TM 447 – THIOGLYCOLLATE MEDIUM W/O INDICATOR (DIAGNOSTIC THIOGLYCOLLATE MEDIUM)

INTENDED USE

The Diagnostic Thioglycollate Medium w/o Indicator is used for enrichment of blood cultures

PRODUCT SUMMARY AND EXPLANATION

Thioglycollate Medium without Indicator is a semisolid medium originally formulated by Brewer for the growth of aerobic and anaerobic microorganisms. Previously methylene blue was incorporated in the medium as an Eh indicator but has been omitted now to enable recognition of early growth and avoids any toxic effects of indicator.

This medium supports a minimal inoculum with early visibility of growth. Obligate aerobes grow at the top of the medium, while anaerobes grow at the bottom of the medium. This medium is nutritious and favours the growth of *Clostridium butyricum*, *Campylobacter* species, *Bacteroides* species and *Pneumococci* etc. from minimal inocula. *Brucella* species which fail to grow in the presence of indicator, can grow in this medium. The broth with addition of 10% v/v serum may be used for cultivation of *Trichomonas vaginalis*. It can also be used as transportation medium for which calcium carbonate is incorporated in the medium. Calcium carbonate neutralizes the acid produced during growth and avoid rapid growth and death of gram-negative cocci, *Clostridium perfringens* and other acid-sensitive bacteria.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	17.000
Soya peptone	3.000
Dextrose (Glucose)	6.000
Sodium chloride	2.500
Sodium thioglycollate	0.500
L-Cystine	0.250
Sodium sulphite	0.100
Agar	0.700

PRINCIPLE

Tryptone, Soya peptone, dextrose, L-cystine provides nitrogenous and carbonaceous compounds, fermentable carbohydrate and trace elements. Sodium thioglycollate serves as a reducing agent. The small amount of agar helps in anaerobiosis. The reducing action provided by sodium thioglycollate and sodium sulphite binds molecular oxygen, thereby maintaining a low Eh. A small amount of agar is added to retard the absorption of oxygen by reducing convection currents in the medium.

INSTRUCTION FOR USE

- Suspend 30.05 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense as desired and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool the medium in an upright position. For maintenance of viability of cultures, add small amount of calcium carbonate into the containers before filling.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder
Appearance of prepared medium : Light amber coloured very slightly opalescent, viscous solution.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Bacteroides vulgatus	8482	50-100	Poor-fair	10-30%	35-37°C	18-48 Hours
Clostridium sporogenes	11437	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
Candida albicans	10231	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
Bacillus subtilis subsp. spizizeni	6633	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
Micrococcus luteus	10240	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
Neisseria meningitidis	13090	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	Good-luxuriant	>=50%	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.

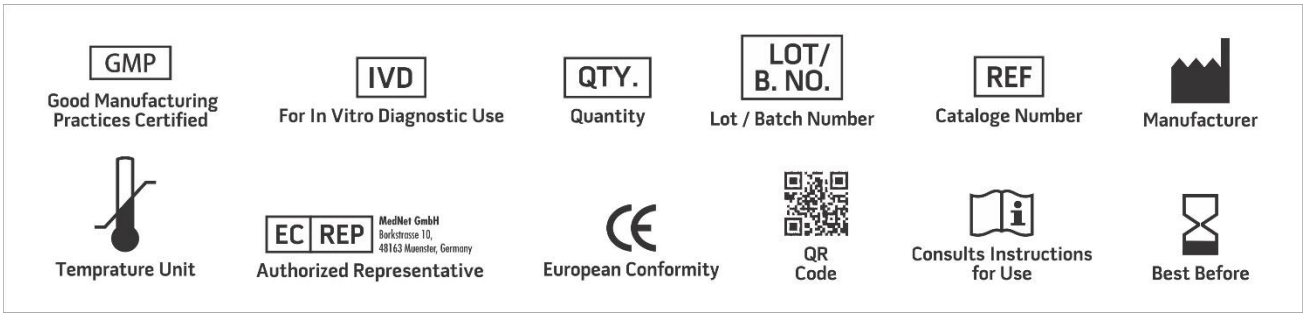
DISPOSAL

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

REFERENCES

1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1 William and Wilkins, Baltimore.

2. Vera H. D., 1944, J. Bacteriol., 47:59-70.
3. Brewer J. H., 1940, J. Bacteriol., 39:10.
4. Hansen P. A., Price K. E. and Clements M. F., 1952, J. Bacteriol., 64:772



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

***For Lab Use Only**

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