



Acetobacter Broth (Mannitol)

M1718

Intended Use:

Recommended as a cultivation medium for mannitol positive *Acetobacter* species.

Composition**

Ingredients	Gms / Litre
Peptone	3.000
Yeast extract	5.000
Mannitol	25.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 33.0 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense in test tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

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 Broth (2) Acetobacter Broth is formulated as per Manual of Microbiological Methods (3) and used for the maintenance of *Acetobacter* species utilizing mannitol (4).

Peptone, 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.

Type of specimen

Food samples - fruits

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (2). 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. Further biochemical and serological tests must be carried out for further identification.
2. Some organism may show poor growth due to nutritional variation.

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

Colour and Clarity of prepared medium

Yellow coloured, clear to slightly opalescent solution in tubes

Reaction

Reaction of 3.3% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

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

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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