



Acetobacter Agar (Mannitol)

M370

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

Directions

Suspend 48 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in test tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool quickly and place them in a slanted position.

Principle And 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 cited (2). A typical maintenance medium is Acetobacter Agar (2) Acetobacter Agar is formulated as per Manual of Microbiological Methods (3) and 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.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in tubes as slants.

Reaction

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

pH

7.20-7.60

Cultural Response

M370: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

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

Storage and Shelf Life

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

Reference

1. Vanderzant C., Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 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.

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