PSEUDOMONAS AGAR (FLUORESCEIN)

PAFL-0EP-500

- **Principle**

Pseudomonas Agar Fluorescein, described by King, Ward and Raney (1954), is a non-selective medium developed for the detection and enhancement of fluorescein (pyoverdine) production by Pseudomonas species. It is particularly useful for the identification of fluorescent pseudomonads, including Pseudomonas aeruginosa, based on their characteristic pigment production under ultraviolet light.

The medium contains tryptone and proteose peptone as sources of carbon and nitrogen, providing essential nutrients for growth and supporting fluorescein production. Glycerol is included as an additional carbon source and promotes pigment synthesis. Dipotassium phosphate stimulates fluorescein production and may inhibit the formation of pyocyanin, thereby enhancing the visibility of fluorescent pigments. Magnesium sulphate supplies essential cations required for optimal pigment expression. Agar is incorporated as the solidifying agent.

Under appropriate incubation conditions, fluorescein-producing strains develop a yellow-green, fluorescent pigment that can be observed under UV illumination, aiding in the differentiation and presumptive identification of fluorescent Pseudomonas species.

- **Regulatory compliance**

This product is manufactured under a quality management system in accordance with ISO 9001 and ISO 13485, and its formulation and quality control comply with applicable international standards, such as ISO 11133, where relevant.

- **Composition**

Ingredients	**g/L**
Tryptone	10.00
Proteose Peptone	10.00
Dipotassium Phosphate	1.50
Magnesium Sulphate	1.50
Agar	15.00

- **Preparation**

Dissolve 38.00 grams in 1,000 ml distilled water contain 1% glycerol. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

- **Applications and use**

Employed for the presumptive identification and differentiation of fluorescent Pseudomonas species in clinical diagnostics, food and beverage testing, water quality control and environmental monitoring. It is used as part of routine identification workflows following

primary isolation, particularly in laboratories investigating contamination, spoilage organisms or opportunistic pathogens.

- **Quality control**

Solubility	w/o rests
Appearance	Fine powder
Colour of the dehydrated medium	Beige
Colour of the prepared medium	Amber
Final pH (25 °C)	7.0 ± 0.2

- **Microbiological test**

Cultural characteristics observed after incubation at 35±2 °C for 18-24 hours. Inoculum 50-100 CFU.

Microorganism	ATCC	Growth	Pigment production
Pseudomonas aeruginosa	27853	Luxuriant	Greenish yellow

- **Storage**

The product is highly hygroscopic; keep the container always closed and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Temp. Min.:2 °C Temp. Max.:25 °C.

Note: Sterilize media immediately after reconstitution.

- **Bibliography**

Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.

Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.

King, E. O., M. K. Ward, and D. E. Raney. (1954). Two simple media for the demonstration of pyocyanin and fluorescein. J. Lab. Clin. Med. 44:301.

Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), Standard methods for the examination of water and wastewater. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

- **Product use limitation**

This product is developed, designed and supplied exclusively for research use only. It is not intended for diagnostic applications or drug development, and it is not suitable for administration to humans or animals.