

## Technical Information

### YT Growth Top Agar

#### Product Code: G1033

YT 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        | 8.00        |
| Yeast extract   | 5.00        |
| Sodium Chloride | 5.00        |
| Agar            | 7.00        |

\*\* Formula adjusted, standardized to suit performance parameters

#### Methodology

Suspend 25 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

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

#### Quality Control

##### Appearance of Powder :

Cream to yellow coloured, homogeneous, free flowing powder.

##### Gelling:

Firm, comparable with 0.7% Agar gel.

##### Colour and Clarity :

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 in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

#### References

- Assubel, F.M., R. Brent, R.E. Kingston, D.D. Moore, J.G. Seidman, J.A. Smithand K. Struhl, Current protocols in molecular biology, vol. 1, Current Protocols, New York, (1994)
- Davis, L.G., M.D. Dibner and J.F. Battey, Basic methods in molecular biology, Elsevier, new York, (1986).

## Disclaimer :

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