

Technical Information

Brewer Thioglycollate Medium

Product Code: DM 1019

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

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
Beef, infusion from	500.000
Dextrose	5.000
Sodium chloride	5.000
Dipotassium phosphate	2.000
Sodium thioglycollate	0.500
Methylene blue	0.002
Agar	0.500
Final pH (25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Brewer thioglycollate medium is prepared according to the original formula of Brewer ^(1,2).

It contains highly nutritious proteose peptone and beef infusion, 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.

Methodology

Suspend 40.5 grams of powder media in 1000 ml distilled water. Shake well & heat 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.

Note : If more than the upper one third layer acquires bluish-green colour (absorbs oxygen), the dissolved oxygen can be removed by heating the medium in free flowing steam for 5-10 minutes or in a water bath until the green colour disappears, and the prepared medium should be stored in the dark till use.

Quality Control

Physical Appearance

Cream to yellow 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.



Dehydrated Culture Media
Bases / Media Supplements

Reaction

Reaction of 4.05% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH range 7.00-7.40

Cultural Response/ characteristics

DM 1019: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours. (Clostridium and Bacteroides species incubated anaerobically)

Organism	Inoculum (CFU)	Growth
Bacteroides melaninogenicus ATCC 25848	50-100	good-luxuriant
Clostridium sporogenes ATCC 11437	50-100	good-luxuriant
Streptococcus mitis ATCC 9895	50-100	good-luxuriant
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant
Bacteroides fragilis ATCC 25285	50-100	good-luxuriant
Staphylococcus aureus ATCC 25923	50-100	good-luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Brewer J. H., 1940, J. Bacteriol., 39:10
2. Brewer J. H., 1940, J.A.M.A., 115:598.

Disclaimer :

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