Letheen Broth (Twin Pack)

Intended Use
Letheen Broth (Twin Pack) is a medium recommended for determination of bactericidal activity of quaternary ammonium compounds using *Escherichia coli* or *Staphylococcus aureus*.

Summary
Letheen Broth is used to determine the phenol co-efficient of cationic surfactants as recommended by the Official Methods of Analysis of the Association of Official Analytical Chemists (AOAC). It is also used in hygiene swabbing protocols where it is necessary to neutralize quaternary ammonium compounds. A modification of FDA Broth, Letheen Broth is easily prepared and has a clear appearance aiding in visual inspection for growth.

Principle
Beef extract, casein enzymic hydrolysate, supply essential nutrients and other trace elements for the microbial growth. Lecithin and polysorbate 80 enables the recovery of bacteria from solutions containing residues of disinfectant used in sanitization of utensils and equipments. Lecithin neutralizes quaternary ammonium compounds and polysorbate 80 neutralizes phenolic disinfectants, hexachlorophene and formalin. Dehydrated medium may appear moist with brown sugar appearance, which does not indicate deterioration.

Formula*

Ingredients	**g/L**
Peptone	10.0
Beef Extract	5.0
Sodium Chloride	5.0
Lecithin	0.7
Polysorbate 80	5.0ml
Final pH (at 25°C)	7.0 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 20.70 g of the powder of Part A in 995 mL purified / distilled water and add 5 ml of Part B.
2. Mix thoroughly.
3. Boil with frequent agitation, to dissolve the powder completely. DO NOT OVERHEAT.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control
Dehydrated Appearance: Cream to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Light yellow to amber coloured, clear solution without any precipitate.
Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 35°C-37°C.

Organisms (ATCC)	**Growth**
Escherichia coli (25922)	Good
Staphylococcus aureus subsp. *aureus* (25923)	Good

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Association of Analytical Chemists,(1995). Official methods of analysis, 16th edition, section 6. Association of Official Analytical Chemists, Washington, D.C.
2. Roberts, D., Hooper, W. and Greenwood, M. (1995). Methods for the examination of food for micro-organisms of public health significance, 2nd edition, section 5.10, Practical Food Microbiology. Butler & Tanner. ISBN 0 901144 36 3.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201120180500	Dehydrated Culture Media	500 g