



Bile Peptone Transport Medium

M481

Bile Peptone Transport Medium is employed for the safe collection, transport and preservation of cholera organisms.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Sodium chloride	10.000
Sodium taurocholate	5.000
Final pH (at 25°C)	8.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 25 grams in 1000 ml distilled water. Dispense into bottles. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If desired, sterile potassium tellurite solution may be added after autoclaving to give a final concentration of 1 in 200,000 to make the medium more selective for *Vibrios*.

Principle And Interpretation

Vibrio cholerae is the etiological agent of epidemic and pandemic cholera in humans.

V. cholerae is a non-halophilic *Vibrio* which cannot grow in media with a concentration of sodium chloride greater than 5-6% and is able to grow in media lacking NaCl (1). Human disease is associated with ingestion of contaminated water or food. *Vibrio* species, like many other gram-negative bacteria, grow in the presence of relatively high levels of bile salts. Bile Peptone Transport medium is a nutritive, selective holding medium for *Vibrio* species (2). It is used as a transport (holding) medium to maintain the viability of *V. cholerae* in stool specimens during delay in transmission to the laboratory.

Casein enzymic hydrolysate serves as a source of carbon, nitrogen and essential nutrients. Incorporation of sodium taurocholate makes the medium selective for *Vibrios*. Sodium chloride makes the medium selective for the growth of cholera organisms. High alkaline pH is tolerated by *Vibrios* while it is detrimental to most of the accompanying coliforms, therefore making the medium selective. Addition of potassium tellurite further improves the selectivity of the medium.

The sample should be transported immediately to the laboratory. However, if there is to be a delay of more than 6 hours, 1-3 ml of faeces should be added to 10-20 ml of Bile Peptone Transport Medium with tellurite (2).

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured, clear solution without any precipitate

Reaction

Reaction of 2.5% w/v aqueous solution at 25°C. pH : 8.5±0.2

pH

8.30-8.70

Cultural Response

M481: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response		
<i>Vibrio cholerae</i> ATCC 15748	50-100	good-luxuriant
<i>Vibrio fluvialis</i> ATCC 33809	50-100	good-luxuriant

Vibrio vulnificus ATCC 50-100 good-luxuriant
29306

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Bruno Gomez-Gil and Ana Roque, Isolation, Enumeration and Preservation of the Vibrionaceae, F.L. Thompson, B. Austin and J. Swings. The Biology of Vibrios. ASM press.
2. Collee J.G., Fraser A. F., Marmion B. P., Simmons A. (Eds) Mackie and McCartney, Practical Medical Microbiology, 1996, 14th edition, Churchill Livingstone.

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