

TECHNICAL DATA SHEET

Article No. 7548

2x YT Broth

SYNONYMS

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SPECIFICATION

Liquid culture medium used for the massive growth of recombinant *Escherichia coli* strains.

FORMULA* IN G/L

Tryptone	16.0
Yeast extract	10.0
Sodium chloride	5.0

Final pH 7.0 ±0.2 at 25 °C

*Adjusted and/or supplemented as required to meet performance criteria.

DIRECTIONS

Dissolve 31 g of powder in 1 l of distilled water, heating up if necessary. Distribute into suitable containers and sterilise by autoclaving at 121 °C for 15 minutes.

DESCRIPTION

A nutritious liquid medium formulated to promote the growth of host cells, thereby encouraging increased replication and yield from filamentous single stranded bacteriophages.

2x YT Broth is a nutritionally rich medium especially for the growth of recombinant strains of *Escherichia coli* and can be used in the propagation of M13 bacteriophage for research. Components such as tryptone and yeast extracts are found in large concentrations within this medium. These components will provide the necessary nitrogen and growth factors that the bacteriophage needs to multiply more rapidly without depleting the host cells of these critical nutrients. *Escherichia coli* will thrive in this medium because of the additional amino acids, nucleotide precursors, vitamins and other essential metabolites that the cell need during growth and development. Sodium chloride provides a suitable osmotic environment for the growing, replicating bacteria.

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Amtsgericht Stuttgart / HRB-Nr. 252035
Geschäftsführer: Lutz-Alexander Geyer / Thomas Roth

TECHNIQUE

The broth is inoculated with phage-infected host cells grown overnight at optimum temperature on 2x YT Agar (product code 7581). The inoculated broth is incubated aerobically at 37 °C for 4-5 hours only to reduce the risk of selecting deletion mutants. The bacterial cells are concentrated by centrifugation and the supernatant containing the bacteriophages is transferred to a new tube, taking care not to raise the sediment of bacteria. The liquid with the collected bacteriophages can be stored at 4 °C or frozen at -20 °C.

QUALITY CONTROL

- Incubation temperature: 35 ±2.0 °C
- Incubation time: 24 ±3 h
- Inoculum: Practical range 100 ±20 CFU. Min. 50 CFU (productivity).

Microorganism	Growth	Remarks
<i>Escherichia coli</i> DH5 ATCC® 53868	Good	-
<i>Escherichia coli</i> ATCC® 25922	Good	-
<i>Escherichia coli</i> ATCC® 8739	Good	-
<i>Escherichia coli</i> ATCC® 11775	Good	-

REFERENCES

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- SAMBROOK, J., E.F. FITSCH & T. MANIATIS (1989) Molecular cloning: A laboratory manual. 2nd ed. Cold Spring Harbor Laboratory. Cold Spring Harbor, N.Y.
- DAVIS, L.G., M.D. DIBNER & J.F. BATTEY (1986) Basic Methods in Molecular Biology. Elsevier. N.Y. USA.

STORAGE

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (4-30 °C).

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