TM 2368 – THIOGLYCOLLATE MEDIUM W/ HEMIN AND VITAMIN K

INTENDED USE

For routine cultivation of fastidious anaerobic microorganisms. Also used for blood culturing and studying fermentation reactions.

PRODUCT SUMMARY AND EXPLANATION

Certain anaerobes require addition of Vitamin K and hemin for their growth. Therefore, Thioglycollate Medium with hemin and Vitamin K is recommended for use in the isolation and cultivation of fastidious or slow-growing obligatory anaerobic microorganisms present in clinical materials. It is also recommended for the isolation and cultivation of wide variety of aerobic and facultatively anaerobic microorganisms.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	15.000
Yeast extract	10.000
Sodium thioglycollate	0.500
Sodium chloride	2.500
L-Cystine hydrochloride	0.500
Sodium bicarbonate	0.400
Resazurin	0.001
Hemin	0.005
Vitamin K	0.0005
Agar	0.750

PRINCIPLE

Tryptose and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients for bacterial metabolism. Sodium thioglycollate and L-cysteine act as reducing agents and maintain a low oxygen tension in the medium. Vitamin K is a growth requirement for some strains of *Prevotella melaninogenicus*. Pink ring at the top (oxidized medium) is due to resazurin indicator. Hemin is the source of the X factor which stimulates the growth of many microorganisms.

INSTRUCTION FOR USE

- Dissolve 29.65 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

Note: If more than the upper one third has acquired a pink colour, the medium may be restored once by heating in a water bath or in free flowing steam until the pink colour disappears.

QUALITY CONTROL SPECIFICATIONS

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

Appearance of prepared medium : Amber coloured clear to very slightly opalescent fluid with upper 10% or less medium pink on standing.

pH (at 25°C) : 7.2±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Bacteroides levii	9177	50-100	Luxuriant	35-37°C	18-48 Hours
Bacteroides vulgatus	8482	50-100	Fair	35-37°C	18-48 Hours
Bacteroides melaninogenicus	25611	50-100	Luxuriant	35-37°C	18-48 Hours
Clostridium perfringens	12924	50-100	Luxuriant	35-37°C	18-48 Hours
Clostridium sporogenes	11437	50-100	Luxuriant	35-37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	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 2-8°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.

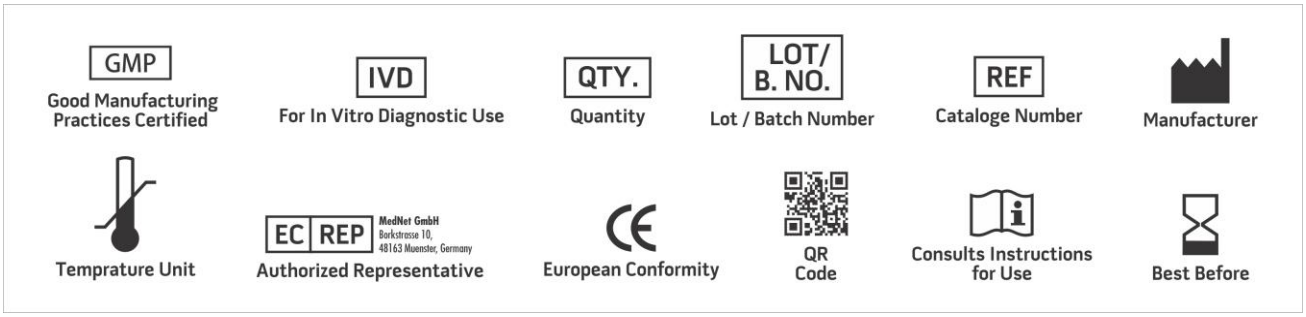
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Gibbon R. J. and MacDonald J. B., 1960, J. Bacteriol., 80:164.
2. Wilkins T. D., Chalgren S. L., Jimenez Ulat G., Drace C. R. , Johnson J. L., 1976, J. Clin Microbiol., 3:359.



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

***For Lab Use Only**

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