

Technical Information

Acetamide Agar, Modified (Twin Pack)

Product Code: DM 2867

Application: - Acetamide Agar, Modified is used for confirmation of *Pseudomonas aeruginosa* in water samples.

Composition**

Ingredients	Gms / Litre
Part A	-
Acetamide	3.000
Part B	-
Sodium chloride	5.000
Yeast extract	0.500
Monopotassium phosphate	1.000
Phenol red	0.030
Dextrose	0.200
Agar	15.000
Final pH (at 25°C)	6.3±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Acetamide Agar, Modified is formulated as per recommendation of Standard Methods for Examination of Water and Wastewater (1). Gilardi and others showed that a wide variety of non-fermenting organisms were capable of utilizing acetamide by using basal mineral media (2, 3). However very few organisms growing in the medium metabolize acetamide by the process of deamination (acrylamidase activity) (4, 5). This unique ability is useful in identification of various non-fermenting gram- negative organisms (6, 7, 8). This ability is shown by *Pseudomonas aeruginosa*, *Pseudomonas aciovorans* Group III (*Achromobacter xylosoxidans*) and *Alcaligenes odorans* (9). Acetamide deamination leads to the liberation of ammonia, which thereby increases the pH of the medium, leading to a subsequent colour change of the phenol red indicator from yellow orange to purplish red. Some strains require upto seven days to exhibit a positive reaction as they deaminate acrylamide slowly. However, only about 40% of apyocyanogenic strains of *Pseudomonas aeruginosa* exhibit a positive reaction. It is therefore, not advisable to rely on this test as the only criterion for identification.

The medium contains inorganic salts and acetamide a sole as a source of carbon and nitrogen. Sodium chloride maintains the osmotic equilibrium. Phenol red is the pH indicator.

Methodology

Suspend 21.73 grams of dehydrated culture media part B in 1000 ml distilled water. Add 3.0 grams of Part A. Shake well and heat to boiling to dissolve the medium completely. Dispense in tubes or as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool the tubes in a slanted position.



Dehydrated Culture Media
Bases / Media Supplements

Quality Control

Appearance

Part A : Colourless deliquescent crystals Part B : Light yellow to brick red homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity

Orange coloured clear to slightly opalescent gel forms in tubes as slants.

Reaction

Reaction of the medium (Mixture of 0.3% w/v Part A and 2.17% Part B) at 25°C. pH : 6.30±0.2

pH Range

6.10-6.50

Cultural Response

DM2867: Cultural characteristics observed after an incubation at 35-37°C for 4-7 days.

Organism

	Inoculum (CFU)	Growth	Deamination
Cultural Response			
<i>Stenotrophomonas maltophila</i> ATCC 13637	50-100	good-luxuriant	negative reaction ,no purplish red colour within 7 days
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good-luxuriant	positive reaction ,no purplish red colour within 7 days

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Eaton A. D., Clesceri L. S., and Greenberg A. W., (Eds.), 1995, Standard Methods for the Examination of Water and Waste water, 21st Ed., APHA, Washington, D.C.
2. Gilardi, 1974, Antonie Van Leeuwenhoek, J. Microbiology Serol., 39:229.
3. Stainier, Palleroni and Doudoroff, 1966, J. Gen Microbiol., 43:159.
4. Pickett M. J. and Pedersen M.M., 1970, Can. J. Microbiol., 16:351.
5. Pickett M. J. and Pedersen M.M., 1970, Can. J. Microbiol., 16:401.
6. Hedberg, 1969, Appl. Microbiol., 17: 481
7. Smith and Dayton, 1972, Appl. Microbiol., 24: 143
8. Buhlmann, Vischer and Bruhin, 1961, J. Bacteriol., 82:787
9. Oberhofer and Rowen, 1974, Appl. Microbiol., 28:720.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
- Central Drug House Pvt. Ltd. reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents. Do not use the products if it fails to meet specifications for identity and performances parameters.

