Pantothenate Culture Agar

M135

Intended Use:

Recommended for culturing *Lactobacillus plantarum* ATCC 8014 used in the microbiological assay of Pantothenic acid or its salts.

Composition**

Ingredients	Gms / Litre
Yeast extract	20.000
Dextrose (Glucose)	5.000
Sodium acetate	5.000
Agar	15.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 45 grams in 1000 ml purified / 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 to 45-50°C in an upright position.

Principle And Interpretation

Pantothenate Culture Agar is prepared according to US Pharmacopoeia (3) 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).

Type of specimen

Isolated Microorganism

Specimen Collection and Handling:

For isolated microorganism samples follow appropriate techniques for handling specimens as per established guidelines (3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. The cultures after incubation should be maintained at 2-10°C for not more than a week.
2. Fresh cultures should be made after every week.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

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

Organism	Inoculum (CFU)	Growth
Lactobacillus plantarum ATCC 8014	50-100	good-luxuriant

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual Clinical Microbiology, 11th Edition. Vol. 1.
3. United States Pharmacopoeia, National Formulary, 1985, 21st rev., USP Convention, Inc., Rockville, MD.

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Disclaimer :

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