



## 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
<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

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## 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.

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