



Thioglycollate Medium w/o Dextrose and Indicator

M1614

Thioglycollate Medium without Dextrose and Indicator is used as a base for fermentation studies of anaerobic and microaerophilic organisms and for detecting microorganisms in normally sterile materials.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	15.000
Sodium chloride	2.500
Sodium thioglycollate	0.500
L-Cystine	0.250
Yeast extract	5.000
Agar	0.750
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 24.00 grams in 1000 ml distilled water. If the medium is to be used for fermentation studies or for diagnostic work add 0.5 to 1% carbohydrate of choice. Heat to boiling to dissolve the medium completely. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Alternatively, sterile carbohydrate solutions may be added to the broth after sterilization. The prepared medium should be stored in the dark at room temperature.

Principle And Interpretation

Thioglycollate Medium without dextrose and indicator is the modification of original Thioglycollate medium (1, 2) used for the fermentation study of anaerobes and for enhancement of sporulation. Omission of dextrose facilitates it to be used in fermentation studies with the addition of desired carbohydrate. Some Clostridia remain viable for a longer period and sporulate better in the absence of carbohydrate and thus this medium could be used for sporulations.

Casein enzymic hydrolysate, L-cystine and yeast extract provide essential nutrients like nitrogenous compounds, carbon, sulphur, minerals and amino acids. Sodium thioglycollate is incorporated as a reducing agent which lowers the oxidation-reduction potential thereby enabling the obligate anaerobes to multiply. A small amount of agar is added to retard the absorption of oxygen by reducing convection currents in the medium.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured very slightly opalescent viscous solution.

Reaction

Reaction of 2.4% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M1614: Cultural characteristics observed after an incubation at 35-37°C for 48 hours (in an appropriate atmosphere) with added carbohydrates.

Organism	Inoculum (CFU)	Growth
Cultural Response		
<i>Clostridium sporogenes</i>	50-100	good-luxuriant
ATCC 11437		

<i>Streptococcus pyogenes</i> ATCC 19615	50-100	good-luxuriant
<i>Bacillus subtilis</i> ATCC 6633	50-100	good-luxuriant
<i>Candida albicans</i> ATCC 10231	50-100	good-luxuriant
<i>Micrococcus luteus</i> ATCC 10240	50-100	good-luxuriant
<i>Neisseria meningitidis</i> ATCC 13090	50-100	good-luxuriant
<i>Bacteroides vulgatus</i> ATCC 8482	50-100	fair

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1. Brewer J. H., 1940, J. Am Med. Assoc., 115, 598.
2. Brewer J. H., 1940, J. Bacteriol., 39:10.

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