

2xYT Medium Broth (J902)



2xYT Medium Broth from AMRESCO is used for cultivating recombinant strains of *Escherichia coli*.

Background:

2xYT Medium Broth is an excellent growth medium. The broth is a nutritionally rich medium for the growth of recombinant strains of *Escherichia coli* and can be used in the propagation of M13 bacteriophage for research¹⁻³. Components such as tryptone and yeast extracts are found in large quantities 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 development³. Sodium chloride is present in the medium and provides a suitable osmotic environment for the growing, replicating bacteria.

Formula: (Per Liter)

Tryptone = 16.0g
Yeast Extract = 10.0g
Sodium Chloride = 5.0g
Final pH 6.8 ± 0.2 at 25°C

Storage:

Dehydrated media should be stored in a dry area at 18-26°C.
Prepared media should be stored at 2-8°C.

Method of Preparation:

1. Suspend 31 grams of 2xYT Medium Broth powder in 1 L of purified water.
2. Allow the powder to dissolve. Heat and stir gently if required.
3. Autoclave at 121°C for 15 minutes.
4. Allow the solution to cool to 50°C or below before adding antibiotics or additional nutritional supplements.

Quality Control:

All powders will have a light beige, free-flowing homogenous appearance.
All solutions will have a light to medium amber, clear appearance.

References:

1. Sambrook, J., E. F. Fritsch and T. Maniatis. 1989. Molecular cloning: a laboratory manual. 2nd Ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, N. Y.
2. Ausubel, F. M., R. Brent, R. E. Kingston, D. D. Moore, J. G. Seidman, J. A. Smith, K. Struhl (ed.). 1994. Current Protocols in Molecular Biology. Vol. 1. Current Protocols. New York, N. Y.
3. Davis, L. G., M. D. Dibner and J. F. Battey. 1986. Basic Methods in Molecular Biology. Elsevier, New York, N. Y.

Ordering Information:

<u>Product</u>	<u>Code</u>	<u>Size</u>
2xYT Medium Broth	J902	100g 500g

FOR LABORATORY USE ONLY

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www.interchim.com



211 bis Avenue Kennedy - BP 1140
03103 Montluçon - France
33 (0) 4 70 03 88 55
Fax 33 (0) 4 70 03 82 60
e-mail interchim@interchim.com

Agence Paris - Normandie
33 (0) 1 41 32 34 40
Fax 33 (0) 1 47 91 23 90
e-mail interchim.paris@interchim.com

