

## CM 20956 – LETHEEN BROTH I MODIFIED

### INTENDED USE

Recommended for screening cosmetic products for microbial contamination.

### PRODUCT SUMMARY AND EXPLANATION

In the early 40s, Weber and Black recommended the use of lecithin and polysorbates to neutralize the antimicrobial action of the quaternary ammonium compounds. In 1965, the methodology was accepted by AOAC for the antimicrobial assays and extended their use to all the cationic detergents. In 1978, the FDA incorporated it as pre-enrichment medium for every microbial examination of cosmetics.

Letheen Broth, Modified is prepared as per FDA for screening cosmetic products for microbial contamination. There are great chances of altering the chemical composition of cosmetics by the metabolism of organisms thereby spoiling and causing harm to the users. Direct colony counts and enrichment culturing are the methods of choice for isolating microorganisms from cosmetic products. The word Letheen represents a combination of lecithin and polysorbate (tween 80).

### COMPOSITION

| Ingredients               | Gms / Ltr |
|---------------------------|-----------|
| Beef extract              | 5.000     |
| Proteose peptone          | 20.000    |
| Polysorbate 80 (Tween 80) | 5.000     |
| Lecithin                  | 0.700     |
| Sodium chloride           | 5.000     |
| Tryptone                  | 5.000     |
| Yeast extract             | 2.000     |
| Sodium bisulfite          | 0.100     |

### PRINCIPLE

This medium consists of Proteose peptone, Beef extract, Tryptone and yeast extract which provide nitrogenous nutrients, carbon compounds and trace elements to the microorganisms. Incorporation of lecithin and polysorbate 80 to the medium enables the recovery of bacteria from materials containing residues of disinfectant compounds or preservatives used in cosmetics. Polysorbate 80 is added to nullify phenolic compounds, hexachlorophene, formalin and along with lecithin neutralizes ethyl alcohol. Lecithin also neutralizes quaternary ammonium compounds present in the cosmetics. Sodium chloride maintains the osmotic balance of the medium.

### INSTRUCTION FOR USE

Dissolve 42.80 grams in 1000 ml distilled water.  
Heat if necessary to dissolve the medium completely.  
Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.  
Cool to 45-50°C and Dispense into tubes or flasks as desired.

### QUALITY CONTROL SPECIFICATIONS



|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| Appearance of Powder          | : Cream to yellow homogeneous free flowing powder. |
| Appearance of prepared medium | : Yellow coloured clear solution in tubes.         |
| pH (at 25°C)                  | : 7.2 ± 0.2                                        |

## INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism                       | ATCC  | Inoculum (CFU/ml) | Growth    | Incubation Temperature | Incubation Period |
|-------------------------------------|-------|-------------------|-----------|------------------------|-------------------|
| Escherichia coli                    | 25922 | 50-100            | Luxuriant | 35-37°C                | 24-48 Hours       |
| Staphylococcus aureus subsp. aureus | 25923 | 50-100            | Luxuriant | 35-37°C                | 24-48 Hours       |

## PACKAGING:

In pack size of 500 gm bottles.

## STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

## DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

## REFERENCES

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|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <br><b>GMP</b><br>Good Manufacturing<br>Practices Certified | <br>Best Before                                           | <br><b>QTY.</b><br>Quantity           | <br><b>REF</b><br>Catalogue Number | <br>Manufacturer |
| <br>Temperature Unit                                        | <br><b>LOT/<br/>         B. NO.</b><br>Lot / Batch Number | <br>Consults Instructions<br>for Use | <br>QR<br>Code                     |                                                                                                     |

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

\*For LabUse Only

