

Technical Information

Thioglycollate Medium w/o Dextrose and Indicator

Product Code: DM 2614

Application: - Thioglycollate Medium without Dextrose and Indicator is recommended 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

Principle & 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.

Methodology

Suspend 24.00 grams of dehydrated powder media 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. Mix thoroughly & 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.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder.

Colour and Clarity

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 Range

7.00-7.40



Dehydrated Culture Media
Bases / Media Supplements

Cultural Response

DM2614: Cultural characteristics observed after an incubation at 35-37°C for 48 hours (in an appropriate atmosphere) with added carbohydrates.

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

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

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

Further Reading

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

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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