



Acetate Agar

M1225

Acetate Agar is used for the isolation and cultivation of *Leuconostoc* and *Pediococcus* species.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Meat extract	5.000
Yeast extract	5.000
Glucose	10.000
Polysorbate 80 (Tween 80)	0.500
Sodium acetate.3H ₂ O	27.220
Agar	20.000
Final pH (at 25°C)	5.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 61.9 grams of dehydrated medium in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Leuconostoc is a genus of gram-positive bacteria, which are heterofermentative and are able to produce dextran from sucrose. These are blamed for causing the stink when creating a sour dough starter. Some species are also capable of causing human infection (1). *Pediococcus* is a genus of gram-positive lactic acid bacteria, which are purely homofermentative. *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. Acetate agar was formulated by Whittenbury (2) and then modified by Keddie (3).

Peptic digest of animal tissue, yeast extract, meat extract provide all essential growth nutrients. 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.

Quality Control

Appearance

Light yellow to beige homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 6.19% aqueous solution at 25°C. pH : 5.4±0.2

pH

5.20-5.60

Cultural Response

M1225: Cultural characteristics observed after an incubation at 25-30°C for 18-48 hours.

Organism

Growth

Cultural Response

Enterococcus faecalis ATCC none-poor
29212

Leuconostoc mesenteroides good-luxuriant
ATCC 12291
Pediococcus acidilactici good-luxuriant
ATCC 33314

Storage and Shelf Life

Store dehydrated powder and the prepared medium at 2-8° C in tightly closed container . Use before expiry date on the label.

Reference

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

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