



Cetrimide Broth

M862

Cetrimide Broth is used for the selective cultivation of *Pseudomonas aeruginosa*.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Beef extract	10.000
Sodium chloride	5.000
Cetrimide	0.300
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 25.3 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Pseudomonas aeruginosa grows well on all normal laboratory media. Cetrimide Broth Base is the modification of the formula designed by King, Ward and Raney (1) and is useful for the cultivation of *P. aeruginosa*. This medium is selective as it contains cetrimide (Cetyl trimethyl ammonium bromide), which inhibits other bacteria except *P. aeruginosa*. This medium is therefore, important in the identification of *P. aeruginosa*. Cetrimide Broth is used for the examination of cosmetics (2) and clinical specimens (3, 4) for the presence of *P. aeruginosa*, as well as for evaluating the efficacy of disinfectants against this organism (5).

Peptic digest of animal tissue and beef extract provide necessary nutrients for *P. aeruginosa*. Cetrimide acts as a quaternary ammonium, cationic detergent that causes release of nitrogen and phosphorus from bacterial cells other than *Pseudomonas aeruginosa*. Sodium chloride maintains osmotic equilibrium in the medium.

Quality Control

Appearance

Cream to yellow coloured homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent solution in tubes

Reaction

Reaction of 2.53% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth
Cultural Response <i>Escherichia coli</i> ATCC 25922	>=10 ³	inhibited
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	>=10 ³	inhibited

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1. King E.O., Ward M.K. and Raney D.E., 1954, J. Lab. Clin. Med., 44(2):301.
2. USFDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.
3. Murray P. R., Baron J. H., Pfaller M. A., Tenover J. C. and Tenover F. C., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
4. Forbes B. A., Sahm A. S. and Weissfeld D. F., Bailey & Scotts Diagnostic Microbiology, 10th Ed., 1998, Mosby, Inc., St. Louis, Mo.
5. Williams, (Ed.), 2005, Official Methods of Analysis of the Association of Official Analytical Chemists, 19th Ed., AOAC, Washington, D.C.

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