

FLUID THIOLYCOLLATE MEDIUM (90 ML)

INTENDED USE:

Fluid Thioglycollate Medium is a general purpose liquid enrichment medium used in qualitative procedures for the sterility test and for the isolation and cultivation of aerobes, anaerobes and microaerophiles that are not excessively fastidious. In clinical microbiology, it may be used as an enrichment medium for clinical specimens.

PRINCIPLE AND INTERPRETATION:

This medium is capable of supporting good growth of a great variety of organisms, including strict anaerobes, without incubation in an anaerobic atmosphere. A feature of sodium thioglycollate, in addition to lowering the oxidation-reduction potential, is its ability to neutralize the antibacterial activity of mercurial compounds. These characteristics make FTM particularly useful for determining the presence of contamination in biological and other materials. Glucose, peptone, and yeast extract provide the growth factors necessary for bacterial growth. Sodium thioglycollate and L-cystine are reducing agent that prevent the accumulation of peroxides which are lethal to some microorganisms. Resazurin is an oxidation-reduction indicator, being pink when oxidized and colorless when reduced. The small amount of agar assists in the maintenance of a low redox potential by stabilizing the medium against convection currents, thereby maintaining anaerobiosis in the lower depths of the medium.⁸ Due to its agar content, Fluid Thioglycollate Medium often appears slightly opaque. The ready-to-use medium described in this document is filled under a stream of nitrogen gas, resulting in a decoloration of the resazurin indicator. However, the media may be used until approximately 30% of the medium (top layer) has been oxidized, as indicated by a pink color of the resazurin near the surface. If oxidation has proceeded further, the broth may be reheated once in steam or boiling water, cooled and used.

COMPOSITION:

Ingredients	Gr/Liter
Yeast Extract	5 gr
Pancreatic Digest of Casein	15 gr
Glucose (anhydrous)	5 gr
L-Cystine	0,5 gr
Sodium Chloride	2,5 gr
Sodium Thioglycollate	0,5 gr
Resazurin	0,001gr
Agar	0,75gr

***Formula adjusted, standardized to suit performance parameters

pH: 7,1 ± 0,2

PRECAUTIONS:

For professional use only. Do not use tubes if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

TEST PROCEDURE:

Incubation at a temperature of 35±2°C and observed after 24 hours-14 days.

QUALITY CONTROL:

1.Sterility Control:

Incubation 48 hours at 30-35°C and 72 hours at 20-25°C: NO GROWTH

2.Physical/Chemical Control

pH: 7,1 ± 0,2

Apperance: Yellow, beige

3.Microbiological Control: Incubation at a temperature of 35±2°C and observed after 24 hours-14 days.

Microorganism	Inoculum (CFU)	Results	
		Growth	Reaction
Staphylococcus aureus ATCC 25923	10-100	Good	Good
Clostridium sporogenes ATCC 19404	10-100	Good	Good
Pseudomonas aeruginosa ATCC 9027	10-100	Good	Good

LIMITATIONS OF THE PROCEDURE:

Fluid Thioglycollate Medium is used as an enrichment medium in many nonclinical and clinical applications. Due to its strongly reducing properties, it provides anaerobiosis without incubating in an anaerobic atmosphere. For optimal recovery of fastidious anaerobes, e.g., *Prevotella* spp., the medium should be supplemented with hemin and vitamin K1 (see Test Procedure). Although most obligate aerobes (e.g. *Micrococcus*, *Pseudomonas* and related genera, and strictly aerobic sporeforming rods) will grow in this medium if the vials are vented during incubation (usually they grow as a thin film near its surface), Fluid Thioglycollate Medium is not the optimal medium for recovery of strict aerobes. For their recovery, Tryptic Soy Broth or Brain Heart Infusion Broth should be used.

STORAGE CONDITIONS AND SHELF LIFE:

Store the prepared medium at 2 - 12°C. Use before expiry date on the label..Do not use beyond stated expiry date.

DISPOSAL:

Incubated medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected tube should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:

Katalog Number: 01122

Content/Packaging: Screw cap x 20 piece /box

REFERENCES:

1. Brewer, J.H. 1940. Clear liquid medium for the "aerobic" cultivation of anaerobes. J. Am.Med. Assoc. 115:598-600. BA-257144.02 - 3 -
2. Vera, H.D. 1944. A comparative study of materials suitable for the cultivation of clostridia. J.Bacteriol. 47:59-70.
3. U.S. Pharmacopeial Convention, Inc. 1999. The U.S. Pharmacopeia 24/The national formulary 19--2000. U.S. Pharmacopeial Convention, Inc., Rockville, Md
4. Council of Europe, 1996. European Pharmacopoeia, 3rd edition. European Pharmacopoeia Secretariat. Strasbourg/France.
5. Council of Europe, 2000. European Pharmacopoeia, Supplement 2001. European Pharmacopoeia Secretariat. Strasbourg/France.
6. Cunniff, P. (ed.). 1995. Official methods of analysis of AOAC International, 16th ed. AOAC International, Gaithersburg, Md.
7. Thomson, R.B., and J.M. Miller. 2003. Specimen collection, transport, and processing: bacteriology. In: Murray, P. R., E. J. Baron, J.H. Jorgensen, M. A. Pfaller, and R. H. Tenen (ed.). Manual of clinical microbiology, 8th ed. American Society for Microbiology, Washington, D.C.
8. MacFaddin, J.F. 1985. Media for isolation-cultivation- identification-maintenance of medical bacteria, vol. I. Williams & Wilkins, Baltimore



Aseptic Sterile



Batch Code



Catalogue Number



Negative Controls



Positive Controls



Use by



Temperature Limitation



Do not reuse



Contains sufficient for <n> tests



Look at user manual



Manufacturer