

Brewer Thioglycollate Medium

Brewer Thioglycollate Medium is used for testing the sterility of biological products and for isolation of aerobic and anaerobic organisms

REF: Bs.1/BTG01.100.0100
REF: BS.1/BTG01.500.0500

100 Gram
500 Gram

REF: BS.1/BTG01.250.01250

250 Gram

CLINICAL SIGNIFICANCE

Brewer thioglycollate medium is prepared as per the original formula of Brewer (1, 2).

Brewer Thioglycollate Medium contains Very nutritious proteose peptone and beef infusion which support the luxuriant growth of fastidious bacteria. Sodium thioglycollate helps to create anaerobic conditions and it neutralizes toxicity of mercurial compounds if they are present in the inoculum. A very small amount of agar present in the medium maintains the anaerobic conditions at the bottom of the broth. Methylene blue indicates oxygen content of the medium by exhibiting a bluish-green color of the medium in the presence of oxygen.

METHOD PRINCIPLE

It contains highly nutritious proteose peptone and Beef infusion that provides carbon, nitrogen substances, long chain amino acids, vitamins and minerals which support luxuriant growth of even fastidious bacteria. Sodium thioglycollate helps to create anaerobic condition as well as neutralizes toxicity of mercurial compounds if present in the inoculum of the test material. Sodium chloride maintains the osmotic equilibrium while dipotassium phosphate buffers the medium. Very small amount of agar present maintains anaerobic conditions at the bottom of the broth. Methylene blue indicates oxygen content of the medium by exhibiting bluish-green colour to the medium in presence of oxygen. The uninoculated medium shows bluish green colour at the top indicating presence of oxygen in that part. Organisms that ferment dextrose and lower the pH to critical levels may not survive in this medium after growth has taken place.

MEDIA COMPOSITION

Item	Formulaper liter of medium
Beef infusion from 500 g	17.500 gm.
Proteose peptone	10.00 gm.
Sodium chloride	5.000 gm.
Sodium Thioglycollate	0.500 gm.
Dipotassium Phosphate	2,000 gm.
Methylene Blue	0.002 gm.
Dextrose	5.000 gm.
Final pH (at 25°C)	7.2 ± 0.2

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses.).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or

special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the Brewer Thioglycollate Medium material safety data sheet.

MEDIA PREPARATION, STORAGE AND STABILITY

BioScien Brewer thioglycollate medium are stable until expiration date stated on label when properly stored at 10-30°C. Suspend 40.5 g of Brewer Thioglycollate Medium in 1000 ml of distilled water. Boil to dissolve the medium completely. Dispense in tubes or in suitable containers as desired and sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 minutes.

Deterioration

BioScien Brewer thioglycollate medium is light yellow coloured homogeneous free flowing powder. If there are any physical changes, discard the medium. Prepared medium appearance:

Media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

SPECIMEN COLLECTION AND PRESERVATION

Clinical samples

Industrial samples for sterility testing

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile cups
- Sterile tubes or flasks as desired
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

Cultural characteristics observed with added Glycerol and 15% v/v sterile defibrinated blood and Bordetella Selective Supplement (FD004), after an incubation at 35-37°C for 3-4 days.

Organism	Growth
<i>Bacteroides melaninogenicus</i> ATCC 25848	Luxuriant
<i>Clostridium sporogenes</i> ATCC 11437	Luxuriant
<i>Streptococcus mitis</i> ATCC 9895	Luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	Luxuriant
<i>Bacteroides fragilis</i> ATCC 25285	Luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923	Luxuriant

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **BioScien** technical support.

REFERENCES

1. Brewer J. H., 1940, J. Bacteriol., 39:10
2. Brewer J. H., 1940, J.A.M.A., 115:598.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, Andry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1..

SYMBOLS IN PRODUCT LABELLING			
	For in-vitro diagnostic use		Number of <n> test in the pack
	Batch Code/Lot number		Caution
	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		