Pantothenate Culture Agar

Pantothenate Culture Agar is recommended for culturing *Lactobacillus plantarum* ATCC 8014 used in the microbiological assay of pantothenic acid or its salts.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeast extract</td>
<td>20.000</td>
</tr>
<tr>
<td>Dextrose</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium acetate</td>
<td>5.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>6.8±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 45 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Distribute in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubes to cool in an upright position.

**Principle And Interpretation**

Pantothenate Culture Agar is prepared according to US Pharmacopoeia (1) and is recommended for culturing *Lactobacillus plantarum* ATCC 8014 used in the microbiological assay of pantothenate.

This medium contains all the necessary nutrients except pantothenate for the growth of *L. plantarum*. *L. plantarum* ATCC 8014 is an auxotrophic strain requiring pantothenate. Growth of *L. plantarum* ATCC 8014 is functional to the concentration of pantothenate in the medium. Therefore from the standard linear curve, concentration of pantothenate from the unknown sample can be determined.

Yeast extract and dextrose supply nitrogen and carbon for the growth of the organism. Sodium acetate inhibits the growth of some organisms including gram-negative bacteria and moulds.

The culture to be used in the assay is inoculated into tubes of Pantothenate Culture Agar and incubated at 35-37°C for 16-24 hours. These cultures are then maintained at 2-10°C for not more than a week. Fresh cultures should be made after every week. The inoculum is prepared by transferring culture from Pantothenate Culture Agar into 10 ml of sterile single strength Pantothenate Assay Medium (M037).

**Quality Control**

**Appearance**

Cream to yellow homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**

Light yellow coloured clear to slightly opalescent gel forms in tubes as butts

**Reaction**

Reaction of 4.5% w/v aqueous solution at 25°C. pH : 6.8±0.2

**pH**

6.60-7.00

**Cultural Response**

M135: Cultural characteristics observed after an incubation at 35-37°C for 16-24 hours.

<table>
<thead>
<tr>
<th>Organism (CFU)</th>
<th>Growth</th>
</tr>
</thead>
</table>
Lactobacillus plantarum  ATCC 8014

50-100  good-luxuriant

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

Reference

Disclaimer:
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