



Penicillin and Pimaricin Pseudomonas Agar Base (PP Pseudomonas Agar Base)

M1788

PP Pseudomonas Agar Base is recommended for selective isolation of *Pseudomonas* species on addition of supplements.

Composition**

Ingredients	Gms / Litre
Pancreatic digest of gelatin	16.000
Casein enzymic hydrolysate	10.000
Potassium sulphate	10.000
Magnesium chloride	1.400
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 52.4 grams in 1000 ml distilled water containing 5 ml glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add sterile rehydrated contents of PP Pseudomonas Selective Supplement (FD 264) and PP Pseudomonas Selective Supplement II (FD 265). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Pseudomonas species are aerobic, non-spore forming, gram negative rods, found in water, soil and plants including fruits and vegetables. *Pseudomonas aeruginosa* has become increasingly recognized as an emerging opportunistic pathogen of clinical relevance especially in patients with compromised host defense mechanisms. Several different epidemiological studies have found its occurrence as a nosocomial pathogen (1). *P.aeruginosa* strains produce two types of soluble pigments, the fluorescent pigment pyoverdine and the blue pigment pyocyanin. Pyocyanin (from "pyocyaneus") refers to "blue pus", which is a characteristic of suppurative infections caused by *P. aeruginosa*. Penicillin and Pimaricin Pseudomonas Agar Base is formulated as recommended by ISO Committee (2). The medium contains pancreatic digest of gelatin and casein enzymic hydrolysate which serves to provide essential nitrogenous nutrients and carbon required for the growth of *Pseudomonas*. Potassium sulphate and magnesium chloride serve to enhance pigment production. Addition of PP Pseudomonas Selective Supplement which contains Penicillin and PP Pseudomonas Selective Supplement II which contains Pimaricin (natamycin) to the medium helps in the selective isolation of *Pseudomonas*, thereby inhibiting the accompanying flora.

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 5.24% w/v aqueous solution (containing 1% v/v glycerol) at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M1788: Cultural characteristics observed with added 1% glycerol after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
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Cultural Response

<i>Pseudomonas fluorescens</i> ATCC 13525	50-100	luxuriant	$\geq 50\%$	greenish yellow
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	luxuriant	$\geq 50\%$	greenish yellow
<i>Escherichia coli</i> ATCC 25922	$\geq 10^3$	inhibited	0%	
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	inhibited	0%	

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared plates at 2-8°C in the dark for not more than 1 day. Use before expiry date on the label.

Reference

1. Murray P.R., Baron J.H., Pfaller M.A., Tenover J.C. and Tenover F.C., (Ed), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. International Organization for Standardization, 2009, Draft ISO/TS 11059:2009 (E).

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