

Technical Information

2 XYT Growth Agar

Product Code: G1035

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

Composition** :

Ingredients	Grams/Litre
Tryptone	16.00
Yeast extract	10.00
Sodium Chloride	5.00
Agar	15.00

** Formula adjusted, standardized to suit performance parameters

Methodology

Suspend 46 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

2 XYT Growth Agar is an optimized formulation for the growth and maintenance of M13 phage or other filamentous ss DNA bacteriophages. 2 XYT Growth Medium is an optimized formulation for the growth and maintenance of M13 phage or other filamentous ss DNA bacteriophages. This media is 2 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. This medium contains agar as the solidifying agent.

Quality Control

Appearance of Powder :

Cream to light yellow coloured, homogeneous, free flowing powder.

Gelling :

Firm, comparable with 1.5% Agar gel.

Colour and Clarity :

Light yellow coloured clear to slightly opalescent gel forms in Petri plates.

Cultural Response :

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

Organisms (ATCC)

Escherichia coli ATCC 23724

Escherichia coli ATCC 25922

Escherichia coli MTCC 1652

Growth

good-luxuriant

good-luxuriant

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.

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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