

## TMKH 001 – FLUID THIOGLYCOLLATE MEDIUM (USP/EP/JP/BP/IP)

### INTENDED USE

For sterility testing of biological and for cultivation of aerobes, anaerobes and microaerophilic organisms.

### PRODUCT SUMMARY AND EXPLANATION

Brewer formulated Fluid Thioglycollate Medium for rapid cultivation of aerobes as well as anaerobes including microaerophiles by adding a reducing agent and small amount of agar. The USP, BP, EP and AOAC have recommended the media for sterility testing of antibiotics, biologicals and foods and for determining the phenol coefficient and sporicidal effect of disinfectants. However, it is intended for the examination of clear liquid or water-soluble materials.

### COMPOSITION

Ingredients	Gms / Ltr
Pancreatic digest of casein	15.000
Dextrose	5.500
Yeast extract	5.000
Sodium chloride	2.500
Agar	0.750
L-Cystine	0.500
Sodium thioglycollate	0.500
Resazurin sodium	0.001

### PRINCIPLE

Dextrose, Pancreatic digest of casein, yeast extract and L-cystine provide the growth factors necessary for bacterial multiplication. L-cystine and sodium thioglycollate allows *Clostridium* to grow in this medium even under aerobic conditions. Also the small amount of agar used in the medium favors the growth of aerobes as well as anaerobes in the medium, even if sodium thioglycollate is deleted from the medium. Sodium thioglycollate act as a reducing agent and neutralizes the toxic effects of mercurial preservatives and peroxides formed in the medium, thereby promoting anaerobiosis, and making the medium suitable to test materials containing heavy metals. Any increase in the oxygen content is indicated by a colour change of redox indicator, resazurin to red. The small amount of agar helps in maintaining low redox potential for stabilizing the medium.

### INSTRUCTION FOR USE

Label the ready to use bottle. Inoculate the sample and incubate at specified temperature and time.

### QUALITY CONTROL SPECIFICATIONS

Appearance of Prepared media	: Light straw coloured solution with upper 10% or less medium pink on standing.
Sterility test	: Passes the release criteria.
pH (at 25°C)	: 7.1±0.2

### INTERPRETATION



Cultural characteristics observed after incubation. (\*incubate anaerobically)

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
* <i>Clostridium sporogenes</i>	11437	50 – 100	Luxuriant	30-35°C	Not more than 3 days
* <i>Clostridium perfringens</i>	13124	50 – 100	Luxuriant	30-35°C	Not more than 3 days
* <i>Clostridium sporogenes</i>	19404	50 – 100	Luxuriant	30-35°C	Not more than 3 days
* <i>Bacteroides fragilis</i>	23745	50 - 100	Luxuriant	30-35°C	Not more than 3 days
<i>Streptococcus pneumoniae</i>	6305	50 – 100	Luxuriant	30-35°C	Not more than 3 days
<i>Escherichia coli</i>	25922	50 – 100	Luxuriant	30-35°C	Not more than 3 days
<i>Escherichia coli</i>	8739	50 – 100	Luxuriant	30-35°C	Not more than 3 days
<i>Staphylococcus aureus</i>	6538	50 – 100	Luxuriant	30-35°C	Not more than 3 days
<i>Staphylococcus aureus</i>	25923	50 – 100	Luxuriant	30-35°C	Not more than 3 days
<i>Bacillus subtilis</i>	6633	50 – 100	Luxuriant	30-35°C	Not more than 3 days
<i>Pseudomonas aeruginosa</i>	27853	50 – 100	Luxuriant	30-35°C	Not more than 3 days
<i>Salmonella Typhimurium</i>	14028	50 – 100	Luxuriant	30-35°C	Not more than 3 days

#### PACKAGING:

In pack size of 100 ml X 25, 200 ml X20, 500 ml X 6 bottles.

#### STORAGE

On receipt, store bottles in the dark at 10–25 °C. Avoid freezing and overheating. Do not open until ready to use. Minimize exposure to light. Bottled media stored as labeled until just prior to use may be inoculated up to the












expiration date and incubated for the recommended incubation times. Allow the medium to warm to room temperature before inoculation

## DISPOSAL

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

## REFERENCES

1. Brewer, 1940, J. Am. Med. Assoc., 115:598.
2. The United States Pharmacopoeia, 2018, The United States Pharmacopoeial Convention, Rockville, MD.
3. British Pharmacopoeia, 2016, The Stationery office British Pharmacopoeia
4. European Pharmacopoeia, 2017, European Dept. for the quality of Medicines.
5. Williams H., (Ed.), 2005, Official Methods of Analysis of the Association of Official Analytical Chemists, 19th Ed., AOAC, Washington, D.C
6. Marshall, Gunnison and Luxen, 1940, Proc. Soc. Exp. Biol. Med., 43:672.
7. Nungester, Hood and Warren, 1943, Proc. Soc. Exp. Biol. Med., 52:287.8. Portwood, 1944, J. Bact., 48:255.
9. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
10. Federal Register, 1992, Fed. Regist., 21:640.

 Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

**\*For Lab Use Only**  
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