Pseudomonas Agar Medium for Detection of Pyocyanin

Intended Use
Pseudomonas Agar Medium for Detection of Pyocyanin is used for enhancement of pyocyanin production by *Pseudomonas* species.

Summary
Pseudomonas species may produce water-soluble pigments in culture media. This property is sometimes used as a characteristic for the taxonomic classification of different species of *Pseudomonas*. Most strains of *P. aeruginosa* produce pyocyanin (blue) or pyoverdin (Yellow) or both, as well as pyorubrin (red), pyomelanin (Brown), or various combinations of these pigments.
Pseudomonas Agar (for Pyocyanin) is a modification of formulation described by King *et al.,* This medium is recommended by USP for use in Microbial Limit Tests.

Principle
Pancreatic Digest of Gelatin provides nutrients, amino acids and trace elements for growth. Magnesium chloride and Potassium sulfate enhance pyocyanin production. Glycerin as an energy source also increases pyocyanin production. Agar is the solidifying agent.

Formula*

Ingredients	**g/L**
Pancreatic Digest of Gelatin	20.0
Anhydrous Magnesium Chloride	1.4
Anhydrous Potassium Sulfate	10.0
Agar	15.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
For clinical samples follow appropriate techniques for handling specimens as per established guidelines.
For food and dairy samples, follow appropriate techniques for handling specimens as per established guidelines.
For water samples, follow appropriate techniques for handling specimens as per established guidelines and local standards.
Specimens should be obtained before antimicrobial agents have been administered.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 46.40 g of powder in 990 mL purified / distilled water.
2. Add 10 mL of glycerin and mix thoroughly.
3. Boil with frequent agitation to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control
Dehydrated Appearance: Light yellow to cream coloured, homogenous, free flowing powder.
Prepared Appearance: Light yellow coloured, clear to slightly opalescent gel forms in petridishes.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP and growth is observed after an incubation at 30°C-35°C for 18-24 hours.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30°C-35°C for 18 hours.

Indicative Properties: The test results observed are within the specified temperature and time, inoculating ≤100 cfu of appropriate microorganism.

Organism (ATCC)	Growth	Colour of colony	Pyocyanin
Pseudomonas aeruginosa (9027)	Good	Blue-green	Positive
Pseudomonas aeruginosa Strain Boston 41501 (27853)	Good	Blue-green	Positive

Note: For Good growth - Growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum.

Interpretation of Results

1. Presence of pyocyanin is appear with a blue to blue green pigment in the colonies and surrounding medium.
2. Confirm the presence of pyocyanin by adding several drops of chloroform and observe for a blue colour in chloroform.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Garibaldi J.A. Journal of Bacteriology, Nov. 1967.1296-1299.
2. Judy A. Daly, Boshard R. and John M. Masten, Journal of clinical Microbiol. June 1984, 742-743.
3. Data on File: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201160330100	Dehydrated Culture Media	100 g
201160330500	Dehydrated Culture Media	500 g