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PSEUDOMONAS AGAR P (FOR PYOCYANIN) TM 267

INTENDED USE
For detection of Pyocyanin production by Pseudomonas species

COMPOSITION

Ingredients	Gms/Ltr.
Peptic digest of animal tissue	20.000
Agar	15.000
Potassium sulphate	10.000
Magnesium chloride	1.400

PRODUCT SUMMARY AND EXPLANATION

Pseudomonas Agar is based on the formulation described by King et al and as recommended by U.S. Pharmacopoeia for detecting pyocyanin, a water soluble pigment by Pseudomonas species from clinical specimens such as stools, wounds, and urine. It is also recommended for microbial limit tests for pharmaceutical and other biological preparations by USP. Pseudomonas species are commonly isolated pathogen and is the significant causative agent of nosocomial, skin and burn infections. Pseudomonas strains are reported to produce phenazine pigments like Pyocyanin- blue green redox-active secondary metabolite pigment, pyorubin-rust brown pigment, -oxyphenzine- a breakdown product of Pyocyanin, pyoverdin-a water soluble yellow green pigments also known as fluorescein. Pyocyanin is readily recovered in large quantities in sputum from patients with cystic fibrosis, an infection caused by Pseudomonas. This medium enhances the formation of Pyocyanin and/or pyorubin and reduces that of fluorescein

PRINCIPLE

Peptic digest of animal tissue provides the carbon and nitrogen necessary for bacterial growth. Potassium sulphate and magnesium chloride, which enhances the pyocyanin production and suppresses the fluorescein production. Low content of phosphorous in the medium also aids in inhibiting the production of fluorescein.

INSTRUCTION FOR USE

1. Dissolve 46.4 grams in 1000 ml distilled water containing 10 ml glycerol.
2. Gently heat to boiling to dissolve the medium completely.
3. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream to yellow colour, homogeneous free flowing powder

Appearance of prepared medium: Yellow colour, clear to slightly opalescent gel

pH (at 25°C): 7.0 ± 0.2

INTERPRETATION:

Culture characteristics observed after incubation period of 18 - 48 hours at 35 ± 2°C.

Microorganisms	ATCC	Inoculum (CFU)	Growth	Appearance of colony	Standard recovery (%)
Pseudomonas aeruginosa	9027	50-100	Luxuriant	Blue Green	≥ 70%
Pseudomonas aeruginosa	27853	50-100	Luxuriant	Blue Green	≥ 70%

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

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. United States Pharmacopoeia, 2008, United States Pharmacopoeia Convention, Inc., Rockville, MD.
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Daly J A, Boshard R, and Matsen J M, 1984, J Clin Microbiol. 19: 742
5. Lau GW, Hassett DJ, Ran H, Kong F., 2004. Trends Mol Med. 10:599.

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.