

Thioglycollate Medium

Catalog : HB5190-5-2

Thioglycollate Medium is used for the sterility testing of biologics and for the cultivation of anaerobes, aerobes and microaerophiles.

Approximate Formula:

Ingredients	gm/liter
Pancreatic Digest of Casein	15.0
Yeast Extract	5.0
Dextrose	5.0
Sodium Thioglycollate	0.5
L-Cystine	0.5
Sodium Chloride	2.5
Resazurin	0.001
Agar	0.75
Final pH 7.1±0.2 at 25°C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 29.25g of the powder in 1000ml of deionized or distilled water. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder. Dispense into test tubes. Sterilize in an autoclave at 121 °C (15 lbs.) for 15 minutes. If more than 1/3 of the medium is pink prior to use, reheat once 100°C water bath until pink disappears (not more than 20 minutes), cool rapidly, and should prevent contamination.

Principle and Interpretation:

Dextrose, pancreatic digest of casein, L-cystine and yeast extract provide the growth factors necessary for bacterial replication. Sodium thioglycollate is a reducing agent that prevents the accumulation of peroxides which are lethal to some microorganisms. The L-cystine is also a reducing agent. 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.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish transparent liquid.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Thioglycollate Medium must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 30-35°C for 24-72 h.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Remarks
<i>Staphylococcus aureus</i>	ATCC 6538	10-100	Luxuriant	It grows in a granular form in a bottle.
<i>Pseudomonas aeruginosa</i>	ATCC 9027	10-100	Luxuriant	Growing on the surface of the bottle, turbid.
<i>Bacillus subtilis</i>	ATCC 6633	10-100	Luxuriant	Growing on the surface of the bottle, turbid.
<i>Clostridium sporogenes</i>	CMCC(B)64941	10-100	Luxuriant	Strip growth below the oxide layer of the bottle.
<i>Clostridium perfringens</i>	ATCC 13124	10-100	Luxuriant	Strip growth below the oxide layer of the bottle, aerogenesis.

References:

- GB4789.28-2013 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.
- Linden. 1941. Fluid thioglycollate medium for the sterility test. National Institutes of Health, Bethesda, Md.