

TM 319 – FLUID THIOGLYCOLLATE MEDIUM (as per IP)

INTENDED USE

For sterility testing of biologicals and for cultivation of aerobic, anaerobic and microaerophilic organisms.

PRODUCT SUMMARY AND EXPLANATION

Brewer formulated Fluid Thioglycollate Medium for rapid cultivation of aerobes as well as anaerobes by adding a reducing agent and small amount of agar. The Indian Pharmacopoeia 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
Tryptone	15.000
Yeast extract	5.000
Dextrose monohydrate	5.500
Sodium chloride	2.500
L-Cystine	0.500
Sodium thioglycollate	0.500
Resazurin sodium	0.001
Agar	0.750

PRINCIPLE

The medium consists of Tryptone and yeast extract which provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other growth factors necessary for bacterial multiplication. Dextrose monohydrate is carbohydrate source. Sodium thioglycollate and L-cystine act as a reducing agent lowering the oxidation-reduction potential by removal of oxygen. This condition helps to prevent the accumulation of peroxides which is toxic in nature. The SH group also neutralizes the antibacterial effect of mercurial preservatives and other heavy metal compounds which exert a bacteriostatic effect in the materials under examination. 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

- Dissolve 29.75 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.
- Cool to 25°C and store in a cool dark place preferably below 25°C.

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

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light straw coloured, clear to slightly opalescent solution with upper 10% or less medium pink - purple on standing.
pH (at 25°C) : 7.1 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Clostridium sporogenes</i>	19404	50-100	Luxuriant	30-35°C	<=3 Days
<i>Clostridium sporogenes</i>	11437	50-100	Luxuriant	30-35°C	<=3 Days
<i>Clostridium perfringens</i>	13124	50-100	Luxuriant	30-35°C	<=3 Days
<i>Bacteroides fragilis</i>	23745	50-100	Luxuriant	30-35°C	<=3 Days
<i>Bacteroides vulgatus</i>	8482	50-100	Luxuriant	30-35°C	<=3 Days
<i>Staphylococcus aureus</i> subsp. <i>aureus</i>	25923	50-100	Luxuriant	30-35°C	<=3 Days
<i>Staphylococcus aureus</i> subsp. <i>aureus</i>	6538	50-100	Luxuriant	30-35°C	<=3 Days
<i>Pseudomonas aeruginosa</i>	27853	50-100	Luxuriant	30-35°C	<=3 Days
<i>Pseudomonas aeruginosa</i>	9027	50-100	Luxuriant	30-35°C	<=3 Days

<i>Micrococcus luteus</i>	9341	50-100	Luxuriant	30-35°C	<=3 Days
<i>Streptococcus pneumoniae</i>	6305	50-100	Luxuriant	30-35°C	<=3 Days
<i>Escherichia coli</i>	25922	50-100	Luxuriant	30-35°C	<=3 Days
<i>Escherichia coli</i>	8739	50-100	Luxuriant	30-35°C	<=3 Days
<i>Salmonella</i> Typhimurium	14028	50-100	Luxuriant	30-35°C	<=3 Days
<i>Bacillus subtilis</i> subsp. <i>spizizenii</i>	6633	50-100	Luxuriant	30-35°C	<=3 Days

PACKAGING:

In pack size of 100 gm and 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

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5. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
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7. Nungester, Hood and Warren, 1943, Proc. Soc. Exp. Biol. Med., 52:287.
8. Portwood, 1944, J. Bact., 48:255.
9. Williams. (Ed.), 2005, Official Methods of Analysis of the Association of Official Analytical Chemists, 19th ed., AOAC, Washington, D.C.



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 MedNet GmbH Buckstrasse 10, 49163 Muenster, Germany Authorized Representative	 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**
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