

Technical Information

Pseudomonas Agar (For Pyocyanin)

Product Code: DM 1119

Application: Pseudomonas Agar (For Pyocyanin) is recommended for the detection of pyocyanin production by *Pseudomonas* species.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	20.000
Potassium sulphate	10.000
Magnesium chloride	1.400
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Pseudomonas Agar devised by King et al ⁽¹⁾ and recommended in U.S. Pharmacopoeia ⁽²⁾ is used for detecting pyocyanin, a water soluble pigment by *Pseudomonas* species ⁽³⁾. This medium enhances the formation of pyocyanin but inhibits the production of fluorescein pigment. The fluorescein pigment diffuses from the colonies of *Pseudomonas* into the agar and shows blue colouration. Some *Pseudomonas* strains produce small amounts of fluorescein resulting in a blue-green colouration.

Potassium sulphate and magnesium chloride enhances the pyocyanin production and suppresses the fluorescein production. A pyocyanin-producing *Pseudomonas* strain usually also produce fluorescein which must be differentiated from other simple fluorescent pseudomonads by other means. Temperature can be a determining factor as most other fluorescent strains will not grow at 35°C. Rather, they grow at 25-30°C ⁽³⁾.

Methodology

Suspend 46.4 grams of powder media in 1000 ml distilled water containing 10 ml glycerol. Shake well & boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.64% w/v aqueous solution containing 1% v/v glycerol at 25°C.pH:-7.0±0.2

pH rangen 6.80-7.20

Cultural Response/Characteristics

DM 1119: Cultural response was observed after an incubation at 35-37°C for 18-48 hours.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth	Observed value (CFU)	Lot Recovery	Colour of Medium
<i>Pseudomonas aeruginosa</i> ATCC 9027	50-100	luxuriant	25 -100	>=50 %	blue-green
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	luxuriant	25 -100	>=50 %	blue-green

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° in sealable plastic bags for 2-5 days.

Further Reading

1. King, Ward and Raney, 1954, J.Lab. and Clin. Med., 44:301
2. The United States Pharmacopoeia, 2008, The United States Pharmacopoeial Convention, Rockville, MD.
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

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