

**2X YT Agar**#GCM10.0500 (500g)  
(FOR RESEARCH ONLY)

**Product:** Dehydrated powder for the preparation of nutritionally rich solid medium (plates) for the growth and maintenance of recombinant strains of *Escherichia coli* in molecular biology studies, and for growth of filamentous phage.

**Quantity:** 500g

**Formulation (g/L)**

Tryptone:	16.00	Yeast Extract:	10.00
NaCl:	5.00	Bacteriological Agar	15.00
Final pH (25°C):	7.0 ± 0.2		

**Appearance:** Beige powder. Autoclaved medium should be amber, slightly opalescent

**Storage:** 2°C – 25°C. When not in use, keep container closed to avoid hydration.

**QC:** Each lot is tested by inoculating freshly prepared medium with a single colony of *Escherichia coli* ATCC 23724 and observation after incubation at 35 ± 2°C for 18 – 24h.

**Bibliography:**

Sambrook and Russell (2006) In: The condensed protocols from Molecular cloning: a laboratory manual, 1<sup>st</sup> ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY.  
Flint, *et al.* (2003) In Principles of Virology: Molecular Biology, Pathogenesis, and Control of Animal Viruses. 2<sup>nd</sup> ed. ASM Press, Washington DC.

**Preparation:**

Add 46g of the dehydrated medium to one liter of distilled water. Mix well and dissolve by heating with regular agitation. Boil for 1 minute in order to dissolve completely. Dispense in appropriate containers and sterilize by autoclaving at 121°C for 15 to 20 minutes. Cool to 45-50°C and dispense into plates. Plates should be stored at 8°C to 15°C.

**Supplements (Optional):**

2xYT Agar (2xTY Agar) is a rich growth medium, optimized for growth and maintenance of filamentous phage such as M13. It contains all the nutritional requirements for *E.coli*. Tryptone and Yeast Extract are the sources for carbon, nitrogen, vitamins, minerals, and amino acids essential for growth, as well as growth factors that allow phages to reproduce without weakening the host cells. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Many supplements, including antibiotics, are heat-sensitive and cannot be autoclaved. These should be filter-sterilized and added to the medium after it has cooled down.