



PSEUDOMONAS P AGAR

- For in vitro use only -

Catalogue No. PP92

Our Pseudomonas P Agar is used for the detection and differentiation of *Pseudomonas aeruginosa* from other pseudomonads based on pyocyanin production.

Pseudomonas aeruginosa is the only species of *Pseudomonas* known to produce and excrete the pigment, pyocyanin. Pseudomonas P Agar was a medium developed by King, Ward, and Raney that improved pyocyanin production by *Pseudomonas aeruginosa*.

Our formulation is consistent with the current USP recommendation. The medium contains pancreatic digest of gelatin, which provides the organism with nitrogen, amino acids, vitamins, and other essential growth factors; also the low phosphate content of this peptone makes it an ideal choice since the presence of phosphate is inhibitory to pyocyanin production. Glycerol is added as an alternate carbon source. Magnesium chloride and potassium sulfate are cationic salts, which act as activators for pyocyanin production. Pyocyanin is a blue, water soluble pigment that diffuses into the medium surrounding the colonies. Pseudomonas P Agar should be used in conjunction with Pseudomonas F Agar since the determination of pyocyanin and fluorescein production aids in the identification of *Pseudomonas aeruginosa*.

Formula per Litre of Medium

Pancreatic Digest of Gelatin	20.0 g
Magnesium Chloride.....	1.4 g
Potassium Sulfate.....	10.0 g
Glycerol.....	10.0 g
Agar	15.0 g

pH 7.0 ± 0.2

Recommended Procedure

1. Allow plates to adjust to room temperature prior to inoculation.
2. Prepare a fresh, pure culture of *Pseudomonas*.
3. Streak plate as to obtain isolated colonies.
4. Incubate plates aerobically at 35°C.
5. Examine after 18-24 hours.
6. If no growth is observed, re-incubate plates for an additional 24 hours.

Interpretation of Results

Pseudomonas P Agar is used to isolate, and detect pigment production by *Pseudomonas aeruginosa*. *Pseudomonas aeruginosa* produces a variety of water-soluble pigments; pyocyanin being one of them. Pyocyanin is a blue, phenazine pigment that diffuses into the agar medium to give the surrounding medium a blue coloration. If growth is observed, pyocyanin production is determined by visual examination of the plates for coloration of the medium surrounding the colonies. A positive result is the observance of blue pigment in the agar. It should be noted that occasionally non-pigmented strains of *P. aeruginosa* may be encountered.

Additional biochemical and/or serological tests should be performed on isolated colonies from pure culture in order to complete identification.

- *Pyocyanin production can be confirmed by extracting the pigment with chloroform*

Quality Control

After checking for correct pH, colour, depth, and sterility, the following organisms are used to determine the growth performance of the completed medium.

Organism	Expected Result
<i>Pseudomonas aeruginosa</i> ATCC 27853	Growth, blue colonies and medium
<i>Burkholderia cepacia</i> ATCC 25609	Growth, no pigment

Storage and Shelf Life

Our *Pseudomonas* P Agar should be stored away from direct light at 4 to 8°C. The medium side should be uppermost to prevent excessive accumulation of moisture on the agar surface. Under these conditions this medium has a shelf life of 8 weeks from the date of manufacture.

Ordering Information

Cat#	Description	Format
PP92	<i>Pseudomonas</i> P Agar [Standard 15x100-mm plate]	10/pkg

References

1. King EO, Ward MK, Raney EE. Two simple media for the demonstration of pyocyanin and fluorescein. J Lab Clin Med 1954; 44: 301.
2. Difco Manual. 11th edition. Difco Laboratories: Maryland 1998.
3. Murray, P. R., E. Baron, M. Pfaller, F. Tenover, R. Tenover. Manual of Clinical Microbiology. 7th ed. Washington: ASM, 1999.

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