



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Asparagine Proline Broth

Product Code: DM 2192

Application: - Asparagine Proline Broth is recommended for the cultivation of *Pseudomonas aeruginosa* using membrane filter technique.

Composition**

Ingredients	Gms / Litre
DL-Asparagine	2.000
L-Proline	1.000
Dipotassium phosphate, anhydrous	1.000
Magnesium sulphate	0.500
Potassium sulphate	10.000

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Pseudomonas aeruginosa is one of the major contaminants of natural, fresh and recreational water, sources being contaminated by wastewater. *Ps. aeruginosa* is an opportunistic pathogen that can multiply in recreational waters in the presence of sufficient nutrients. It produces a water soluble, fluorescent pigment in media containing asparagine and ethanol. Asparagine Proline Broth is also recommended for cultivation of *Ps. aeruginosa* by the membrane filter technique. The medium is recommended by BIS.

Asparagine Proline Broth contains both the enantiomeric forms of Asparagine, which is readily utilized by *Pseudomonas* for their growth. Phosphate and sulphates provide the ions for the growth as well as buffers the medium to promote the growth of the organism.

When 1 ml of sample is to be analyzed, use single strength medium (14.5 g/l). If larger portions of the sample (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 $37 \pm 1^\circ\text{C}$ for 48 hours. Examine for growth and fluorescence. The growth is further sub cultured on Milk Agar w/ Cetrimide (DM2273S).

Methodology

Suspend 14.5 grams (for single strength medium) or 29.0 grams (for concentrated medium) of powder media in 1000 ml distilled water containing 25 ml or 40 ml ethanol respectively. Shake well and heat to dissolve the medium completely. Distribute as desired in screw-capped bottles. Close the caps so that the seal in the lid just touches the lip of the bottle. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Tighten the caps of the bottles immediately after removal from the autoclave to prevent loss of ethanol by evaporation.

It is not advisable to use polypropylene caps without seals. Alternatively, ethanol may be sterilized separately by filtration and then added aseptically to the sterile cooled medium.





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Quality Control

Physical Appearance

White to cream homogeneous free flowing powder

Colour and Clarity of prepared medium

Colourless clear solution, without any precipitate

Cultural Response/Characteristics

DM 2192: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth
<i>Escherichia coli</i> ATCC 25922	50-100	none to poor
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	Luxuriant with greenish yellow pigment

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: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

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

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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