Vegetable LB Agar (Lennox)

Cat. 2039

Recommended medium for maintaining and cultivating recombinant strains of E. coli.

Practical information

Aplications	Categories
Preparation and recovery of competent cells	Escherichia coli

Industry: Molecular biology

Principles and uses

Vegetable LB Agar (Lennox) is a nutritionally rich medium based on the LB Agar (Lennox) (Cat. 1083) designed as an alternative to classical animal-based media for the growth and maintenance of pure cultures of recombinant strains of E. coli used in molecular microbiology procedures.

These strains are generally derived from E. coli K12, which are unable to produce vitamin B, so this media is formulated to enhance the growth of nutritionally demanding microorganisms. This strain of E. coli has been further modified through specific mutation to create an auxotrophic strain that is not capable of growth on nutritionally deficient media.

In this case, the ingredients are animal-free in order to minimize the risk of bovine spongiform encephalopathy in culture media containing bovine materials. Vegetable origin peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is source of vitamins, particularly the B-group essential for bacterial growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Bacteriological agar is the solidifying agent.

Vegetable LB Agar (Lennox) has a different sodium chloride level than other media such as Luria Agar (Miller LB Agar) (Cat. 1552) or Luria Agar (Miller's Modification) (Cat. 1308). This allows to select the optimum salt concentration of the medium for a specific strain.

Formula in g/L

Bacteriological agar	15	Sodium chloride	5
Yeast extract	5	Vegetable peptone	10

Preparation

Suspend 35 grams of 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 45-50 ºC, mix well and dispense into plates.

Instructions for use

- Carry out the experimental procedure according to appropriate use or purpose.
- Inoculate and incubate at a temperature of 35±2 ºC for 18-24 hours.

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	7,0±0,2

Microbiological test

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

Microrganisms	Specification
Escherichia coli ATCC 23724	Good growth

Escherichia coli ATCC 33694	Good growth
Escherichia coli ATCC 33849	Good growth
Escherichia coli ATCC 39403	Good growth
Escherichia coli ATCC 47014	Good growth

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

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