



## PRODUCT SPECIFICATION SHEET

### Acetobacter Agar w/ Liver Extract (DM588)

#### Intended Use

Acetobacter Agar w/ Liver Extract (DM588) 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.<sup>(1)</sup> *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.<sup>(2)</sup> Acetobacter Agar<sup>(2)</sup> is a typical maintenance medium formulated as per Manual of Microbiological Methods<sup>(3)</sup> and used for the maintenance of *Acetobacter* species utilizing glucose or mannitol.<sup>(4)</sup> Acetobacter Agar w/ liver extract is a modification of Acetobacter Agar.

#### Principles of the Procedure

Acetobacter Agar w/ Liver Extract contains casein enzymic hydrolysate, liver 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
Casein enzymic hydrolysate	5.00
Liver extract	2.00
Glucose	20.00
Calcium carbonate	10.00
Agar	20.00
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 57 grams of medium in one liter of purified/distilled water.
2. Heat to boiling, to dissolve the medium completely.
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 5.7% Solution	pH : 7.4 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 2.0% 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.	<i>Acetobacter aceti</i> ATCC 15973	50-100
2.	<i>Acetobacter liquifaciens</i> 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 w/ Liver Extract

**Product Code :** DM588

**Available Pack sizes :** 500gm

### References

1. Vanderzant C., Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3<sup>rd</sup> 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

For further information please contact your local MICROMASTER Representative.



**MICROMASTER LABORATORIES PRIVATE LIMITED**




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