Letheen Broth Modified ISO/BAM

Cat. 1244

For the microbiological analysis of cosmetics.

Practical information

Aplications	Categories
Enrichment with neutralizers	General use

Industry: Cosmetics

Regulations: ISO 18415 / ISO 18416 / ISO 21149 / ISO 21150 / ISO 22717 / ISO 22718 / BAM

Principles and uses

Letheen Broth Modified is based on the formula described in FDA Bacteriological Analytical Manual, and is a modification of Letheen Broth Base. It is a highly nutritious liquid medium recommended for use in the microbiological testing of cosmetics.

This medium is also recommended by ISO 21149, ISO 21150, ISO 18415, ISO 22718, ISO 22717 and ISO 18416 normatives for the enrichment of aerobic bacteria, yeast and molds in cosmetic products.

Beef extract and casein peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is the source of vitamins, particularly of the B-group. 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.

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

Formula in g/L

Casein peptone	5	Lecithin	0,7
Beef extract	5	Meat peptone	20
Polysorbate 80	5	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 42,8 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. Dispense into appropriate containers and sterilize at 121 ºC for 15 minutes.

Instructions for use

For the enrichment of aerobic bacteria present in cosmetic products:
- Prepare the initial suspension and disperse in the broth.
- Incubate at 35±2 ºC for 18-24 hours.
- Subculture a defined amount of the above solution onto appropriate media depending on the microorganism to be detected; MacConkey Agar (Cat. 1052) for E. coli, Baird Parker Agar (Cat. 1100) for S. aureus, Cetrimide Agar (Cat. 1102) for P. aeruginosa and Sabouraud Dextrose Agar + Chloramphenicol for C. albicans.

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).
Inoculation conditions: (10^2-10^3 CFU).

Microorganisms	Specification
Staphylococcus epidermidis ATCC 12228	Good growth
Salmonella typhimurium ATCC 14028	Good growth
Escherichia coli ATCC 25922	Good growth
Staphylococcus aureus ATCC 25923	Good growth
Pseudomonas aeruginosa ATCC 27853	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).