

Technical Information

L-Growth Top Agar

Product Code: G1007

Application: L-Growth Top Agar is recommended for cultivation and maintenance of recombinant strains of *Escherichia coli* for genetic and molecular biology studies.

Composition**

Ingredients	Grams/Litre
Tryptone	10.00
Yeast extract	5.00
Sodium chloride	0.50
Agar	7.00

** Formula adjusted, standardized to suit performance parameters

Methodology

Suspend 22.5 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

Principle and Interpretation

L-Growth Top Agar is recommended for cultivation and maintenance of recombinant strains of *Escherichia coli* for genetic and molecular biology studies for purposes of strain maintenance, cloning, plasmid propagation, and protein expression (1). This nutritionally rich medium was originally developed by Miller for cultivation and maintenance of *E. coli* cells in molecular biology (2).

All nutritional requirements of *E. coli* strains are provided by L-Growth Top Agar. Peptides and amino acids are abundantly present in Tryptone. Yeast extract is a rich source of amino acids, vitamins, nucleotides and carbohydrates. These nutritional elements support a luxurious growth of *E. coli* cells. The concentration of NaCl in this media is low compared to both LB Miller and LB Lennox formulations, respectively 10% and 5% of the NaCl concentration is present in both formulations. These variations in Sodium chloride content make it possible to select the optimal salt concentration for a specific strain.

Top agar is used to distribute bacterial cells uniformly on the thin layer over the surface of a plate. Top agar contains less amount of agar than usual plates and so stays in a molten state for several days when it is kept at 45° to 50°C.

Quality Control

Appearance of Powder :

Light yellow coloured, homogeneous, free flowing powder.

Gelling :

Firm, comparable with 0.7 % Agar gel.

Colour and Clarity :

Light amber coloured, clear to slightly opalescent gel forms in Petri plates.

Cultural Response :

Cultural characteristics observed after an incubation at 35-37°C for 18 - 48 hours.

Organisms (ATCC)

Escherichia coli ATCC 23724

Escherichia coli ATCC 25922

Escherichia coli MTCC 1652

Growth

good-luxuriant

good-luxuriant

good-luxuriant

Storage and Shelf Life

Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.

References

1. Miller, J.H., Experiments in molecular genetics, Cold Spring harbour Laboratory, Cold Spring harbour, New York, (1972).
2. Sambrook, J., E. F. Fritsch, and T. Maniatis, 1989, Molecular cloning: a laboratory manual, 2nd edition ed., Cold Spring Harbour laboratory, Cold Spring Harbour, N.Y.

Disclaimer :

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