



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Pseudomonas Asparagine Broth

Product Code: DM 2096

Application: - Pseudomonas Asparagine Broth is used for presumptive determination of *Pseudomonas aeruginosa* from recreational or natural water as per APHA.

Composition**

Ingredients	Gms / Litre
DL-Asparagine	3.000
Dipotassium phosphate	1.000
Magnesium sulphate	0.500
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Recreational water in swimming pool is like a body of water holding in a structure. Microorganisms of concern in swimming pool are those causing infections of ear, skin and upper respiratory tract etc. *Pseudomonas aeruginosa* is one of those organisms which is responsible for a large percentage of swimming pool associated infection. Asparagine Medium is recommended for the microbiological analysis of water. This is an excellent enrichment medium for *P. aeruginosa*; It is also used in the multiple-tube technique for microbiological analysis of recreational waters. *from different sources* ⁽¹⁾. Pseudomonas Asparagine Broth medium is a relatively simple medium containing an amino acid DL-asparagine and two salts dipotassium phosphate and magnesium sulphate. Asparagine is the amino acid and carbon source while phosphate and sulphate provide the ions for the growth of *P. aeruginosa*. Dipotassium phosphate also helps in maintaining the buffering conditions of the medium. This medium is only a presumptive medium for *P. aeruginosa*, and further confirmatory tests are necessary for the identification. For five tubes multiple tube test, use 10 ml of single strength Asparagine Broth for inocula of 1 ml or less and 10 ml double strength Asparagine Broth for 10 ml inocula. For swimming pools, higher dilutions may be necessary. Incubate inoculated tubes at 35-37°C. After 24 hours and again after 48 hours of incubation examine tubes under long wave ultraviolet light in a darkened room. Production of a green fluorescent pigment indicates a positive presumptive test. Confirmation is performed by subculturing a loop from each tube in Acetamide Medium (DM2148). Development of purple colour within 24-36 hours of incubation at 35-37°C is a positive confirmed test for *P. aeruginosa*.

Methodology

Suspend 4.5 grams of powder media in 1000 ml distilled water. Shake well & Gently boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.





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Quality Control

Physical Appearance

White to cream homogeneous free flowing powder

Colour and Clarity of prepared medium

Colourless clear solution with slight precipitate.

Reaction

Reaction of 0.45% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH range

6.80-7.20

Cultural Response/Characteristics

DM 2096: Cultural characteristics observed after an incubation at 35-37°C for 20 - 24 hours.

Organism	Inoculum (CFU)	Growth
Pseudomonas aeruginosa ATCC 27853	50-100	luxuriant

Storage and Shelf Lifez

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8^o in sealable plastic bags for 2-5 days.

Further Reading

1.1. Eaton A. D., Clesceri L. S. and Greenberg A W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater , 21st Ed., APHA, Washington, D.C.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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