

## Technical Information

### Acetamide Nutrient Broth

**Product Code: DM 2370**

**Application:** - Acetamide Nutrient Broth is used for the 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

### Principle & Interpretation

Ability of utilizing acetamide by a wide variety of organisms was shown by Gilardi and others <sup>(1, 2)</sup>. However very few organisms including *Pseudomonas aeruginosa* and *Alcaligenes faecalis* are capable of deaminating acetamide by the acrylamidase activity <sup>(3, 4, 5)</sup>.

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 Nessler's 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.

### Methodology

Suspend 0.56 grams of Part A in 1000 ml distilled water. Add 2 grams of Part B. Shake well & 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.

### Quality Control

#### Physical 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

#### 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 Range:-** 6.80-7.20

#### Cultural Response/Characteristics

DM 2370: Cultural characteristics observed after an incubation at 35-37°C for 4-7 days.



Dehydrated Culture Media  
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth	Deamination
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good – luxuriant	positive, yellow colour on addition of 1-2 drops Nessler's reagent after incubation indicates presence of ammonia
<i>Strenophomonas maltophila</i> ATCC 13637	50-100	good – luxuriant	negative no colour change on addition of 1-2 drops Nessler's after incubation indicates presence of ammonia

## 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<sup>o</sup> in sealable plastic bags for 2-5 days.

## Further Reading

1. Gilardi, 1974, Antonie Van Leeuwenhoek, J. Microbiol. Serol. 39:229.
2. Stainier Palleroni and Doudoroff, 1966, J. Ger. Microbiol., 43:159.
3. Pickett and Rederser, 1970, Car. J. Microbiol., 16:351.
4. Pickett and Rederser, 1970, Car. J. Microbiol., 16:401.
5. Oberhofer and Rower, 1974, Appl. Microbiol., 24:143.

## Disclaimer :

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