PRODUCT SPECIFICATION SHEET

Acetobacter Agar (Glucose) (DM589)

Intended Use
Acetobacter Agar (Glucose) (DM589) is recommended for maintenance of glucose positive *Acetobacter* species.

Product Summary and Explanation
Acetobacter is a genus of acetic acid bacteria characterized by the ability to convert ethanol to acetic acid in the presence of oxygen. They are gram-negative, aerobic, rod-shaped bacteria. Acetic acid bacteria are found in fruits with high carbohydrate concentration, which is selective for yeasts, which produce ethanol. This ethanol forms the substrate for acetic acid bacteria and may oxidize ethanol to acetic acid.[1] *Acetobacter* species can be easily distinguished in the laboratory by the growth of colonies on a medium containing about 7% ethanol and enough calcium carbonate to render it partially opaque. When *Acetobacter* colonies form enough acetic acid from the ethanol, the calcium carbonate around the colonies dissolves, forming a very distinct clear zone. A range of synthetic and maintenance media for *Acetobacter* cultures have been cited.[2] Acetobacter Agar[2] is a typical maintenance medium formulated as per Manual of Microbiological Methods[3] and used for the maintenance of *Acetobacter* species utilizing glucose.[4]

Principles of the Procedure
Acetobacter Agar (Glucose) contains yeast extract which provides nitrogen, vitamins and minerals required for bacterial growth. Glucose acts as a carbon and energy source. Calcium carbonate acts as a buffering agent.

Formula / Liter

Ingredients	Gms / Liter
Yeast extract	10.00
Calcium carbonate	10.00
Glucose	3.00
Agar	15.00
Final pH: 7.4 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.
3. Due to presence of calcium carbonate, the prepared medium forms opalescent solution with white precipitate.

Directions
1. Suspend 38 grams of medium in one liter of purified/distilled water.
2. Heat just to boiling.
3. Dispense in test tubes, taking care to distribute calcium carbonate evenly.
4. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
5. Shake the tubes and place them to cool in a slanted position so as to keep the calcium carbonate in suspension.

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Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light amber coloured opalescent gel with heavy white precipitate, forms in tubes as slants
Reaction of 3.8% Solution	pH : 7.4 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

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

Sr. No.	Organisms	Results to be achieved
		Inoculum (CFU)
1.	*Acetobacter liquifaciens ATCC 14835*	50-100

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Refer to appropriate references for standard test procedures.

Results
Refer to appropriate references and standard test procedures for interpretation of results.

Storage
Store the sealed bottle containing the dehydrated medium at 10- 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration
Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure
1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging
Product Name : Acetobacter Agar (Glucose)
Product Code : DM589
Available Pack sizes : 500gm

References

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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Further Information

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DM589PSS,QAD/FR/024,Rev.00/01.01.2018

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