Rogosa SL Agar, Granulated

Rogosa SL Agar, granulated is used as a selective medium for cultivation of oral, vaginal and faecal *Lactobacilli*.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptose</td>
<td>10.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>5.000</td>
</tr>
<tr>
<td>Dextrose</td>
<td>10.000</td>
</tr>
<tr>
<td>Arabinose</td>
<td>5.000</td>
</tr>
<tr>
<td>Saccharose</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium acetate</td>
<td>15.000</td>
</tr>
<tr>
<td>Ammonium citrate</td>
<td>2.000</td>
</tr>
<tr>
<td>Monopotassium phosphate</td>
<td>6.000</td>
</tr>
<tr>
<td>Magnesium sulphate</td>
<td>0.570</td>
</tr>
<tr>
<td>Manganese sulphate</td>
<td>0.120</td>
</tr>
<tr>
<td>Ferrous sulphate</td>
<td>0.030</td>
</tr>
<tr>
<td>Polysorbate 80</td>
<td>1.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>5.4±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 74.72 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Add 1.32 ml glacial acetic acid. Mix thoroughly, distribute into culture tubes or flasks. Heat to 90 - 100°C for 2-3 minutes. Cool to 45°C for direct inoculation. **DO NOT AUTOCLAVE.**

**Principle And Interpretation**

Rogosa SL Agar also known as RMW Agar, is a modification of the media formulated by Rogosa, Mitchell and Wiseman (3, 4). This media is used for isolation, enumeration and identification of *Lactobacilli* from foodstuffs and clinical specimens (1, 2). Accompanying bacterial flora is suppressed due to the low pH of the medium and also because of the high sodium acetate concentration.

Tryptose and yeast extract provide nitrogenous compounds, sulphur, trace elements and vitamin B complex, essential for growth of *Lactobacilli*. Dextrose, arabinose and saccharose are the fermentable carbohydrates. Polysorbate 80 is the source of fatty acids. Ammonium citrate and Sodium acetate inhibit moulds, *Streptococci* and many other organisms. Monopotassium phosphate provides buffering capability. Magnesium sulphate, manganese sulphate and ferrous sulphate are sources of inorganic ions. Low pH of the medium and addition of acetic acid makes the medium selective for *Lactobacilli* inhibiting other bacterial flora (2).

It is recommended that the plates should be incubated at 30°C for 5 days or at 37°C for 3 days in an atmosphere of 95% hydrogen and 5% carbon dioxide (5). If this is not possible, overlay the inoculated plates with a second layer of the agar before incubation. High acetate concentration and acidic pH suppress many strains of other lactic acid bacteria. All colonies should be checked by gram staining and by catalase test before further identification. The salt in the formulation makes the medium unsuitable for isolation of dairy *Lactobacilli*. e.g. *L.lactis, L.bulgaricus* and *L.helveticus* (2, 4).

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Quality Control

Appearance
Cream to yellow coloured granular medium

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured opalescent gel forms in Petri plates

Reaction
Reaction of 7.5% w/v aqueous solution with 0.132% v/v acetic acid at 25°C. pH : 5.4±0.2

pH
5.20-5.60

Cultural Response
Cultural characteristics observed in presence of 5% Carbon dioxide (CO₂) and 95% H₂ after an incubation at 35-37°C for 40-48 hours.

Organism | Inoculum (CFU) | Growth | Recovery |
--- | --- | --- | --- |
*Lactobacillus casei* ATCC 9595 | 50-100 | good - luxuriant | >=50% |
*Lactobacillus fermentum* ATCC 9338 | 50-100 | good to luxuriant | >=50% |
*Lactobacillus leichmannii* ATCC 4797 | 50-100 | good to luxuriant | >=50% |
*Lactobacillus plantarum* ATCC 8014 | 50-100 | good-luxuriant | >=50% |
*Staphylococcus aureus* ATCC 25923 | >=10³ | inhibited | 0%

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

Reference

Revision : 00 / 2014

Disclaimer :
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