TM 1812 – PSEUDOMONAS AGAR FOR DETECTION OF PYOCYANIN (as per IP)

INTENDED USE

For detection of Pyocyanin production by *Pseudomonas* species.

PRODUCT SUMMARY AND EXPLANATION

Pseudomonas Agar is based on the formulation described by King et al and as recommended by Indian Pharmacopoeia for detecting pyocyanin, a water soluble pigment by *Pseudomonas* species from clinical specimens such as stools, wounds, and urine. *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.

COMPOSITION

Ingredients	Gms / Ltr
Pancreatic digest of gelatin	20.000
Anhydrous potassium sulphate	10.000
Anhydrous magnesium chloride	1.400
Agar	15.000

PRINCIPLE

The medium consists of Pancreatic digest of casein which provides essential nutrients for growth of *Pseudomonas*, while glycerol provides carbon and energy to the cell. The pyocyanin pigment diffuses from the colonies of *Pseudomonas* into the agar and shows blue colouration. Potassium sulphate and magnesium chloride enhances the pyocyanin production and suppresses the fluorescein production. Low content of phosphorous in the medium also aids in inhibiting the production of fluorescein.

Some *Pseudomonas* strains produce small amounts of fluorescein resulting in a blue-green colouration. Strains of *Pseudomonas aeruginosa* that may fail to produce pyocyanin are not detected in this medium. Production of other pigments may mask the presence of pyocyanin.

INSTRUCTION FOR USE

- Dissolve 46.4 grams in 1000 ml purified/distilled water containing 10 ml glycerin.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Characteristic colonial morphology	Fluorescence in UV light	Oxidase	Incubation Temperature	Incubation Period
Pseudomonas aeruginosa	27853	50 -100	Luxuriant	>=70 %	Generally greenish	Positive	Positive	33-37°C	less than 3 days
Pseudomonas aeruginosa	9027	50-100	Luxuriant	>=70 %	Generally greenish	Positive	Positive	33-37°C	less than 3 days

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°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.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
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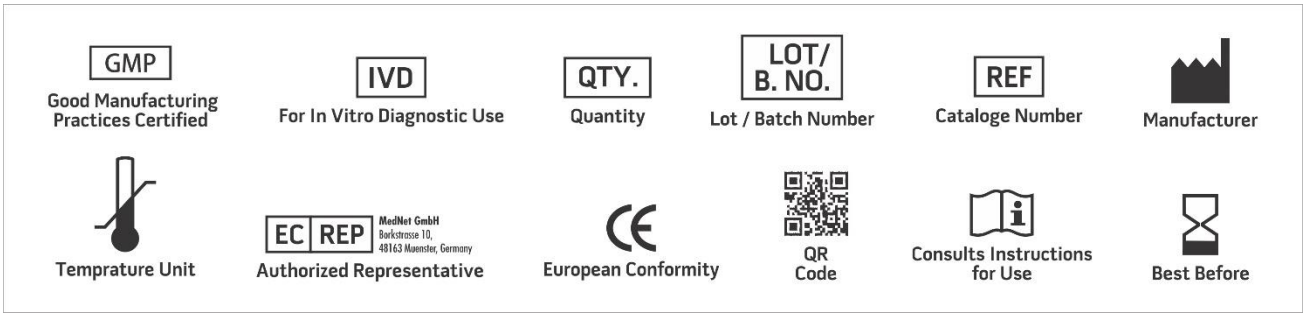

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
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