

**YT Growth Medium****G031**

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

**Composition\*\* :**

<b>Ingredients</b>	<b>Grams/Litre</b>
Tryptone	8.00
Yeast extract	5.00
Sodium chloride	5.00

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

**Directions :**

Suspend 18 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 :**

YT (Yeast Extract Tryptone) Growth Medium 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.

**References:**

1. Difco manual 11<sup>th</sup> 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).

**YT Growth Medium****G031****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)**

*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.