

## TM 1499 – ANAEROBIC THIOGLYCOLLATE MEDIUM BASE

### INTENDED USE

For cultivation of anaerobes.

### PRODUCT SUMMARY AND EXPLANATION

During the past few years the importance of anaerobic microorganisms as pathogenic agents responsible for infectious diseases and the role they play in the microbial spoilage of food have been better appreciated. Clostridial species are one of the major causes of food poisoning or gastrointestinal illnesses. Anaerobic microorganisms have long been known as constituents of the normal bacterial flora of human and animals. Both their pathogenic significance in medicine and their important role in food hygiene have, however, long been underestimated.

Anaerobic Thioglycollate Medium is used for the cultivation of anaerobes as described by Caselitz and Freitag. Anaerobes, which are very particular in regard to the nutrient quality of the substrate, grow very well in this medium. It has been proved to be of use in determining the resistance of anaerobes to various antibiotics in the serial dilution procedure.

For determining the resistance of anaerobes to various antibiotics, aliquot 4.8 ml of the medium into sterile test tubes containing 0.1ml of serially diluted antibiotic. These tubes are then inoculated with 0.1ml of an adjusted suspension of pure culture of the test bacteria. The lowest antibiotic concentration, which shows no visible growth, is taken as the minimum inhibitory concentration (MIC) of the antibiotic.

### COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	17.000
Papaic digest of soyabean meal	3.000
Meat extract	7.500
Liver hydrolysate	3.000
D-Glucose	6.000
Sodium chloride	2.500
Sodium thioglycollate	0.500
L-Cysteine	0.250
Sodium sulphite	0.100
Agar	0.700

### PRINCIPLE

Casein enzymic hydrolysate, papaic digest of soyabean meal, meat extract and liver hydrolysate in the medium provides nitrogen, carbon and other nutrients necessary to support bacterial growth. Glucose is the fermentable carbohydrate. Sodium chloride provides essential ions and maintains osmotic balance of the medium. Sodium thioglycollate and L-cysteine act as reducing agents and maintain a low oxygen tension in the medium. This enables the obligate anaerobes to multiply. The small amount of agar helps in anaerobiosis.

### INSTRUCTION FOR USE

- Dissolve 40.55 grams in 900 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Add 100 ml sterile serum.



- Mix well and dispense into sterile test tubes under sterile conditions.

### QUALITY CONTROL SPECIFICATIONS

**Appearance of Powder** : Cream to yellow homogeneous free flowing powder.  
**Appearance of prepared medium** : Amber to dark amber coloured clear to slightly opalescent gel  
**pH (at 25°C)** : 7.3±0.2

### INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Good	40-50%	35-37°C	18-24 Hours
<i>Bacteroides fragilis</i>	25285	50-100	Good	40-50%	35-37°C	18-24 Hours
<i>Bacteroides vulgatus</i>	8482	50-100	Fair	20-30%	35-37°C	18-24 Hours
<i>Clostridium perfringens</i>	13124	50-100	Good	40-50%	35-37°C	18-24 Hours
<i>Clostridium sporogenes</i>	11437	50-100	Good	40-50%	35-37°C	18-24 Hours
<i>Clostridium septicum</i>	12464	50-100	Good	40-50%	35-37°C	18-24 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

- Caselitz F. H, u. Freitag V., 1969, Arztl. Lab., 15; 426-430.
- Caselitz F. H, u. Freitag V., 1970, Arztl. Lab., 16; 165-170.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Borkstrasse 10, 48163 Muenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
**Revision: 08 Nov., 2019**