

Terrific Growth Medium**G004**

Terrific Growth Medium is recommended for high density of *Escherichia coli* host cells and higher yield of plasmid DNA.

Composition :**

Ingredients	Grams/Litre
Tryptone	12.00
Yeast extract	24.00
Potassium dihydrogen phosphate	2.2
Dipotassium phosphate	9.4

** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 47.6 grams in 1000 ml distilled water containing 0.4 ml v/v glycerol. 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:

Terrific Growth Medium is recommended for high density of *Escherichia coli* host cells and higher yield of plasmid DNA. It was first formulated by Tartoff and Hobbs as an enriched medium for *E. coli* compared to LB and Tryptone Media (1). The medium was developed to enhance growth of *E. coli* recombinant strains and to obtain higher yield of plasmid DNA compared to LB and Tryptone broth (2). Due to the presence of large amount of tryptone and yeast extract in this medium plasmid yield is very high. Potassium dihydrogen phosphate prevents any drop in pH of the medium during bacterial growth. Moreover, tryptone and yeast extract provide additional nutrients and growth factors required for improved growth of *E. coli* recombinant strains. Glycerol is added in the medium as the carbon source and it is not fermented to acetic acid like glucose.

References:

1. Tartoff, K. D. and C. A. Hobbs. 1987. Improved media for growing plasmid and cosmid clones. Bethesda Research Laboratories Focus. 9:12.
2. Sambrook, Fritsch and Maniatis. 1989. Molecular cloning: a laboratory manual, 2nd ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

Terrific Growth Medium**G004****Quality Control :****Appearance of Powder :**

Light yellow coloured, homogeneous, free flowing powder.

Colour and Clarity :

Light amber 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.