

Bacto™ Tryptose Phosphate Broth

Intended Use

Bacto Tryptose Phosphate Broth is used for cultivating fastidious microorganisms.

Summary and Explanation

Tryptose Phosphate Broth is an infusion-free buffered medium recommended for the cultivation of fastidious, pathogenic microorganisms. It can be used in a procedure for the serodiagnosis of *Listeria monocytogenes*.¹ It is valuable in tissue culture procedures,² where the peptone content is considered to be a stimulating factor for cells.

Principles of the Procedure

Peptone provides carbon and nitrogen. Dextrose is a carbon source. Sodium chloride maintains osmotic balance. Buffering capacity is provided by disodium phosphate.

The addition of 0.1-0.2% agar to Tryptose Phosphate Broth facilitates anaerobic growth and aids in dispersion of reducing substances and CO₂ formed in the environment.³ The low agar concentration provides suitable conditions for both aerobic growth in the upper zone and for microaerophilic and anaerobic growth in the lower zone.

Formula

Bacto™ Tryptose Phosphate Broth

Approximate Formula* Per Liter

Tryptose	20.0	g
Dextrose	2.0	g
Sodium Chloride	5.0	g
Disodium Phosphate	2.5	g

*Adjusted and/or supplemented as required to meet performance criteria.

Directions for Preparation from Dehydrated Product

1. Dissolve 29.5 g of the powder in 1 L of purified water. (If a medium containing 0.1-0.2% agar is desired, add 1-2 g of agar; heat with frequent agitation and boil for 1 minute to completely dissolve the powder.)
2. Autoclave at 121°C for 15 minutes.
3. Test samples of the finished product for performance using stable, typical control cultures.

Procedure

See appropriate references for specific procedures.

Expected Results

Refer to appropriate references and procedures for results.

References

1. U.S. Food and Drug Administration. 2001. Bacteriological analytical manual, online. AOAC International, Gaithersburg, Md.
2. Ginsberg, Gold and Jordan. 1955. Proc. Soc. Exp. Biol. Med. 89:66.
3. MacFaddin. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1. Williams & Wilkins, Baltimore, Md.

User Quality Control

Identity Specifications

Bacto™ Tryptose Phosphate Broth

Dehydrated Appearance: Beige, free-flowing, homogeneous.

Solution: 2.95% solution, soluble in purified water. Solution is light amber, clear to very slightly opalescent, may have a very slight precipitate.

Prepared Appearance: Light amber, clear to very slightly opalescent, may have a very slight precipitate.

Reaction of 2.95% Solution at 25°C: pH 7.3 ± 0.2

Cultural Response

Bacto™ Tryptose Phosphate Broth

Prepare the medium per label directions. Inoculate and incubate at 35 ± 2°C for 18-48 hours.

ORGANISM	ATCC™	INOCULUM CFU	RECOVERY
<i>Neisseria meningitidis</i>	13090	10 ² -10 ³	Good
<i>Staphylococcus epidermidis</i>	12228	10 ² -10 ³	Good
<i>Streptococcus pneumoniae</i>	6305	10 ² -10 ³	Good
<i>Streptococcus pyogenes</i>	19615	10 ² -10 ³	Good



Availability

Bacto™ Tryptose Phosphate Broth

BAM

Cat. No.	260300	Dehydrated – 500 g
	260100	Dehydrated – 2 kg
	260200	Dehydrated – 10 kg