Modified Terrific Broth

Cat. 1548

Medium for use with glycerol in the culture of recombinant E.coli strains.

Practical information

Aplications	Categories
Preparation and recovery of competent cells	Escherichia coli

Industry: Molecular biology

Principles and uses

Modified Terrific Broth is a medium that supports a high cell density and, when formulated for optimum growth of E.coli, maintains growth in the logarithmic phase for a long time. As a result, it yields a greater number of recombinant proteins and plasmic DNA. In some circumstances it substitutes LB Broth (Lennox) (Cat. 1231) used in genetic studies.

Tryptone provide nitrogen, vitamins, minerals and amino acids essential for growth Yeast extract is source of vitamins, particularly the B-group. Potassium phosphates act as a buffer system to prevent cell death.

Glycerol is the source of carbohydrates and carbon since it is not fermented to acetic acid as glucose and does not lead to confusing results.

The formulation of this medium was modified from the Terrific Broth (Cat. 1246) with a different concentration of biological buffer.

Formula in g/L

Dipotassium phosphate	9,4	Monopotassium phosphate	2,2
Tryptone	12	Yeast extract	24

Preparation

Suspend 47.6 grams of the medium in 900 ml of distilled water .Mix well. Add 4 ml of glycerol, adjust to a final volume of 1000 ml, and 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

- 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	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Beige	Amber	7,2 ± 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

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Escherichia coli ATCC 47014	Good growth

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

SAMBROC, J., E.F. FRITSCH, T. MANIATIS (1989) MOLECULAR CLONING

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