

ASPARAGINE BROTH

CAT N°: 1207

For the presumptive identification and enumeration (MPN)
of *Pseudomonas aeruginosa*

FORMULA IN g/l

Monopotassium Phosphate	10.00	Dipotassium Phosphate	1.00
DL- Asparagine	2.00	Magnesium Sulfate	0.50

Final pH 7.0 ± 0.2 at 25°C

PREPARATION

Suspend 13.5 grams of the medium in one liter of distilled water. Add 8 ml of glycerol. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes. To obtain a double-strength broth, dissolve 27 grams of the medium and add 16 ml of glycerol. The prepared medium should be stored at 8-15°C. The color is colorless.

The dehydrated medium should be homogeneous, free-flowing and white in color. If there are any physical changes, discard the medium.

USES

ASPARAGINE BROTH is an excellent enrichment broth for *Pseudomonas aeruginosa*.

The formula contains a strictly mineral base with Asparagine as the sole source of nitrogen and Glycerol as the carbon source. The Potassium salts act as a buffer system and Magnesium sulfate is a magnesium ion required in a large variety of enzymatic reactions, including DNA replication, and also acts as a buffer.

Asparagine Broth is recommended for enumeration by the MPN method with series of 5 tubes inoculating 10 ml, 1 ml and 0.1 ml. All tubes are incubated at 35 ± 2°C for 48 hours.

P. aeruginosa hydrolyze asparagine to aspartic acid. The appearance of growth with or without fluorescent pigmentation is considered a presumptive test for the presence of *P. aeruginosa* and counts are determined using the MPN tubes.

Confirmation is made by subculturing a loopful from each turbid tube into Acetamide Broth (Cat. 1211).

Pseudomonas aeruginosa is an opportunist pathogen for humans, capable of growing in water with a low concentration of nutrients. This is why natural mineral water and spring water are *Pseudomonas aeruginosa* free at the time of their commercialization. This microorganism can also be found in swimming pool water.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 35 ± 2°C and observed after 24 - 48 hours.

Microorganisms	Growth
<i>Pseudomonas aeruginosa</i> ATCC 27853	Good
<i>Pseudomonas aeruginosa</i> ATCC 10145	Good

BIBLIOGRAPHY

APHA. Standard Methods for Examination of Water and wastewater, 1 4th ea. 1975.

STORAGE

Once opened keep powdered medium closed to avoid hydration.



2°C



25°C