TM 351 – ACETAMIDE BROTH (DOUBLE PACK)

INTENDED USE
For confirmation of *Pseudomonas aeruginosa* in water samples.

PRODUCT SUMMARY AND EXPLANATION
Acetamide Broth is formulated as per the recommendation of Standard Methods for the Examination of Water and Wastewater. Acetamide is utilized by a wide variety of non-fermenting organisms. The media contains inorganic salts and acetamide a sole carbon and nitrogen source. However very few organisms growing in the medium metabolize acetamide by the process of deamination (acrylamidase activity). This unique ability is useful in identification of various non-fermenting gram-negative organisms. This ability is shown by *Pseudomonas aeruginosa*, *Pseudomonas aciovorans* Group III (*Achromobacter xylosoxidans*) and *Alcaligenes odorans*.

COMPOSITION

Ingredients	Gms / Ltr
Part I	
Acetamide	10.000
Part II	
Sodium chloride	5.000
Dipotassium hydrogen phosphate	1.390
Potassium dihydrogen phosphate	0.730
Magnesium sulphate	0.500
Phenol red	0.012

PRINCIPLE
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. Phosphates in the media serve as buffering agents, Magnesium sulphate is a source of ions that stimulate metabolism whereas Acetamide serves as the sole nitrogen and carbon source. Sodium chloride maintains osmotic equilibrium. Phenol red is the pH indicator.

INSTRUCTION FOR USE
- Dissolve 7.63 grams of part II in 1000 ml purified / distilled water.
- Add 10.0 grams of Part II. Heat if necessary to dissolve the medium completely.
- Dispense in 10ml amounts in tubes or as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Part I : Colourless deliquescent crystals Part II : Light yellow to light pink homogeneous free flowing powder
Appearance of prepared medium	: Orange coloured clear solution in tubes
pH (at 25°C)	: 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Determination	Incubation Temperature	Incubation Period
Pseudomonas aeruginosa	27853	50-100	Good-luxuriant	Positive reaction, purplish red colour (within 7days)	35-37°C	4-7 Days
Stenotrophomonas maltophilia	13637	50-100	Good-luxuriant	Negative reaction,no purplish red colour (after 7 days)	35-37°C	4-7 Days

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

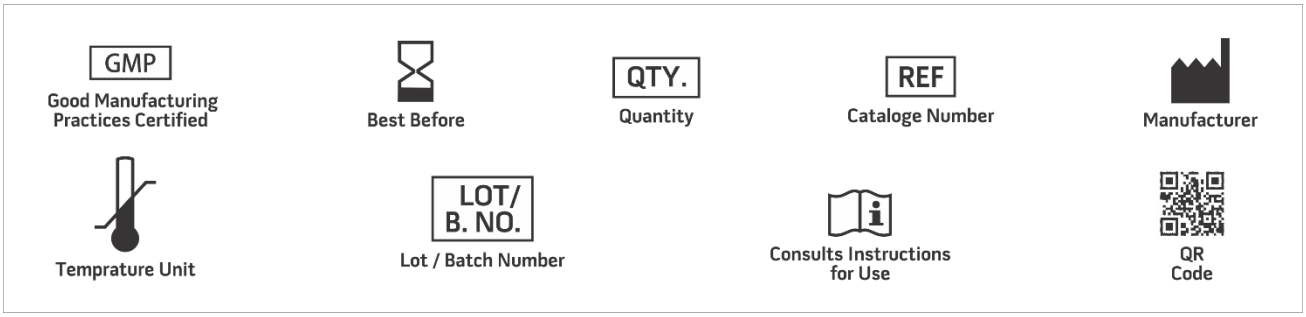
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Buhlmann, Vischer and Bruhin, 1961, J. Bacteriol., 82:787.
2. Eaton A.D.,Clesceri L.S., and Greenberg A.W., (Eds.), 1998, Standard Methods for the Examination of Water and Wastewater, 20th Ed., APHA, Washington, D.C.
3. Gilardi, 1974, Antonie Van Leeuwenhoek, J. Microbiology Serol., 39:229.
4. Hedberg, 1969, Appl. Microbiol., 17: 481.
5. Oberhofer and Rowen, 1974, Appl. Microbiol., 28:720.
6. Pickett M. J. and Pedersen M.M., 1970, Can. J. Microbiol.,16:351.
7.Pickett M. J. and Pedersen M.M., 1970, Can. J. Microbiol., 16:401.
8. Smith and Dayton, 1972, Appl. Microbiol., 24: 143
9. Stainier, Palleroni and Doudoroff, 1966, J. Gen Microbiol., 43:159.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019