



Bile Broth Base

M071

Bile Broth Base is used for the cultivation of members of *Enterobacteriaceae* and in culture of blood clots from patients with suspected enteric fever.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	20.000
Sodium taurocholate	5.000
Sodium chloride	5.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.0 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 40°C and add 1 ml of Streptokinase solution (100000 units/ml). Mix well and dispense as desired.

Principle And Interpretation

Enterobacteriaceae inhabit a wide variety of niches that include the human gastrointestinal tract and various environmental niches. When blood samples from a patient with suspected enteric fever is submitted for the widal test, it is useful as a routine to culture the clot after separation of serum (1). If it is known that the blood has been withdrawn with strict aseptic precautions, the clot may be placed in a wide tube half-filled with broth, or in a wide mouth screw-capped bottle containing 80 ml of broth. When there is any doubt regarding the presence of contaminating organisms, and this is always a possibility when blood specimens are sent to the laboratory from a distance, the clot should be transferred directly to a tube of sterile ox bile and disintegrated with aseptic precautions. After overnight incubation the bile culture is examined for enteric organism in the usual manner. A method of clot culture with Streptokinase has been recommended (2). Blood is allowed to clot in 5 ml quantities in sterile screw-capped universal containers. The separated serum is removed and 15 ml of 0.5% Bile Broth Base with Streptokinase 100 units/ml is added to each bottle. The streptokinase causes rapid clot lysis with release of bacteria trapped in the clot (2)

Peptic digest of animal tissue serves important sources of nitrogen .Sodium taurocholate inhibits majority of Gram-positive species. Sodium chloride maintains the isotonicity of the medium whereas addition of streptokinase solution causes rapid clot lysis with release of bacteria trapped in the clot (2).

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured, clear solution without any haziness

Reaction

Reaction of 3% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH

7.40-7.80

Cultural Response

M071: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response <i>Escherichia coli</i> ATCC 25922	50-100	luxuriant

<i>Enterobacter aerogenes</i> ATCC 13048	50-100	luxuriant
<i>Salmonella Typhi</i> ATCC 6539	50-100	luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	inhibited

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. Colle, J.G., Duguid J.P., Fraser A.G. and Marmion, B.P. (Eds.) 1989 Mackie and McCartney Practical Medical Microbiology, Vol. 2, p:134 Longman Group, UK.
2. Watson, K.C. 1955, Isolation of Salmonella Typhi from the blood stream. J. of „Lab and Clinical Medicine 46:128-134.

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