

17129 Asparagine Proline Broth

For the cultivation of *Pseudomonas aeruginosa* using membrane filter technique.

Composition:

Ingredients	Grams/Litre
DL-Asparagine	2.0
L-Proline	1.0
Dipotassiumphosphate, anhydrous	1.0
Magnesium sulfate	0.5
Potassium sulfate	10.0
Final pH 7.2 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated granulate, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance: White to off white colored, homogeneous, free flowing granulate.

Colour and Clarity: Colorless, clear solution.

Directions:

Suspend 14.5 g in 1 litre distilled water containing 25 ml of ethanol. Boil to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:

Pseudomonas aeruginosa is regularly found in natural, fresh and recreational water, often contaminated by waste water. *Ps. aeruginosa* is an opportunistic pathogen that can grow in recreational waters even with low nutrients content. It produces a water soluble, fluorescent pigment in media containing asparagine and ethanol. This medium is recommended for cultivation of *Ps. aeruginosa* by the membrane filter technique. The medium is recommended by the Bureau of Indian Standards (1). Asparagine Proline Broth contains both the enantiomeric forms of the amino acid Asparagine, which is a carbon and nitrogen source and supports the growth of *Pseudomonas* and is used to produce the fluorescence pigment. As well L-Proline is an amino acid and act as well as a carbon nitrogen source. Phosphate and sulphates provide the ions for the growth and act as well as buffer in the medium. When 1 ml of sample is analyzed, add 1 ml of sample to 4 ml of single strength medium (14.5 g/l). If larger portions of the sample (e.g. 10 ml, 50 ml) are to be used, add the sample to an equal volume of the concentrated medium (23.2 g/l). Incubate at 37 ±1°C for 48 hours. Examine for growth and fluorescence. The growth is further sub cultured on Milk Agar with 0.4g/l Cetrimide.

Cultural characteristics after 24-48 hours at 35-37°C.

Organisms (ATCC/WDCM)	Inoculum [CFU]	Growth	Colour of colony
<i>Escherichia coli</i> (25922/00013)	50-100	-/+	-
<i>Pseudomonas aeruginosa</i> (27853/00025)	50-100	+++	Greenish yellow pigment

References:

1. Bureau of Indian Standards (BIS), 2005, Draft IS 13428:2005

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

