



HiCulture™ Sterile Swabs w/Letheen Broth

MS5397

Intended Use:

Recommended for determination of bacterial activity of quaternary ammonium compounds using *Escherichia coli* or *Staphylococcus aureus* ATCC 6538.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
HM peptone B #	5.000
Lecithin	0.700
Polysorbate 80	5.000
Sodium chloride	5.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Using the capped swab provided along with the Saline containing tube, collect the sample or specimen from surface. Discard the cap of the tube and insert the capped swab with the sample till the bottom of the medium. Tighten the cap firmly. The specimen will be preserved during transportation and also the viability of the organisms will be maintained but it will diminish over the time. Some growth of contaminants may occur during longer period of transport. After the transportation, the specimen should be inoculated in proper medium as soon as possible. The cultures on transport swabs must not be kept at room temperature for more than 24 hours.

Principle And Interpretation

Letheen Broth was developed by Quisno, Gibby and Foter (2) by the addition of lecithin and Polysorbate 80 to FDA Broth. Letheen Broth is recommended by AOAC to determine the phenol coefficient of cationic surfactants (3). Letheen Medium is also recommended for testing of cosmetics (4).

HM Peptone B and peptone supply nitrogenous and carbonaceous compounds, long chain amino acid, 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 (5, 1). Dehydrated medium may appear moist with brown sugar appearance, which does not indicate deterioration (1).

Type of specimen

Environmental samples; Water samples

Specimen Collection and Handling:

For environmental samples, follow appropriate techniques for sample collection and processing as per guidelines (7).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(1)

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

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 specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Due to nutritional variation certain strains may show poor growth.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Sterile HiCulture™ Sterile Swabs w/Letheen Broth

Colour

Yellow clear solution

Quantity of Medium

5 ml of medium in tubes

Reaction

6.80-7.20

Sterility test

Passes release criteria

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours .

Organism	Inoculum (CFU)	Growth
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	good-luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 6538 (00032*)	50-100	good-luxuriant
<i>Escherichia coli</i> ATCC 8739 (00012*)	50-100	good-luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	50-100	good-luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 5-25°C. Use before expiry date on the label. Product performance is best if used within stated expiry period

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

- American Society for Testing and Materials, 1991, Standard Test Methods for preservatives in water-containing cosmetics, E640-78. Annual Book of ASTM Standards, ASTM, Philadelphia, Pa.
- Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
- Favero (Chm.), 1967, A State of the Art Report, Biological Contamination Control Committee, American Association for Contamination Control.
- Horwitz, (Ed.), 2000, Official Methods of Analysis of AOAC International, 17th Ed., Vol.I, AOAC International, Gaithersburg, Mb.
- Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
- Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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7. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
 8. Weber and Black, 1948, Am. J. Public Health, 38:1405.

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