Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Acetamide Agar (Twin Pack)

Product Code: DM 2033

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

Composition**

Ingredients	Gms / Litre
Part A	-
Acetamide	10.000
Part B	-
Sodium chloride	5.000
Dipotassium hydrogen phosphate	1.390
Potassium dihydrogen phosphate	0.730
Phenol red	0.012
Magnesium sulphate	0.500
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Acetamide Agar is formulated as per the recommendation of Standard Methods for the Examination of Water and Wastewater. [1] Gilardi and coworkers [2,3] showed that a wide variety of non-fermenting organisms were capable of utilizing acetamide by using basal mineral media. However very few organisms growing in the medium metabolize acetamide by the process of deamination and this unique property is useful in identification of various non-fermenting gram-negative organisms [4-8]. 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. This ability is shown by *Pseudomonas aeruginosa , Pseudomonas aciovorans* Group III (*Achromobacter xylosoxidans)* and *Alcaligenes odoran)*[9]. 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 & confirmation of the organism The medium contains inorganic salts and acetamide a sole carbon and nitrogen source. Sodium chloride maintains the osmotic equilibrium. Phenol red act as pH indicator.

Methodology

Suspend 22.63 grams of part B powder media in 1000 ml distilled water. Add 10.0 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.

Quality Control

Physical 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 of prepared medium

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

Reaction

Reaction of the medium (Mixture of 1% w/v Part A and 2.263% Part B)at 25°C. pH : 7.0±0.2

pH Range:- 6.80-7.20

Cultural Response/Characteristics

DM 2033: Cultural characteristics observed after an incubation at 35-37^0 C for 4-7 days.

Organism	Inoculum (CFU)	Growth	Deamination
Stenotrophomonas maltophila ATCC 13637	50-100	Good-luxuriant	negative reaction ,no purplish red colour within 7 days positive
Pseudomonas aeruginosa ATCC 27853	50-100	Good-luxuriant	reaction, purplish red colour within 7 days

Storage and Shelf Life

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Eaton A. D., Clesceri L. S., and Greenberg A. W., (Eds.), 1995, Standard Wastewater, 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.

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