



PRODUCT SPECIFICATION SHEET

Acetate Agar (DM385)

Intended Use

Acetate Agar (DM385) is recommended for isolating and cultivating *Leuconostoc* and *Pediococcus* species.

Product Summary and Explanation

Leuconostoc is a genus of Gram-positive bacteria, placed within the family of *Leuconostocaceae*. All species within this genus are hetero-fermentative and are able to produce dextran from sucrose. They are generally slime-forming and are blamed for causing the 'stink' when creating a sourdough starter. Some species are also capable of causing human infection.⁽¹⁾ *Leuconostoc* is, along with other lactic acid bacteria such as *Pediococcus* and *Lactobacillus*, responsible for the fermentation of cabbage, making it sauerkraut. In this process, the sugars in fresh cabbage are transformed to lactic acid which gives it a sour flavour and good keeping qualities. *Pediococcus* is a genus of Gram-positive lactic acid bacteria, placed within the family of *Lactobacillaceae*. They are purely homo-fermentative. *Pediococcus* bacteria are usually considered contaminants of beer and wine although their presence is sometimes desired in beer styles such as Lambic. Certain *Pediococcus* isolates produce diacetyl, which gives a buttery or butterscotch aroma to some wines (such as Chardonnay) and a few styles of beer. *Pediococcus* species are often used in silage inoculants. Whittenbury⁽²⁾ formulated Acetate agar, which was further modified by Keddie⁽³⁾ for cultivating *Leuconostoc* and *Pediococcus* species.

Principles of the Procedure

Acetate Agar contains peptic digest of animal tissue, yeast extract, meat extract which provides nitrogenous and other essential nutrients required for growth of organisms. Polysorbate 80 maintains the surface tension of the medium to the optimal level. Glucose is the energy source. Sodium acetate serves as a sole source of carbon.

Formula / Liter

Ingredients	Gms / Liter
Peptic digest of animal tissue	5.00
Meat extract	5.00
Yeast extract	5.00
Glucose	10.00
Polysorbate 80 (Tween 80)	0.50
Sodium acetate.3H ₂ O	27.22
Agar	20.00
Final pH: 5.4 ± 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.

Directions

1. Suspend 61.9 grams of medium in one liter of purified/distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile Petri plates.

Quality Control Specifications

Dehydrated Appearance	Light yellow to beige homogeneous free flowing powder
Prepared Medium	Yellow coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 6.19% Solution	pH: 5.4 ± 0.2 at 25°C





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Gel Strength	Firm, comparable with 2.0% Agar gel
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Expected Cultural Response: Cultural characteristics observed after an incubation at 25-30°C for 18-48 hours.

Sr. No.	Organisms	Results to be achieved
		Growth
1.	<i>Enterococcus faecalis</i> ATCC 29212	none-poor
2.	<i>Leuconostoc mesenteroides</i> ATCC 12291	good-luxuriant
3.	<i>Pediococcus acidilactici</i> ATCC 33314	good-luxuriant

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 - 8°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

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

Packaging

Product Name : Acetate Agar

Product Code : DM385

Available Pack sizes : 500gm

References

- Vagiakou-Voudris E., Mylona-Petropoulou D., Kalogeropoulou E., Chantzis A., Chini S., Tsiotra P., Malamou-Lada E., J. Infect. Dis. 2002;34(10):766-7.
- Whittenbury R., 1965 b, J. Gen. Microbiol., 40:97.
- Keddie R. M., 1951, Proceed. Soc. Appl. Bacteriol., 14:157.

Further Information

For further information please contact your local MICROMASTER Representative.



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