Acetamide Nutrient Broth (Twin Pack)

M1370

Intended Use:

Recommended for detection of microbial utilization of acetamide.

Composition**

Ingredients	Gms / Litre
Part A	-
Magnesium sulphate	0.158
Sodium chloride	0.200
Sodium molybdate	0.005
Ferrous sulphate	0.0005
Dipotassium hydrogen phosphate	0.200
Part B	-
Acetamide	2.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 0.56 grams of Part A in 1000 ml purified / distilled water. Add 2 grams of Part B. Heat if necessary, to dissolve the medium completely. Dispense in tubes or as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Ability of utilizing acetamide by a wide variety of organisms was shown by Gilardi and others (1, 2). They used a basal mineral medium for this purpose. However very few organisms are capable of deaminating acetamide by the acrylamidase activity (3,4). The ability to deaminate acetamide is more pronounced in the case of *Pseudomonas aeruginosa* and *Alcaligenes faecalis* (5).

Acetamide Nutrient Broth contains various inorganic salts and acetamide as sources of carbon and nitrogen. Organisms growing in this medium metabolize acetamide, thereby liberating ammonia. This liberated ammonia can be detected by Nesslers reagent, which confirms *Pseudomonas aeruginosa.* Magnesium sulphate, ferrous sulphate and sodium molybdate are sources of ions that stimulate metabolism. Sodium chloride maintains osmotic equilibrium. Dipotassium hydrogen phosphate provides buffering to the medium.

Type of specimen

Isolated Microorganism

Specimen Collection and Handling:

For samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Well isolated colonies must be used.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Part A : White to cream homogeneous free flowing powder Part B : White to cream deliquescent crystals

Colour and Clarity of prepared medium
Colourless clear solution in tubes with slight precipitate

Reaction
Reaction of the medium (mixture of 0.2% w/v Part B and 0.056% Part A) aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

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

Organism	Inoculum (CFU)	Growth	Deamination
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	good-luxuriant	positive,yellow colour on addition of 1-2 drops Nesslers reagent after incubation indicates presence of ammonia
Strenophomonas maltophila ATCC 13637	50-100	good -luxuriant	negative no colour change on addition of 1-2 drops Nesslers reagent after incubation indicates absence of ammonia

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Gilardi, 1974, Antonie Van Leewenhoek, J. Microbiol. Serol. 39:229.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Oberhofer and Rower, 1974, Appl. Microbiol., 24:143.
5. Pickett and Rederser, 1970, Car. J. Microbiol., 16:351.
6. Pickett and Rederser, 1970, Car. J. Microbiol., 16:401.
7. Stainier Palleroni and Doudoroff, 1966, J. Ger. Microbiol., 43:159.

Revision : 03/2020