



## Brewer Thioglycollate Medium, Modified

M195A

### Intended Use:

Recommended for testing sterility of biological products and for isolation of aerobic and anaerobic organisms.

### Composition\*\*

Ingredients	Gms / Litre
HM peptone B #	1.500
Yeast extract	2.000
Peptone	5.000
Dextrose (Glucose)	5.000
Sodium chloride	5.000
Sodium thioglycollate	1.100
Methylene blue	0.002
Agar	1.000
Final pH ( at 25°C)	7.2±0.2

\*\*Formula adjusted, standardized to suit performance parameters

# Equivalent to Beef extract

### Directions

Suspend 20.6 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

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

### Principle And Interpretation

Brewer Thioglycollate Medium is prepared as per the original formula of Brewer (1,2). Brewer thioglycollate medium, modified is modification of original Brewer medium for sterility testing of product containing mercury preservatives. It contains highly nutritious Peptone, HM peptone B and yeast extract, which support luxuriant growth of even fastidious bacteria. Sodium thioglycollate helps to create anaerobic condition as well as neutralize toxicity of mercurial components in the test material. Very small amount of agar helps in maintaining anaerobic condition. Methylene blue will indicate oxygen content of the medium by establishing bluish green colour to the medium, in presence of oxygen. The modified medium contains more thioglycollate and is recommended for sterility testing procedure.

### Type of specimen

Industrial samples for sterility testing.

### Specimen Collection and Handling:

For industrial samples, follow appropriate techniques for sample collection, processing as per guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations :

1. Further biochemical testing is required for complete identification.
2. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
3. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within expiry period when stored at the recommended temperature.

## Quality Control

### Appearance

Cream to yellow coloured homogeneous free flowing powder

### Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent fluid with upper 10% or less medium bluish green on standing.

### Reaction

Reaction of 2.06% w/v aqueous solution at 25°C. pH : 7.2±0.2

### pH

7.00-7.40

### Cultural Response

Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 48 hours

Organism	Inoculum (CFU)	Growth
<i>Bacillus megaterium</i> ATCC 25848	50-100	luxuriant
<i>Bacteroides vulgatus</i> ATCC 8482	50-100	luxuriant
<i>Candida albicans</i> ATCC 10231 (00054*)	50-100	luxuriant
<i>Clostridium sporogenes</i> ATCC 11437	50-100	luxuriant
<i>Micrococcus luteus</i> ATCC 10240	50-100	luxuriant
<i>Neisseria meningitidis</i> ATCC 13090	50-100	luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	50-100	luxuriant
<i>Streptococcus mitis</i> ATCC 9811	50-100	luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	luxuriant

Key : (\*) Corresponding WDCM numbers.

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

## Reference

1. Brewer, 1940, J. Bact. 39:10.
2. Brewer, 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.

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