Cetrimide Broth

M862

Intended Use:

Recommended for selective cultivation of *Pseudomonas aeruginosa.*

Composition**

Ingredients	Gms / Litre
Peptone	10.000
HM peptone B#	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

Equivalent to Beef extract

Directions

Suspend 25.3 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes or flasks or as desired. 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).

Peptone and HM peptone B 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.

Type of specimen

Clinical samples - Blood, pus, skin samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets

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.

Organism	Inoculum (CFU)	Growth
Escherichia coli ATCC 25922	>=10^4	inhibited
Pseudomonas aeruginosa ATCC 27853	50-100	luxuriant
Staphylococcus aureus ATCC 25923	>=10^4	inhibited

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., Jorgensen J. H. and Yolken R. H., (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.

Revision : 02 / 2017