2× YT Agar — Technical Data Sheet

Catalogue Number: AS-1395

Product Identification

Product Name	2× YT Agar (Double-Strength Yeast Tryptone Agar)
Catalogue Number	AS-1395
HS Code	3821.00.00
Medium Type	Dehydrated non-selective solid culture medium (double-strength)
Physical Form	Fine homogeneous powder
Colour (powder)	Light beige to cream
Colour (prepared)	Clear to slightly amber solid agar
Also known as	2xYT, 2×YT, Double YT, DYTB + agar

Composition (per litre of prepared medium)

Component	CAS Number	Function	Amount
Tryptone (Pancreatic Digest of Casein)	73049-73-7	High-level nitrogen, carbon, peptides	16.0 g
Yeast Extract	8013-01-2	Double-strength vitamins, growth factors	10.0 g
Sodium Chloride	7647-14-5	Osmotic balance	5.0 g
Agar	9002-18-0	Solidifying agent	15.0 g

Total per litre: 46.0 g | Final pH: 7.0 ± 0.2 at 25 °C

Physical & Chemical Specifications

Appearance (powder)	Light beige to cream fine homogeneous powder

Appearance (prepared)	Clear to slightly amber solid agar
pH (prepared medium, 25 °C)	7.0 ± 0.2
Loss on Drying (moisture)	≤ 5.0%
Gel strength	Firm agar — 20–25 mL per 90 mm Petri dish
Solubility	Completely soluble in purified water on heating
Tryptone concentration	16.0 g/L — double the standard LB level (10.0 g/L)
Yeast Extract concentration	10.0 g/L — double the standard LB level (5.0 g/L)
Selectivity	Non-selective — broad range of bacteria
Differential	Non-differential

Preparation Instructions

1. Suspend 46.0 g of dehydrated medium in 1 litre of purified or demineralised water.
2. Heat with agitation until completely dissolved.
3. Verify pH and adjust to 7.0 ± 0.2 if required.
4. Sterilise by autoclaving at 121 °C for 15 minutes.
5. Cool to 50–55 °C before pouring.
6. Add filter-sterilised antibiotics or supplements aseptically if required.
7. Mix gently and dispense 20–25 mL per 90 mm sterile Petri dish.
8. Allow to solidify on a level surface at room temperature.

Performance Characteristics

Organism	ATCC No.	Expected Result	Incubation
Escherichia coli K-12	23716	Good growth — large cream colonies >3 mm	37 °C, 12–18 h
E. coli DH5α	N/A	Vigorous growth — suitable for cloning	37 °C, 12–16 h
E. coli BL21(DE3)	N/A	Vigorous growth — expression host	37 °C, 12–16 h
E. coli XL1-Blue	N/A	Good growth — M13/phage compatible	37 °C, 12–16 h

Salmonella typhimurium	14028	Good growth	37 °C, 18–24 h

Storage & Stability

Dehydrated powder	15–30 °C, tightly closed
Protect from	Moisture, light, extreme temperatures
Plates (no antibiotics)	2–8 °C, inverted, up to 4 weeks
Plates (with antibiotics)	2–8 °C, use within 1–2 weeks
Shelf life	As per labelled expiry date

Quality Standards & References

Standard References	Sambrook & Russell — Molecular Cloning; Current Protocols in Molecular Biology
Phage Display	Barbas et al. (2001) Phage Display: A Laboratory Manual, CSHL Press
Composition Note	Composition may be adjusted to match specific institutional or published protocols
Batch Release Testing	pH, appearance, moisture, performance vs E. coli ATCC 23716
Country of Manufacture	Australia

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