Pseudomonas Agar (For Pyocyanin)

M119

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

Directions

Suspend 46.4 grams in 1000 ml distilled water containing 10 ml glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Pseudomonas Agar is based on the formulation described by King et al (1) and as recommended in U.S. Pharmacopoeia (2) for detecting pyocyanin, a water soluble pigment by *Pseudomonas* species (3). This medium enhances the elaboration of pyocyanin but inhibits the formation 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, which enhances the pyocyanin production and suppresses the fluorescein production. A pyocyanin-producing *Pseudomonas* strain will usually also produce fluorescein. It must, therefore, 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).

Quality Control

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

6.80-7.20

Cultural Response

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

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

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

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.

Revision : 2 / 2015