NZCYM Broth

Cat. 1549

For the cultivation of recombinant E.coli strains.

Practical information

Aplications	Categories
Preparation and recovery of competent cells	Escherichia coli

Industry: Culture media for Molecular biology

Principles and uses

NZCYM Broth is used as an enrichment medium for the cultivation of recombinant strains of E.coli and propagating lambda bacteriophages developed by Blattner and colleagues.

E.coli grows fast in this enrichment medium, which supplies the amino acids, vitamins and other metabolites as nucleotide precursors and other factors that otherwise would be synthesized by the cell. Casein digest, Yeast extract and Casamino acids provide the necessary nutrients and cofactors required for excellent growth of recombinant strains of E.coli. Magnesium sulfate is the magnesium ions font required in a big variation of enzymatic reactions, including DNA replication.

Formula in g/L

Casaminoacids	1	Magnesium sulfate	0,98
Pancreatic digest of casein	10	Sodium chloride	5
Yeast extract	5		

Preparation

Suspend 22 grams of the medium in one liter of distilled water. Mix well 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	Appareance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Beige	Amber	7,0 ± 0,2

Microbiological test

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

Microorganisms	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

Blattner, F. R., B. G Williams, A. E. Blechl, K. Denniston-Thompson, H. E. Faber, L. A. Furlong, D. J. Grunwald, D. O. Kiefer, D. D. Moore, J. W. Schumm, E. L. Sheldon, and O. Smithies. 1977. Charon phages: Safer derivatives of bacteriophage Lambda for DNA cloning. Science 196:161.
The condensed protocols from molecular cloning: a laboratory manual/ Joseph Sambrook, David W .Russell