

Technical Information

Acetobacter Agar (Mannitol)

Product Code: DM 1370

Application: - Acetobacter Agar (Mannitol) is used as a maintenance medium for mannitol positive *Acetobacter* species.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	3.000
Yeast extract	5.000
Mannitol	25.000
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Acetic acid bacteria are found in fruits with high carbohydrate concentration, which is selective for yeasts that produce ethanol. This ethanol forms the substrate for acetic acid bacteria and may oxidize ethanol to acetic acid ⁽¹⁾. Various synthetic and maintenance media for *Acetobacter* cultures have been reported ⁽²⁾. A typical maintenance medium is Acetobacter Agar ⁽²⁾ which has been formulated as per Manual of Microbiological Methods ⁽³⁾ and being used for the maintenance of *Acetobacter* species utilizing mannitol ⁽⁴⁾.

Peptic digest of animal tissue, yeast extract in the medium provides nitrogen, vitamins and minerals necessary to support bacterial growth. Mannitol acts as energy source. Calcium carbonate acts as a buffer.

Methodology

Suspend 48 grams of powder media in 1000 ml distilled water. Shake well & heat just to boiling. Dispense in test tubes, taking care to distribute calcium carbonate evenly. Sterilize by autoclaving at 15 lbs pressure (12 1°C) for 15 minutes. Cool quickly and place them in a slanted position.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured opalescent gel with heavy white precipitate, forms in tubes as slants.

Reaction

Reaction of 4.8% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH Range:- 7.20-7.60

Cultural Response/Characteristics

DM 1370: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth
<i>Acetobacter hansenii</i> ATCC 35959	50-100	good-luxuriant
<i>Acetobacter pasteurianus</i> ATCC 6033	50-100	good-luxuriant

Storage and Shelf Life

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1. 3rd Ed., APHA, Washington, D. C.
2. Asai, 1968, Univ. of Tokyo Press, Tokyo, Japan and Univ. Park Press, Baltimore, MD.
3. Manual of Microbiological Methods, 1957, Society of American Bacteriologists, McGraw-Hill Book Company, New York.
4. Catalogue of Bacteria and Bacteriophages, 1992, 18th Ed., American Type Culture Collection, Rockville, MD.

Disclaimer :

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