Technical Information

NZYDT Growth Medium

Product Code: G1026

NZYDT Growth Medium is used for lambda and filamentous phage.

Composition**

Ingredients	Grams/Litre
Casein enzymic hydrolysate	10.00
Yeast extract	5.00
$MgSO_4$. $7H_2O$	1.00
Sodium chloride	5.00
Thymidine	0.04

** Formula adjusted, standardized to suit performance parameters

Methodology

Suspend 20.53 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle and Interpretation :

NZYDT Growth Medium is used for lambda and filamentous phage. This medium was developed by Blattner and colleagues as a rich medium for the propagation of bacteriophages (1). Cells grow very fast in this medium as this medium provides all the amino acids, vitamins and other metabolites required for cell growth (2). Casein enzymic hydrolysate provides nitrogen, amino acids, and carbon sources for the cells. Yeast extract functions as the source of vitamins and trace elements. Sodium chloride provides sodium ions for transport and osmotic balance and Magnesium sulfate is a source of magnesium ions required in a variety of enzymatic reactions, including DNA replication (3). NZYDT Growth Medium allows the cells to grow more rapidly as they do not have to synthesize nucleotide precursors and other factors required for growth.

Quality control

Appearance of Powder :
Light yellow coloured, homogeneous, free flowing powder.
Colour and Clarity :
Light yellow coloured, clear solution without any precipitate**.**
Cultural Response :
Cultural characteristics observed after an incubation at 35-37°C for 18 - 48 hours.

Organisms (ATCC)	Growth
Escherichia coli ATCC 23724	good-luxuriant
Escherichia coli ATCC 25922	good-luxuriant
Escherichia coli MTCC 1652	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.

Reference

(1) 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 for DNA cloning. Science 196:161.
(2) Ausubel, F. M., R. Brent, R. E. Kingston, D. D. Moore, J. G. Seidman, J. A. Smith, and K. Struhl. 1994. Current protocols in molecular biology, vol. 1.Current Protocols, New York, NY.
(3) Sambrook J., E. F. Fritsch, and T. Maniatis. 1989. Molecular cloning: a laboratory manual, 2nd ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specifications for identity and performance parameters.