YT Broth (2X YT Broth) M1251

YT Broth is used for the cultivation of recombinant strains of *Escherichia coli* .

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	16.000
Yeast extract	10.000
Sodium chloride	5.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 31.0 grams in 1000 ml distilled water. Heat if necessary 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 Broth is recommended for use in the cultivation of recombinant strains of *Escherichia coli* (1, 2, 4). It is also used in culture of *E. coli* strains for propagation of M 13 bacteriophages (2-4).

These media contain casein enzymic hydrolysate and yeast extract, which supply nitrogenous compounds, vitamin B complex and other essential nutrients and co-factors necessary for the luxuriant growth of recombinant *E. coli* and allows the bacteria to recover from the stress of transformation and grow well. Sodium chloride helps in maintaining isotonic conditions in the medium.

Quality Control

Appearance
Light yellow to beige homogeneous free flowing powder

Color and Clarity of Prepared Medium
Light amber coloured clear solution in tubes.

Reaction
Reaction of 3.1% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
M1251: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response		
Escherichia coli ATCC 23724	50-100	good-luxuriant
Escherichia coli ATCC 53868	50-100	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.

Reference

1. Miller H., 1987, Meth. Enzymol; 152, 145.
2. Ausubel F. M., Brent R., Kingston R. E., Moore B. D., Seidman J. G., Smith J. A. and Strohl K., 1994, Current Protocols in Molecular Biology, Vol. I, Current Protocols, New York, N.Y.
3. Davis L. G., Dibner M. D., Battey J. F., 1986, Basic Methods in Molecular Biology, Elsevier, New York, N.Y.

4. Sambrook J., Fritsch E. E. and Maniatis T., 1989, Molecular Cloning: A Laboratory Manual, 2nd Ed., Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

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