

FLUID THIOGLYCOLLATE MEDIUM (FTM)

APPLICATION	Fluid Thioglycollate Media are used for sterility testing of biologicals and for cultivation of aerobic and anaerobic organisms and microaerophiles in accordance with harmonized methodology of USP/EP																
PRINCIPLE AND INTERPRETATION	<p>Brewer¹ formulated Fluid Thioglycollate Medium (FTM) for rapid cultivation of aerobes as well as anaerobes by adding a reducing agent and small amount of agar. The Harmonized Pharmacopoeia, USP, BP² and AOAC³ 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.</p> <p>Glucose monohydrate, pancreatic digest of casein, yeast extract provide necessary nutrients and growth factors necessary for bacterial multiplication. Sodium thioglycollate, L-cystine lower the oxidation-reduction potential of the medium by removing oxygen to maintain a low Eh. By creating an environment with a low Eh, the reducing agents prevent the accumulation of peroxides which can be toxic to some organisms. The sulphhydryl groups (-SH) of these compounds 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 pink.^{4,5,6} The small amount of agar helps in maintaining low redox potential for stabilizing the medium⁷.</p> <p>In sterility checking, when the sample contains preservatives, it is recommended to dilute the sample with this broth to reduce the toxicity and enhance the growth of contaminants, if any.</p>																
MEDIUM COMPOSITION*	<p>Pancreatic digest of casein.....15.000 g/l Yeast extract.....5.000 g/l Glucose monohydrate.....5.500 g/l Sodium chloride.....2.500 g/l L-Cystine.....0.500 g/l Sodium Thioglycollate.....0.500 g/l Resazurin sodium.....0.001 g/l Agar.....0.75 g/l Final pH 7.1 ± 0.2</p> <p>*Adjusted and/or supplemented to meet performance criteria</p>																
STORAGE	<p>+2°/+25°C Protect from light, excessive heat, moisture and freezing</p>																
QUALITY CONTROL	<p>Growth Promotion Test:</p> <table border="1" data-bbox="512 1496 1497 1765"> <thead> <tr> <th>Control strain</th> <th>Medium inoculation level</th> <th>Incubation Conditions</th> <th>Recovery Specifications</th> </tr> </thead> <tbody> <tr> <td><i>P. aeruginosa</i> ATCC 9027</td> <td>10-100 viable microorganisms</td> <td>24-72 h</td> <td>Positive growth</td> </tr> <tr> <td><i>C. sporogenes</i> ATCC 11437</td> <td>10-100 viable microorganisms</td> <td>24-72 h</td> <td>Positive growth</td> </tr> <tr> <td><i>S. aureus</i> ATCC 6538</td> <td>10-100 viable microorganisms</td> <td>24-72 h</td> <td>Positive growth</td> </tr> </tbody> </table> <p>Sterility control: no growth Appearance: Yellow straw coloured, clear to very slightly opalescent solution with upper 10% or less medium pink on standing.</p>	Control strain	Medium inoculation level	Incubation Conditions	Recovery Specifications	<i>P. aeruginosa</i> ATCC 9027	10-100 viable microorganisms	24-72 h	Positive growth	<i>C. sporogenes</i> ATCC 11437	10-100 viable microorganisms	24-72 h	Positive growth	<i>S. aureus</i> ATCC 6538	10-100 viable microorganisms	24-72 h	Positive growth
Control strain	Medium inoculation level	Incubation Conditions	Recovery Specifications														
<i>P. aeruginosa</i> ATCC 9027	10-100 viable microorganisms	24-72 h	Positive growth														
<i>C. sporogenes</i> ATCC 11437	10-100 viable microorganisms	24-72 h	Positive growth														
<i>S. aureus</i> ATCC 6538	10-100 viable microorganisms	24-72 h	Positive growth														

¹ Brewer, 1940, J. Am. Med. Assoc., 115:598

² European Pharmacopoeia, current Edition

³ Willimas. (Ed.), 2008, Official methods of Analysis of the Association of Official Analytical Chemists, 19th ed., AOAC, Washington D.C.

⁴ Marshall, Gunnison and Luxen, 1940, Proc. Soc. Exp. Biol. Med, 43:672

⁵ Nungester, Hood and Warren, 1943, Proc. Soc. Exp. Biol. Med., 52:287

⁶ Portwood, 1944, J. Bact., 48:255.

⁷ Mac Faddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vo. 1, Willimas and Wilkins, Baltimore

FLUID THIOGLYCOLLATE MEDIUM (FTM)

GENERAL WARNING NOTES	<p>Device must be handled according to asepsis precautions, of utilization of culture media is strictly referred to the type of analysis that must be done. Please refer to specific norms and procedures. Do not use if device is broken. Do not use if media shows accidental contamination signs. Do not utilize after expiry date. Let device reach room temperature before utilizing. Results interpretation must be done by qualified personnel, who must consider context of use.</p> <p>Disposal of waste must be carried out according to national and local regulations in force.</p>
-----------------------	---

This item is available in:

- Sterile bottled media

MODEL	PRODUCT CODE	ORDER CODE	DESCRIPTION	SHELF LIFE
200ml	ME009/31PSC28.200	ME009/31PSC28.200.10 (10 bottles/pack)	200ml in 250ml volume, PP28 Screw Cap Bottle	1 year
100ml	ME009/30FLP32.100	ME009/30FLP32.100.10 (10 bottles/pack)	100ml in 125ml volume, PP32 Pierceable Cap Bottle	1 year
100ml	ME009/30P.100	ME009/30P.100.10 (10 bottles/pack)	100ml in 125ml volume, PP28 Polypropylen Screw Cap bottle with two septum	1 year
100ml	ME009/30PSC28.100	ME009/30PSC28.100.10 (10 bottles/pack)	100ml in 125ml volume, PP28 Screw Cap Bottle	1 year
900ml	ME009/33P.900	ME009/33P.900.10 (10 bottles/pack)	900ml in 1000ml volume, PP28 Polypropylen Screw Cap bottle with two septum	1 year

Customized filling volumes and formulations are available upon request

To receive information please

contact info@cpcbiotech.it