

70887 Cetrимide Agar (Pseudomonas Selective Agar Base)

Solid culture medium for selective isolation of *Pseudomonas aeruginosa* and enhances fluorescein and pyocyanin pigment production. The Cetrимide Agar is based on the *Pseudomonas aeruginosa* strains enormous resistance of the Quaternary Ammonium compounds. With regard to the Cetiltrimethyl-Ammonium Bromide there has been growth at 1 g/l concentrations, but in such cases, it has been very poor and slow. An inhibitor of 0.3-0.5 g/l, the rest of the fastidious accompanying flora, both gram-positive and gram-negative, as well as other species of *Pseudomonas* are inhibited.

Composition:

| Ingredients | Grams/Litre |
|---------------------------------|-------------|
| Gelatine peptone | 20.0 |
| Magnesium chloride | 1.4 |
| Potassium sulfate | 10.0 |
| Cetiltrimethyl-Ammonium Bromide | 0.3 |
| Agar | 15.0 |
| Final pH (at 25 °C) 7.2 ± 0.2 | |

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:

Suspend 46.7 g in 1 liter distilled water and add 10 ml of glycerol. Bring to boil and distribute into tubes or flasks. Sterilize at 121°C for 15 minutes.

Principle and Interpretation:

Cetrимide Agar is used as a selective medium for the isolation of *Pseudomonas aeruginosa* from pus, sputum and drains, etc. Also used for determining the ability of an organism to produce fluorescein and pyocyanin (Antibiotica). Cetrимide (Cetyltrimethylammonium bromide; Cat. No. 52370) is incorporated in the medium to inhibit bacteria other than *Pseudomonas aeruginosa*. It acts as a quaternary ammonium compound and cationic detergent which causes nitrogen and phosphorus to be released from bacterial cells other than *Pseudomonas aeruginosa*. For the isolation of *Pseudomonas aeruginosa*, plates of Cetrимide Agar should be inoculated from non-selective medium such as Brain Heart Infusion Broth (Cat. No. 70138) or Tryptone Soya Broth (Cat. No. 22092). If the count is high the test sample can be directly inoculated onto this medium. *Pseudomonas aeruginosa* colonies may appear pigmented blue, bluegreen or nonpigmented.

Cultural characteristics after 24 hours at 35-37°C.

| Organisms (ATCC) | Growth | Pigmentation |
|--|--------------|--------------|
| <i>Pseudomonas aeruginosa</i> (27853) | + | + |
| <i>Pseudomonas putida</i> (12633) | + | - |
| <i>Xanthomonas maltophilia</i> (13637) | - | - |
| <i>Escherichia coli</i> (25922) | - or partial | - |



References:

1. Brown, V.I., Lowbury, E.J.L. 1965 Use of an improved cetrimide agar medium and of culture methods for *Pseudomonas aeruginosa* J. Clin. Pathol. 18: 752
2. King, E.O., M.K. Ward, D.E. Raney. 1954 Two simple media for the demonstration of pyocyanin and fluorescein. J. Lab. Clin. Med. 44:301-307
3. Lennette, E.H., Ballows, A., Hausler, W.J.Jr., and Shadomy, H.J. Manual of Clinical Microbiology. 4th ed. 1985 Washington D.C.: American society for Microbiology.
4. Mac Faddin, Jean F., Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria Vol.1 1985 Baltimore, MD. Williams & Wilkins.
5. Washington, J.A. Laboratory Procedures in Clinical Microbiology 1981. Springer-Verlag, New York

Precautions and Disclaimer

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