

Pseudomonas Isolation Agar Plate

MP406

Intended Use

Recommended for selective isolation and identification of *Pseudomonas aeruginosa* from clinical and non clinical specimens.

Composition**

Ingredients	g / L
Peptone	20.000
Magnesium chloride	1.400
Potassium sulphate	10.000
Triclosan (Irgasan)	0.025
Glycerol	20.000ml
Agar	13.600
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

Pseudomonas aeruginosa is an important human pathogen commonly found in nosocomial infections. It successfully combines adaptability to a variety of moist environments with a collection of potent virulence factors (1). *Pseudomonas* infections usually occur at any site where moisture tends to accumulate e. g. tracheostomies, in-dwelling catheters, burns, the external ear and weeping cutaneous wounds (2). Pseudomonas Isolation Agar Base, used for the selective isolation and identification of *P. aeruginosa*, is a modification of Medium A, originally formulated by King, Ward and Raney (3). The medium contains pigment-enhancing components and the selective agents, triclosan (4) which selectively inhibits non-pseudomonads. The pigment-enhancers i.e. potassium sulphate and magnesium chloride enhance the blue or blue-green pigment production by *P. aeruginosa*, thus aiding in its identification.

Peptone provides nitrogenous compounds and other essential growth nutrients. Glycerol is a source of energy and promotes pyocyanin i.e. pigment production which is characteristic of *Pseudomonas* (5,6). Potassium sulphate and magnesium chloride enhance pyocyanin production. Triclosan (7) selectively inhibits gram-positive and gram-negative bacteria but *Pseudomonas* species are resistant to it. Some pyocyanin producing strains may also produce small amounts of fluorescein, resulting in the production of a blue-green to green pigment. Presumptive *Pseudomonas* should be further confirmed by performing biochemical tests, as some strains of *Pseudomonas* do not produce pyocyanin (8).

Type of Specimen

Clinical specimen: Pus, wound, urine, etc.; food samples; water samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (9,10).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (11).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (12). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the pack. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

8. Gaby W. L. and Free E., 1958, J. Bacteriol., 76:442
9. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
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11. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
12. Lipps WC, Braun-Howland EB, Baxter TE, eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.

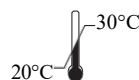
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