

Thioglycollate Medium Brewer | Ready-to-use Media

a product by **Biomed MDX**



Intended Use:

Used for the cultivation of aerobic, microaerophilic, and anaerobic microorganisms in sterility testing.

Principle of the Procedure:

The primary principle of this medium is anaerobiosis through chemical reduction. Sodium Thioglycollate acts as a powerful reducing agent that chemically removes dissolved oxygen, converting it into water. This creates a low oxidation-reduction (redox) potential, allowing anaerobic bacteria to grow. To prevent oxygen from re-entering the liquid, a small amount of Agar is added to increase the viscosity, which physically blocks oxygen from diffusing downward. Methylene Blue serves as a visual indicator, remaining colourless in the anaerobic (oxygen-free) depths and turning blue only in the upper oxidised layer where oxygen is present.

Product Summary:

Brewer Thioglycollate Medium is a highly nutritious enrichment broth formulated to support the proliferation of a diverse range of microorganisms, particularly obligate anaerobes. The product's nutritional foundation consists of Pancreatic Digest of Casein and Papaic Digest of Soybean Meal, which collectively provide the essential nitrogenous compounds, vitamins, and minerals required for cellular synthesis. Dextrose is included as a primary carbohydrate source to drive microbial metabolism, while Dipotassium Phosphate serves as a critical buffering agent to maintain pH stability against acidic metabolic byproducts. Sodium Chloride is integrated to preserve osmotic equilibrium, ensuring the structural integrity of the bacterial cells during incubation.

The medium's specialized functionality is achieved through the combination of Sodium Thioglycollate and a minimal concentration of Agar. The thioglycollate acts as a potent reducing agent that chemically sequesters dissolved oxygen, while the agar increases the medium's viscosity to physically impede the downward diffusion of atmospheric oxygen. This creates a stable anaerobic environment in the lower depths of the tube, visually monitored by the redox indicator Methylene Blue. This indicator remains colorless in the reduced anaerobic zone and transitions to a blue hue only in the oxidized upper layer, providing a clear demarcation of the oxygen gradient.

Formulation* (PER LITER):

Pancreatic Digest of Casein	17.5g	Sodium Thioglycollate	1.0g
Papaic Digest of Soybean Meal	2.5g	Dipotassium Phosphate	2.0g
Dextrose	10.0g	Methylene Blue	2.0mg
Sodium Chloride	5.0g	Agar	0.5g

pH 7.2 +/- 0.2

*Adjust and/or supplemental as required to meet performance criteria

Procedure

Materials Provided

5mL Thioglycollate Medium Brewer

Materials Required But Not Provided

Ancillary culture media, reagents, and laboratory equipment as required.

Test Procedure

1. Inoculate and streak the specimen as soon as possible after it is received in the laboratory with an aseptic technique.
2. Incubate at 35 ± 2°C for up to 7 days.
3. Observe the result according to user requirements.
4. Dispose of all used reagents and contaminated materials as infectious waste. Laboratories must handle and dispose of all waste safely according to regulations.

Results

Examine for colonies exhibiting typical microscopic and colonial morphology. Appropriate biochemical or immunological tests may be required for final identification

Quality Control

Inoculate representative samples with the following strains. Incubate the inoculated tubes at $35 \pm 2^\circ\text{C}$ for up to 7 days.

Strains	ATCC®	Growth Results
<i>Bacteroides fragilis</i>	25285	Growth
<i>Staphylococcus aureus</i>	25923	Growth
<i>Clostridium sporogenes</i>	11437	Growth
Negative Control	-	No growth

Transportation:

Temperature fluctuations may occur during transportation. However, these fluctuations do not affect the performance, quality, or safety of the media.

Storage and Shelf Life:

Upon receipt, store tubes at 2 to 8°C in their original sleeve wrapping until just before use. Avoid freezing and overheating.

The tubes may be inoculated up to the expiration date (see package label) and incubated for the recommended incubation times.

Warning and Precautions:

For in vitro diagnostic use. For Professional Use Only. Do Not Reuse.

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













Limitations of the Procedure

This medium is for laboratory use only and is not intended for the diagnosis of disease or other conditions. Identifications are presumptive and colonies should be identified using appropriate methods

Reference

1. Farber, J. F., & Seligmann Jr, E. B. (1968). *Bacteroides vulgatus*, a nonsporeforming anaerobe for testing fluid thioglycollate medium. *Applied Microbiology*, 16(7), 1102-1103.

Packaging Symbol

Symbol	Definition
	Catalogue number
	In Vitro Diagnostic Medical Device
	Batch code
	Date of manufacture
	Temperature limit
	Use-by date
	Keep away from sunlight
	Do not re-use
	Fragile, handle with care
	Consult instructions for use or consult electronic instructions for use
	Do not use if packaging damaged and consult instructions for use
	Manufacturer

Further Information:

For further information please contact your Biomed MDX representative.

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