

Luria Bertani HiVeg™ Agar, Miller (Miller Luria Bertani HiVeg™ Agar), Granulated

GMV1151

Luria Bertani HiVeg Agar, Miller, granulated is used for cultivation and maintenance of recombinant strains of *Escherichia coli* for genetic and molecular studies and may be used for routine cultivation of not particularly fastidious microorganisms.

Composition**

Ingredients	Gms / Litre
HiVeg hydrolysate	10.000
Yeast extract	5.000
Sodium chloride	10.000
Agar	15.000
Final pH (at 25°C)	7.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40 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. Cool to 45-50°C. Mix well and pour into sterile Petri plates or as desired.

Principle And Interpretation

Luria Bertani HiVeg Agar, Miller is prepared by replacing casein enzymic hydrolysate with HiVeg hydrolysate which is free of BSE/TSE risks. It is the modification of Luria Bertani Agar formulated by Lennox (1) for cultivation and maintenance of recombinant strains of *Escherichia coli*. Luria Bertani HiVeg Agar, like the conventional media (2) are slightly different with double amount of sodium chloride. The medium is nutritionally rich for the growth of pure cultures of recombinant strains. Strains which are generally derived from *Escherichia coli* K12 are deficient in Vitamin B synthesis which are further modified by specific mutation to create auxotrophic strains and are unable to grow on nutritionally deficient media. HiVeg hydrolysate provides nitrogen and carbon while Vitamin B complex is provided by yeast extract. Sodium chloride provides sodium ions for the membrane transport and maintains osmotic equilibrium of the medium.

Quality Control

Appearance

Cream to yellow coloured granular medium

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

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

Reaction

Reaction of 4.0% w/v aqueous solution at 25°C. pH : 7.5±0.2

pH

7.30-7.70

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18 - 24 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
<i>Escherichia coli</i> ATCC 23724	50-100	luxuriant	>=70%
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	>=70%
<i>Escherichia coli</i> DH5 alpha MTCC 1652	50-100	luxuriant	>=70%

Storage and Shelf Life

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

Reference

- 1.Lennox, E.S. 1955. Virology, 1.
- 2.Atlas, R. M. 2004. A Handbook of Microbiological Media. 3 ed.: CRC Press.

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