TM 1811 – PSEUDOMONAS AGAR FOR DETECTION OF FLUORESCEIN (as per IP)

INTENDED USE

For detection of fluorescein production by *Pseudomonas* species

PRODUCT SUMMARY AND EXPLANATION

Pseudomonas Agar (For Fluorescein) is based on the formula described by King et al and modified as in the Indian Pharmacopoeia for the detection of fluorescein production a water soluble, chloroform insoluble fluorescent pigment by *Pseudomonas* species and in microbial limit tests. *Pseudomonas* are ubiquitous in environment and is common causative agent of burn, skin and nosocomial infections. They are also common contaminant of pharmaceutical and cosmetics related preparations. *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.

This medium enhances the elaboration of fluorescein by *Pseudomonas* and inhibits the pyocyanin formation. The fluorescein pigment diffuses from the colonies of *Pseudomonas* into the agar and shows yellow fluorescent colouration. Some *Pseudomonas* strains produce small amounts of pyocyanin resulting in a yellow-green colouration.

COMPOSITION

Ingredients	Gms / Ltr
Pancreatic digest of casein	10.000
Peptic digest of animal tissue	10.000
Anhydrous dibasic potassium phosphate	1.500
Magnesium sulphate	1.500
Agar	15.000

PRINCIPLE

The medium consists of Peptic digest of animal tissue which provides the essential nitrogenous nutrients, carbon, sulfur and trace elements for the growth of *Pseudomonas*. These nutrients are also conducive to the production of fluroescein. Peptone and phosphorous in the medium enhance the production of pyoverdin/ fluorescein pigment. Dipotassium phosphate buffers the medium while magnesium sulphate provides necessary cations for the activation of fluorescein production. Salt concentration exceeding 2% affects pigment production. UV illumination may be bactericidal, so make sure that there is good growth before placing culture under UV light. The presence of *Pseudomonas* is confirmed by a positive oxidase test.

INSTRUCTION FOR USE

- Dissolve 37.23 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	9027	50-100	Luxuriant	>=70%	Generally colourless to yellowish	Positive	Positive	33-37°C	18-48 Hours
Pseudomonas aeruginosa	27853	50-100	Luxuriant	>=70%	Generally colourless to yellowish	Positive	Positive	33-37°C	18-48 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

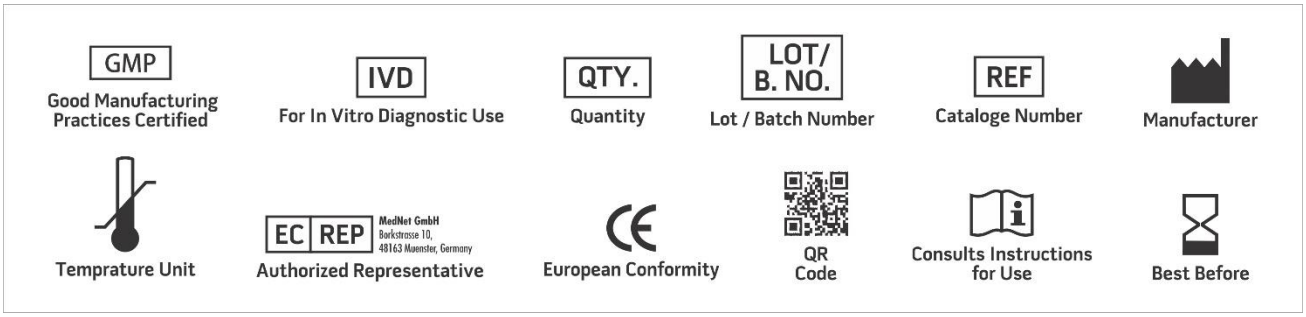
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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

1. King, Ward and Raney, 1954, J.Lab. Clin. Med., 44 : 301.
2. Indian Pharmacopoeia, 2007, Government of India, Ministry of Health and Family Welfare, Publications and Information Directorate (CSIR), New Delhi.
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification and Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.



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

***For Lab Use Only**

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