

Technical Information

4 XYT Growth Medium

Product Code : G1151

4 XYT Growth Medium is an optimized formulation for the growth and maintenance of M13 phage or other filamentous ss DNA bacteriophages.

Composition**

Ingredients	Grams/Litre
Tryptone	32.00
Yeast extract	20.00
Sodium chloride	5.00

** Formula adjusted, standardized to suit performance parameters

Methodology

Suspend 57 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. Mix well and dispense as desired.

Principle and Interpretation

4 XYT Growth Medium is an optimized formulation for the growth and maintenance of M13 phage or other filamentous ss DNA bacteriophages. This media is 4 times richer than the YT media. This media was originally formulated as a nutritionally enriched growth medium for growth of recombinant strains of *Escherichia coli* and can also be used for propagation of M13 bacteriophage (1-3). It permits larger quantity of phage production without exhausting the host. Yeast extract and tryptone provide all the required amino acids, nucleotide precursors, vitamins and other metabolites and as a result the cells grow faster in this medium. Sodium chloride provides sodium ions for transport and osmotic balance.

Quality control

Appearance of Powder :

Cream to yellow coloured, homogeneous, free flowing powder.

Colour and Clarity :

Light yellow to yellow coloured, clear solution without any precipitate.

Cultural Response :

Cultural characteristics observed after incubation at 35-37°C for 18 - 48 hours.

Organisms (ATCC)

Escherichia coli ATCC 23724

Escherichia coli ATCC 25922

Escherichia coli DH5alpha MTCC1652

Growth

good-luxuriant

good-luxuriant

good-luxuriant

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.

References

1. Difco manual 11th ed., Sparks, MD (1998), 22-23
2. Assubel, F.M., R. Brent, R.E. Kingston, D.D. Moore, J.G. Seidman, J.A. Smith and K. Struhl, Current protocols in molecular biology, vol. 1, Current Protocols, New York, (1994)
3. Davis, L.G., M.D. Dibner and J.F. Battey, Basic methods in molecular biology, Elsevier, new York, (1986).

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