TM 1557 – LETHEEN AGAR W/ TRITON X-100

INTENDED USE

For screening cosmetic products for microbial contamination by adding Triton X-100.

PRODUCT SUMMARY AND EXPLANATION

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. 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.

Letheen Agar with Triton X-100 is recommended for luxuriant growth of most organisms for detection of yeast and moulds. Triton X-100 is non-ionic and disperses microorganisms making counting easier.

COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissue	10.000
Beef extract	5.000
Sodium chloride	5.000
Polysorbate 80	5.000
Lecithin	0.700
Triton X-100	1.000
Agar	15.000

PRINCIPLE

This medium consists of Peptic digest of animal tissue, beef 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. Triton X-100 acts as a surfactant. Cosmetics contain preservatives and they should be at least partially inactivated during the plating and this medium helps in dilution as well as neutralizing.

INSTRUCTION FOR USE

- Dissolve 41.7 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and pour into sterile petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured, clear to slightly opalescent gel forms in petri plates.
pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	>=70%	35-37°C	18-48 Hours
Staphylococcus aureus	6538	50-100	Luxuriant	>=70%	35-37°C	18-48 Hours
Staphylococcus aureus	25923	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

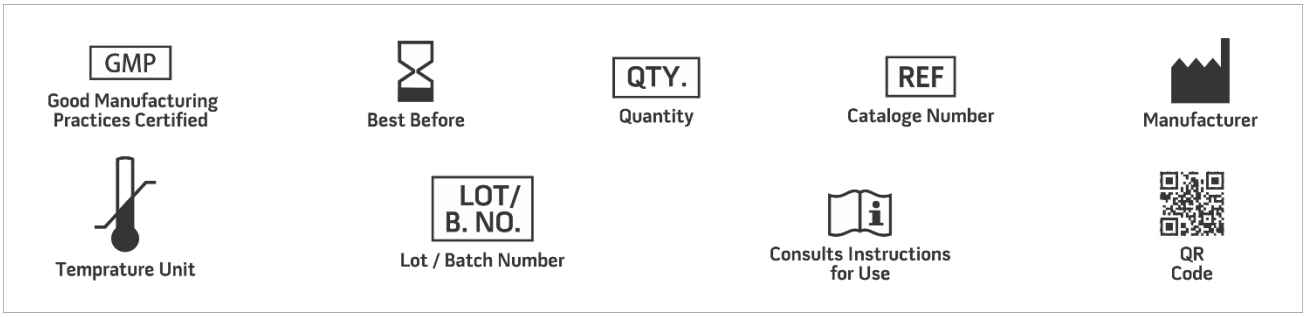
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided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

1. Dunningan A. P., 1968, Drug Cosmet. Ind., 102:43.
2. Smart R. and Spooner D. F., 1972, J. Soc. Cosmet. Chem., 23:721.
3. Wilson L. A. and Ahearn D. G., 1977, Am. J. Opthalmol., 84:112.
4. Weber and Black, 1948, Soap Sanitary Chem., 24:134-139
5. Favero (Chm.), 1967, A State of the Art Report, Biological Contamination Control Committee, American Association for Contamination Control.



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

***For Lab Use Only**

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