

Pseudomonas Isolation Agar (NCM0150)

Intended Use

Pseudomonas Isolation Agar is used for the isolation of *Pseudomonas aeruginosa* and other *Pseudomonas* spp. in a laboratory setting. Pseudomonas Isolation Agar is not intended for use in the diagnosis of disease or other conditions in humans.

Description

Pseudomonas Isolation Agar is based on Medium A described by King, Ward, and Raney. This medium is very useful for isolating *Pseudomonas* spp. Pseudomonas Isolation Agar includes Irgasan®, a potent broad spectrum antimicrobial not active against *Pseudomonas* spp. This medium is selective and formulated to enhanced formation of blue or blue-green pyocyanin pigment by *Pseudomonas aeruginosa*. The pigment diffuses into the medium surrounding growth.

Typical Formulation

Enzymatic Digest of Gelatin	20.0 g/L
Magnesium Chloride	1.4 g/L
Potassium Sulfate	10.0 g/L
Irgasan®	0.025 g/L
Agar	13.6 g/L

Supplement /Liter

Glycerol, 20 mL

Final pH: 7.0 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution

Refer to SDS

Preparation

1. Suspend 45 g of the medium in one liter of purified water containing 20 mL of glycerol.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing, and light beige.

Prepared Appearance: Prepared medium is trace to slight hazy and light beige.

Expected Cultural Response: Cultural response on Pseudomonas Isolation Agar incubated aerobically at 35 ± 2°C and examined for growth after 18 - 48 hours.

Microorganism	Approx. Inoculum (CFU)	Expected Results
<i>Escherichia coli</i> ATCC® 25922	300 - 1000	Completely Inhibited
<i>Proteus mirabilis</i> ATCC® 12453	300 - 1000	Completely Inhibited
<i>Pseudomonas aeruginosa</i> ATCC® 10145	10 - 300	Growth; green to blue-green colonies
<i>Pseudomonas aeruginosa</i> ATCC® 35422	10 - 300	Growth; green to blue-green colonies

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

1. Inoculate medium using the streak plate method to obtain isolated colonies.
2. Incubate for 18 – 48 hours at 35°C.

Results

Examine for presence of good growth. *Pseudomonas aeruginosa* colonies will be green to blue-green with pigment that diffuses into the medium.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.
2. Some strains of *Pseudomonas aeruginosa* may fail to produce pyocyanin.
3. Non-*Pseudomonas aeruginosa* strains that are not completely inhibited on this medium may be encountered and must be differentiated from *Pseudomonas aeruginosa*.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. King, E. O., M. K. Ward, and E. E. Raney. 1954. Two simple media for the demonstration of pyocyanin and fluorescein. *J. Lab. Clin. Med.* 44:301-307.
2. Furia and Schenkel. 1968. Soap and chemical specialties. January.
3. Pezzlo, M. (ed.). 1992. Aerobic bacteriology, p. 1.0.0-1.20.47. *In* H. D. Isenberg (ed.). *Clinical microbiology procedures handbook*, vol. 1. American Society for Microbiology, Washington, D.C.