

LPT Dilution Broth

Solvent for the homogenization of samples in the analysis of cosmetic products

Practical information

Applications	Categories
Diluent	General use

Industry: Cosmetics

Principles and uses

LPT Dilution Broth is recommended by UNIPRO Publication for the homogenization of the samples in the analysis of cosmetic products.

Tryptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Potassium phosphates act as a buffer system. Lecithin and Tween 80 neutralize quaternary ammonium compounds and inhibit the action of the preservatives. Antimicrobial preservatives are commonly used in cosmetic products in order to reduce their microbial contamination. The cosmetics, due to their nature, are sensitive to microbial contamination and should be preserved as they are used in eyes, damaged skin or in long period times.

Formula in g/L

Disodium phosphate	9	Lecithin	3
Monopotassium phosphate	1,5	Sodium chloride	8,5
Sodium thiosulfate	5	Tryptone	1
L-Histidine	1		

Preparation

Suspend 29 grams of the medium in one liter of distilled water. Mix well and add 30 ml of Tween 80. Dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes.

Instructions for use

For the homogenization and dilution of samples:

- Homogenize the sample using a 1 in 10 dilution. If necessary, use this suspension to prepare further decimal dilutions.
- Leave the tubes at room temperature for a time sufficient to allow the neutralizing agents to inhibit the activity of preservatives contained in cosmetic products, but not sufficient to encourage multiplication of the organisms.
- Inoculate a solid medium to enumerate the contaminating microorganisms.

For the enrichment of microorganisms in cosmetic products:

- Inoculate the sample in the LPT Dilution Broth and incubate at 35±2 °C for 18-24 hours.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
Slightly opalescent	Fine powder	Beige	Amber	7,0 ± 0,2

Microbiological test

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

Microorganisms	Specification
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Salmonella enteritidis ATCC 13076
Salmonella typhimurium ATCC 14028
Salmonella typhi ATCC 19430
Staphylococcus aureus ATCC 6538

Good growth
Good growth
Good growth
Good growth

Storage

Temp. Min.:2 °C
Temp. Max.:8 °C

Bibliography

Microbiologia nell'Industria Cosmetica. UNIPRO, aprile 1990, vol. 1. Ricerche e Tecnologie Cosmetiche