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TECHNICAL INFORMATION

Catalog Number: 1682149, 193436

Tryptose Phosphate Broth

Use: Tryptose Phosphate Broth is a buffered medium used for cultivating fastidious microorganisms.

Formulation:

Ingredient	Amount (per liter)	Ingredient	Amount (per liter)
Tryptose	20 g	Dextrose	2 g
Sodium Chloride	5 g	Disodium Phosphate	2.5 g

Final pH: 7.3 ± 0.2 at 25°C

Prepared Medium: Light amber, may be very slightly opalescent with very slight precipitate

Directions: To rehydrate the powdered medium (Catalog number 193436), dissolve 29.5 grams in one liter of water. Dispense as desired. Sterilize in the autoclave for 15 minutes at 15 pounds pressure @121°C (Catalog number 16821 is a pre-sterilized solution). For more rapid growth of pathogenic bacteria, dissolve 1 gram of agar per liter of broth prior to sterilizing the medium. Final pH will be approximately 7.3 ± 0.2 at 25°C.

The addition of 0.1 to 0.2% agar to a broth medium improves the productivity of the medium for most purposes. The low agar concentration provides suitable conditions for both aerobic growth in the clear upper zone and for microaerophilic and anaerobic growth in the lower, flocculent agar zones.

Description: *Standard Methods for the Examination of Dairy Products*, 9th Edition,¹ described tryptose phosphate agar broth (0.1% agar added) for use in isolating pathogenic bacteria from cheese. *Diagnostic Procedures and Reagents*² (APHA) also recommended adding 0.1 to 0.2% agar to the formulation.

While studying the detection of food poisoning attributable to dairy products, Newman³ used tryptose phosphate broth with 0.1% agar and 1:2500 sodium azide added for cultivating streptococci at 37°C.

Tryptose phosphate broth has been used for testing the sensitivity of microorganisms to antibiotics by the tube dilution method. Waisbren, Carr and Dunnett⁴ demonstrated that a soy bean peptone medium inhibited the action of neomycin, Aureomycin®, terramycin and polymyxin against the test organism while tryptose phosphate broth, dextrose broth and nutrient broth were suitable for the test.

Typical Culture Response in Tryptose Phosphate Broth After 18-24 Hours at 35°C:

Organism	Recovery
<i>Neisseria meningitidis</i> ATCC 13090	good
<i>Staphylococcus epidermidis</i> ATCC 12228	excellent
<i>Streptococcus pneumoniae</i> ATCC 6303	excellent
<i>Streptococcus pyogenes</i> ATCC 19615	excellent

Availability:

Catalog Number	Description	Size
1682149	Tryptose Phosphate Broth, liquid, concentration 29.5 mg/ml	100 ml
193436	Tryptose Phosphate Broth, powder	100 g 500 g 1 kg

References:

- Standard Methods for the Examination of Dairy Products, **9th Ed.**, 165 (1948).
- Diagnostic Procedures and Reagents, **3rd Ed.**, 16 (1950).
- *J. Milk and Food Tech.*, **v. 13**, 226 (1950).
- *Am. J. Clin. Path.*, **v. 21**, 884 (1951).