions for Preparation from Dehydrated Product
1. Suspend 50 g of the powder in 1 L of purified water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
3. Autoclave at 121°C for 15 minutes.
4. Test samples of the finished product for performance using stable, typical control cultures.

User Quality Control

\textbf{Identity Specifications}
\textbf{Difco™ Stock Culture Agar}

Dehydrated Appearance: Light tan, free-flowing, homogeneous.
Solution: 5.0% solution, soluble in purified water upon boiling. Solution is medium amber, opalescent.
Prepared Appearance: Medium amber, opalescent.
Reaction of 5% Solution at 25°C: pH 7.5 ± 0.2

\textbf{Cultural Response}
\textbf{Difco™ Stock Culture Agar}

Prepare the medium per label directions. Stab inoculate with fresh cultures and incubate at 35 ± 2°C for 18-48 hours.

<table>
<thead>
<tr>
<th>ORGANISM</th>
<th>ATCC*</th>
<th>RECOVERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neisseria meningitidis</td>
<td>13090</td>
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<tr>
<td>Staphylococcus aureus</td>
<td>25923</td>
<td>Good</td>
</tr>
<tr>
<td>Streptococcus pneumoniae</td>
<td>6305</td>
<td>Good</td>
</tr>
<tr>
<td>Streptococcus pyogenes</td>
<td>19615</td>
<td>Good</td>
</tr>
</tbody>
</table>

Expected Results
Refer to appropriate references and procedures for results.

References

Availability
\textbf{Difco™ Stock Culture Agar}

Cat. No. 254100  Dehydrated – 500 g