

2 XYT Growth Top Agar**G036**

2 XYT Growth Top 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	7.00

** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 38 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 Top 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 0.7% of agar which functions as the top agar for the propagation of bacteriophages.

References:

1. Difco manual 11th ed., Sparks, MD (1998), 22-23

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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).

Quality Control :**Appearance of Powder :**

Light yellow coloured, homogeneous, free flowing powder.

Gelling :

Firm, comparable with 0.7% 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

Growth

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.