Letheen Broth (with tween)
SKU: 700003300, 700003301, 700003302, 700003303, 700004505
NCM0116

Intended Use
Letheen Broth is primarily used for assessing the bactericidal activity of quaternary ammonium compounds and is not intended for use in the diagnosis of disease or other conditions in humans.

Description
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 contains lecithin to neutralize quaternary ammonium compounds and Polysorbate 80 to neutralize phenols, hexachlorophene, formalin and (with lecithin) ethanol. Letheen Broth is easily prepared and has a clear appearance aiding in visual inspection for growth.

The American Society for Testing Materials (ASTM) specifies the use of Letheen Broth in the Standard Test Method for Preservatives in Water Containing Cosmetics.

Typical Formulation

Peptone	10.0 g/L
Beef Extract	5.0 g/L
Sodium Chloride	5.0 g/L
Lecithin	0.7 g/L
Polysorbate 80	5.0 g/L

Final pH: 7.0 ± 0.2 at 25°C
Formula is adjusted and/or supplemented as required to meet performance specifications.

Precaution
Refer to SDS

Preparation
1. Dissolve 25.7 grams of the medium in one liter of purified water.
2. Heat with frequent agitation to completely dissolve the medium if necessary.
3. Dispense into final containers.
4. Autoclave at 121°C for 15 minutes.

Test Procedure
There are a variety of methods which use Letheen Broth and the appropriate references should be consulted. For example:

Phenol co-efficient testing - Subculture from disinfectant dilutions into 10ml volumes of Letheen Broth.

Hygiene swabbing - Swab measured area or specific equipment and place in 10ml volume of Letheen Broth. Area to be swabbed and volume of medium may vary depending upon swabbing protocol used. Incubate at 37°C aerobically for 24-48 hours.

Quality Control Specifications
Dehydrated Appearance: Powder is slightly clumped and beige in color.

Prepared Appearance: Prepared medium is a clear, yellow liquid.

Expected Cultural Response:
The medium was prepared according to label directions and inoculated with the organisms listed below. Cultures were incubated aerobically at 37 ± 1°C and examined for growth at 24 to 72 hours.

MICROORGANISM	ATCC	APPROX. INOCULUM (CFU)	EXPECTED RESULTS
Escherichia coli	11229	Satisfactory growth	Satisfactory growth
Staphylococcus aureus	6538	Satisfactory growth	Satisfactory growth

Results
Refer to appropriate references for results.

Expiration
Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing or appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedures
Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage
Store dehydrated culture media at 2-8°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed. This formulation is very hygroscopic and must be stored carefully as instructed.

References
1. American Society for Testing Materials, (1998). Standard Test Method for Preservatives in Water-Containing Cosmetics. E640-78. Annual Book of ASTM Standards, Philadelphia, PA.
2. Association of Analytical Chemists, (1995). Official methods of analysis, 20th edition, section 6. Association of Official Analytical Chemists, Washington, D.C.
3. 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.