Letheen Agar Modified

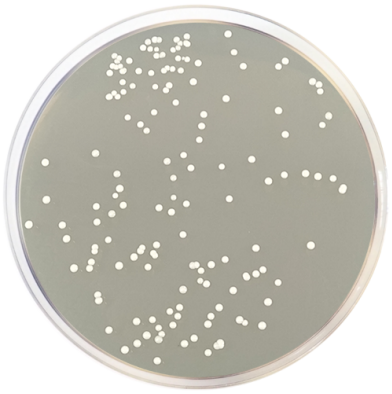
Cat. 1111

For the microbiological analysis of cosmetics

Practical information

Aplications	Categories
Enumeration with neutralizers	General use

Industry: Cosmetics



Principles and uses

Letheen Agar Modified is a modification of Letheen Broth Base. It is highly nutritious and recommended for use in the microbiological testing of cosmetics. It can be used to inactivate quarternary ammonium compounds and other preservatives when establishing the number of bacteria present in cosmetics and other materials.

Beef extract, casein peptone and meat peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is the source of vitamins, particularly of the B-group. Glucose is the fermentable carbohydrate providing carbon and energy. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Lecithin, polisorbate 80 and sodium bisulfite neutralize quaternary ammonium compounds and partially neutralize the preservative system commonly found in cosmetics. Bacteriological Agar is the solidifying agent.

The medium is also used for microbiological samples from surfaces that have been treated with disinfectants.

Formula in g/L

Glucose	1	Bacteriological agar	20
Casein peptone	10	Lecithin	1
Beef extract	3	Meat peptone	10
Polysorbate 80	7	Sodium bisulfite	0,1
Sodium chloride	5	Yeast extract	2

Typical formula g/L * Adjusted and/or supplemented as required to meet performance criteria.

Preparation

Suspend 59,1 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121 ºC for 15 minutes. Cool to 50 ºC, mix well and dispense into plates.

Instructions for use

- Prepare and dilute samples in Letheen Broth Modified (Cat. 1244).
- Using the spread plate technique, inoculate in duplicate 0,1 ml of the diluted samples onto Letheen Agar Modified.
- Incubate one plate of Letheen Agae Modified at 30±2 ºC for 48 hours and the other one at 35±2 ºC under anaerobic conditions for 2-4 days.
- Incubate the diluted samples from step 1 at 35±2 ºC for 7 days. Subculture enriched samples onto Letheen Agar Modified only if there is no growth in the first incubation.

Quality control

Solubility	Appareance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Beige	Amber, slightly opalescent	7,2±0,2

Microbiological test

Incubation conditions: (35±2 ºC / 18-24 h)

Microorganisms	Specification
Staphylococcus epidermidis ATCC 12228	Good growth
Escherichia coli ATCC 25922	Good growth
Staphylococcus aureus ATCC 25923	Good growth
Salmonella typhi ATCC 6539	Good growth

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

FDA Bacteriological Analytical Manual (BAM] 1995. Microbiological Methods for cosmetics, Letheen Agar (modified). Letheen Broth (modified).