

TECHNICAL DATA SHEET

Lethen Agar, Modified

Principle

Lethen agar modified is composed of peptone, meat extract (equivalent of beef extract), tryptone, yeast extract, sodium chloride, dextrose, polysorbate 80, lecithin, sodium bisulfite and agar. Peptone, Meat extract, yeast extract and tryptone provide nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and trace elements for the growth of microorganisms. Sodium chloride maintains osmotic equilibrium. Dextrose is carbon source. The lecithin and polysorbate 80 aids the recovery of bacteria from materials containing residues of disinfectant or preservatives used in cosmetics. Polysorbate 80 and lecithin nullify phenolic compounds, hexachlorophene, and formalin and neutralizes ethyl alcohol. Lecithin also neutralizes quaternary ammonium compounds present in the cosmetics. Sodium bisulfite enhances growth of microorganisms and neutralizes the preservative.

Use: For screening cosmetic products for microbial contamination.

Contents*

Ingredients	Gram/Litre
Peptone	10.00
Meat Extract#	3.00
Tryptone	10.00
Yeast Extract	2.00
Sodium Chloride	5.00
Dextrose	1.00
Polysorbate 80	7.00
Lecithin	1.00
Sodium Bisulfite	0.10
Agar	15.00
pH at 25°C	7.2 ±0.2

* Formula adjusted for optimum performance and parameters # Equivalent to Beef Extract

Directions: Dissolve 54.10 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

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Specimens types analyzed

Cosmetics and other commercial products etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 5.41% solution	7.2 ±0.2 at 25 °C
pH	7.00- 7.40
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light yellow to amber colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at 35±2°C for 18-48 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Recovery
<i>Staphylococcus aureus</i>	25923	Luxuriant	≥ 70%
<i>Escherichia coli</i>	8739	Luxuriant	≥ 70%
<i>Escherichia coli</i>	25922	Luxuriant	≥ 70%

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.

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