

# TM 448 – THIOL BROTH

#### **INTENDED USE**

For cultivation of bacteria from body fluids containing Penicillin, Streptomycin and Sulphonamides.

#### PRODUCT SUMMARY AND EXPLANATION

Thiol Medium is used for culturing microorganisms from body fluids and also other materials containing antibiotics like penicillin, streptomycin or sulphonamides. The efficacy of Thiol Medium to retain viability of *Vibrio* was initially described by Huddleson. The ability of Thiol Medium to neutralize antibacterials was demonstrated by Christensen. This media can also be used for the cultivation and maintenance of *Haemophilus*, *Vibrio* and *Meningococci*. Thiol Broth which is Thiol Medium devoid of agar is also recommended for growing anaerobic bacteria in blood cultures and for recovery of nutritionally variant *Streptococci* and *Bacteriodes*.

## **COMPOSITION**

Ingredients	Gms / Ltr	
Proteose peptone	10.000	
Yeast extract	5.000	
Dextrose	1.000	
Sodium chloride	5.000	
Thiol compound	8.000	
p-Amino benzoic acid (PABA)	0.050	

### **PRINCIPLE**

Proteose peptone and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Dextrose is the energy source. p-Amino benzoic acid serves as a preservative.

## **INSTRUCTION FOR USE**

- Dissolve 29.05 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in tubes or flasks to a depth of 6 cm for neutralization of Penicillin or in shallow layers for neutralization of Streptomycin.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

### **QUALITY CONTROL SPECIFICATIONS**

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium : Light yellow coloured clear to slightly opalescent solution.

pH (at 25°C) : 7.1±0.2

# **INTERPRETATION**

Cultural characteristics observed after incubation. Growth observed after addition of antibiotic concentrations upto 100 units of Penicillin or 1,000 micrograms of Streptomycin.











Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Neisseria meningitidis	13090	50-100	Poor-fair	35-37°C	18-48 Hours
Staphylococcus aureus	25923	50-100	Good-luxuriant	35-37°C	18-48 Hours
Streptococcus pneumoniae	6303	50-100	Good-luxuriant	35-37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	Good-luxuriant	35-37°C	18-48 Hours

## **PACKAGING:**

In pack size of 500 gm bottles.

## **STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

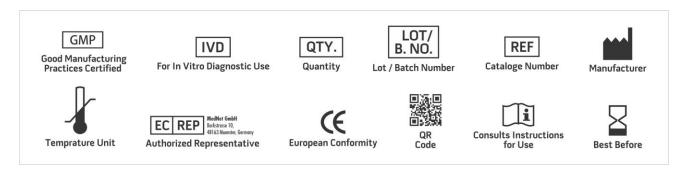
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

## **DISPOSAL**

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

## **REFERENCES**

- 1. Huddleson I. F., 1948, J. Bacteriol., 56:508.
- 2. Christensen D. H., 1947, Presented at the Michigan Branch, Society of American Bacteriologists, Detroit, Mich, December 12, 1947.
- 3. Donnelly J. P., 1994, Infect. Dis. Alert 6:109.
- 4. Isenberg (Ed.), 1992, Clinical Microbiology Procedures Handbook, Vol. 1, American Society for Microbiology, Washington, D.C.
- 5. Szawatkowski M. V., 1976, Med. Lab. Sci., 33:5. 6. Shanson D. C. and Barnicoat, 1975, J. Clin. Pathol., 28:407.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices. \*For Lab Use Only

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