



# TECHNICAL DATA SHEET

AS-1398 | 2× YT Broth

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## 2× YT Broth — Technical Data Sheet

Catalogue Number: AS-1398

### Product Identification

|                                  |  |
|----------------------------------|--|
| <b>Product Name</b>              | 2× YT Broth (Double-Strength Yeast Tryptone Broth)               |
| <b>Catalogue Number</b>          | AS-1398  |
| <b>HS Code</b>                   | 3821.00.00   |
| <b>Medium Type</b>               | Dehydrated non-selective liquid culture medium (double-strength) |
| <b>Physical Form</b>             | Fine homogeneous powder  |
| <b>Colour (powder)</b>           | Light beige to cream   |
| <b>Physical state (prepared)</b> | Clear to slightly turbid light amber liquid                      |
| <b>Also known as</b>             | 2xYT, Double YT, DYTb, Double-Strength Yeast Tryptone Broth      |
| <b>Related product</b>           | 2× YT Agar (AS-1395) — same formulation with 15 g/L agar         |

### Composition (per litre of prepared medium)

| Component                              | CAS Number | Function  | Amount |
|--|------------|---|--------|
| Tryptone (Pancreatic Digest of Casein) | 73049-73-7 | High-level nitrogen, carbon, amino acids, peptides    | 16.0 g |
| Yeast Extract                          | 8013-01-2  | Double-strength vitamins, growth factors, nucleotides | 10.0 g |
| Sodium Chloride                        | 7647-14-5  | Osmotic balance                                       | 5.0 g  |

**Total per litre:** 31.0 g | Final pH: 7.0 ± 0.2 at 25 °C

### Physical & Chemical Specifications



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|                                    |  |
|------------------------------------|--|
| <b>Appearance (powder)</b>         | Light beige to cream fine homogeneous powder       |
| <b>Appearance (prepared)</b>       | Clear to slightly turbid light amber liquid        |
| <b>pH (prepared medium, 25 °C)</b> | 7.0 ± 0.2  |
| <b>Loss on Drying (moisture)</b>   | ≤ 5.0%   |
| <b>Solubility</b>                  | Readily and completely soluble in purified water   |
| <b>Tryptone concentration</b>      | 16.0 g/L — double the standard LB level (10.0 g/L) |
| <b>Yeast Extract concentration</b> | 10.0 g/L — double the standard LB level (5.0 g/L)  |
| <b>Selectivity</b>                 | Non-selective                                      |
| <b>Differential</b>                | Non-differential                                   |

## Performance Characteristics

| Organism               | ATCC No. | Expected Result  | Incubation                          |
|------------------------|----------|--|-------------------------------------|
| Escherichia coli K-12  | 23716    | Vigorous growth — turbid broth, OD <sub>600</sub> >3.0 | 37 °C, shaking, 18–24 h             |
| E. coli DH5α           | N/A      | Vigorous growth — suitable for cloning                 | 37 °C, shaking, 12–16 h             |
| E. coli BL21(DE3)      | N/A      | Vigorous growth — protein expression host              | 37 °C, shaking, 3–4 h to OD 0.6–0.8 |
| E. coli XL1-Blue       | N/A      | Good growth — M13/phage compatible                     | 37 °C, shaking, 12–16 h             |
| Salmonella typhimurium | 14028    | Good growth  | 37 °C, shaking, 12–16 h             |

## Storage & Stability

|                          |                                       |
|--------------------------|---------------------------------------|
| <b>Dehydrated powder</b> | 15–30 °C, tightly closed              |
| <b>Protect from</b>      | Moisture, light, extreme temperatures |
| <b>Prepared broth</b>    | 2–8 °C, use within 1 week             |
| <b>Shelf life</b>        | As per labelled expiry date           |



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## Quality Standards & References

|                               |  |
|-------------------------------|--|
| <b>Standard References</b>    | Sambrook & Russell — Molecular Cloning; Current Protocols in Molecular Biology |
| <b>Phage Display</b>          | Barbas et al. (2001) Phage Display: A Laboratory Manual, CSHL Press            |
| <b>Batch Release Testing</b>  | pH, appearance, moisture, performance vs E. coli ATCC 23716                    |
| <b>Country of Manufacture</b> | Australia  |

## Disclaimer

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