Technical Information

Acetobacter Agar w/ Liver Extract

Product Code: DM 1346

Application: - Acetobacter Agar w/ liver extract is used for maintaing glucose positive *Acetobacter* species.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.000
Liver extract	2.000
Glucose	20.000
Calcium carbonate	10.000
Agar	20.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Acetobacter species are aerobic, gram-negative organisms and 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)] that has been formulated as per Manual of Microbiological Methods [(3)] and being used for the maintenance of *Acetobacter* species utilizing glucose or mannitol [(4)]. Acetobacter Agar w/ liver extract is a farther modification of Acetobacter Agarfor maintaining glucose positive Acetobacter species.

Casein enzymic hydrolysate, liver extract in the medium provides nitrogen, vitamins and minerals necessary to support bacteri al growth.

Glucose acts as energy source. Calcium carbonate acts as a buffer.

Methodology

Suspend 57 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 (121°C) for 15 minutes. Shake the tubes and place them to cool in a slanted position so as to keep the calcium carbonate in suspension.

Note: Due to presence of calcium carbonate, the prepared medium forms opalescent solution with white precipitate.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

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

Reaction

Reaction of 5.7% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH Range:- 7.20-7.60

Cultural Response/Characteristics

DM 1346: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours

Organism	Inoculum (CFU)
Acetobacter aceti ATCC 15973	50-100
Acetobacter liquifaciens ATCC 14835	50-100

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: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

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. 3. Catalogue of Bacteria and Bacteriophages, 1992, 18th Ed., American Type Culture Collection, Rockville, MD.

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