# TM 1200 – FLUOROGENIC PSEUDOMONAS AGAR BASE (MUG PSEUDOMONAS AGAR)

## INTENDED USE

For selective isolation of Pseudomonas aeruginosa by fluorogenic method.

## PRODUCT SUMMARY AND EXPLANATION

*Pseudomonas aeruginosa* (also known as *Pseudomonas pyocyanea*) is a gram-negative, aerobic, rod-shaped bacterium. Like other *Pseudomonas, P. aeruginosa* secretes a variety of pigments, including pyocyanin (blue-green), fluorescein (yellow - green and fluorescent), and pyorubin (red-brown). King et al developed Pseudomonas Agar P (i.e. King A media) for enhancing pyocyanin and pyorubin production and Pseudomonas Agar F (i.e. King B media) for enhancing fluorescein production.

Fluorogenic Pseudomonas Agar Base is devised based on the formula described by King et al. except fluorogenic mixture. It is used as the selective medium for the isolation of *P. aeruginosa* from pus, sputum and drains etc.

## COMPOSITION

| Ingredients | Gms / Ltr |
|---|---|
| **Gelatin peptone** | 18.000 |
| **Magnesium chloride** | 1.400 |
| **Potassium sulphate** | 10.000 |
| **Cetrimide** | 0.300 |
| **Fluorogenic mixture** | 2.050 |
| **Agar** | 15.000 |

## PRINCIPLE

The medium consists of peptone which provides necessary nutrients for the growth of microorganism. Cetrimide (Cetyltrimethylammonium bromide) is incorporated in the medium to inhibit bacteria other than *P. aeruginosa*. It acts as a quaternary ammonium compound, cationic detergent that causes nitrogen and phosphorus to be released from bacterial cells other than *P. aeruginosa. P. aeruginosa* cleaves the fluorogenic compound to release the fluorogen which produces a visible fluorescence under long wave UV light.

## INSTRUCTION FOR USE

- Dissolve 46.75 grams in 1000 ml purified/distilled water containing 10ml glycerol.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

## QUALITY CONTROL SPECIFICATIONS

**Appearance of Powder** : Cream to yellow homogeneous free flowing powder.

**Appearance of prepared medium** : Light amber coloured, opalescent gel with slight precipitate forms in Petri plates.

**pH (at 25°C)** : 7.2 ± 0.2

## INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Fluorescence (under UV) | Incubation Temperature | Incubation Period |
|---|---|---|---|---|---|---|---|
| *Pseudomonas aeruginosa* | 27853 | 50-100 | Good-luxuriant | >=50% | Positive | 35-37 °C | 24 - 48 Hours |
| *Stenotrophomonas maltophila* | 13637 | $>=10^4$ | Inhibited | 0% | - | 35-37 °C | 18 - 24 Hours |
| *Staphylococcus aureus subsp. aureus* | 25923 | $>=10^4$ | Inhibited | 0% | - | 35-37 °C | 18 - 24 Hours |
| *Escherichia coli* | 25922 | $>=10^4$ | Inhibited | 0% | - | 35-37 °C | 18 - 24 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 2-8°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.

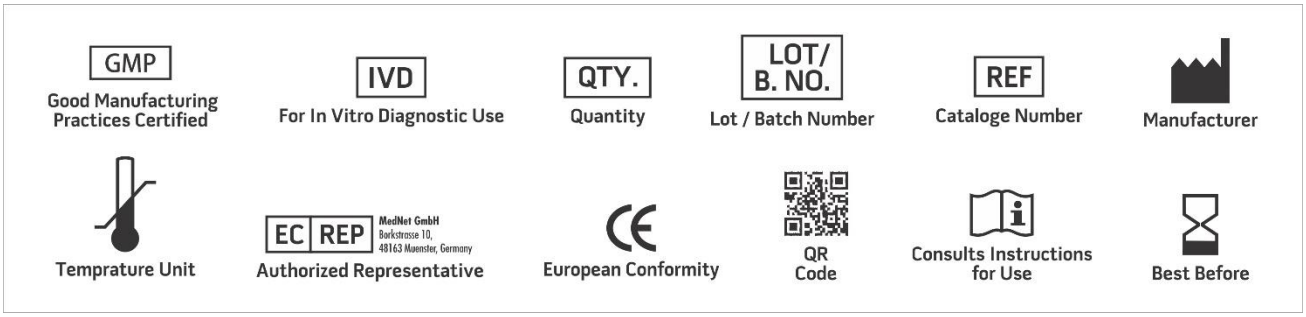
**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

## DISPOSAL

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

## REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. King, Ward and Raney, 1954, J. Lab. Clin. Med., 44:301.




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

***For Lab Use Only**

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