Enriched Thioglycollate Broth

M738

Enriched Thioglycollate Broth is used for isolation, cultivation and identification of a wide variety of obligate anaerobic bacteria.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	17.000
Soya peptone	3.000
Dextrose	6.000
Sodium chloride	2.500
Sodium thioglycollate	0.500
L-Cystine	0.250
Sodium sulphite	0.100
Hemin	0.005
Vitamin K1	0.0001
Agar	0.700
Sodium bicarbonate	1.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 31.06 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 118-121°C for 15 minutes(12-15 lbs pressure respectively). Aseptically add 10% rabbit or horse serum. Cool and dry under 85% N2, 10% H2 and 5% CO2 atmosphere.

Principle And Interpretation

Enriched Thioglycollate Medium is recommended for use in isolation and cultivation of fastidious and obligate anaerobic bacteria from clinical materials (1). This medium is often used for susceptibility testing of anaerobes by broth disk elution method. This medium is the modification of original Brewers formulation (2, 3), with the addition of vitamin K1, sodium bicarbonate, hemin and rabbit or horse serum.

Casein enzymic hydrolysate and soya peptone supports growth of wide variety of fastidious microorganisms. Sodium thioglycollate lowers the oxidation-reduction potential for anaerobic growth and also neutralizes the bacteriostatic effect of mercurial compounds. Most organisms show earlier and more vigorous growth in presence of dextrose, hemin and vitamin K1. Hemin is the source of X-factor, which stimulates the growth of many microorganisms.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Light amber coloured, clear to slightly opalescent solution in tubes

Reaction
Reaction of 3.0% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
M738: Cultural characteristics observed under anaerobic condition, after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth

Bacteroides vulgatus ATCC 8482	50-100	luxuriant
Clostridium perfringens ATCC 12924	50-100	luxuriant
Clostridium sporogenes ATCC 11437	50-100	luxuriant
Neisseria meningitidis ATCC 13090	50-100	luxuriant
Streptococcus pyogenes ATCC 19615	50-100	luxuriant

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. Allen S. D., Siders J. A. and Movler M., 1985, In Manual of Clinical Microbiology, Lennette, Balows, Hausler and Shadomy (Eds.), 4th Ed., ASM, Washington, D.C.
2. Brewer J. H., 1940 and 1943, J. Bacteriol., 39:10 and 46:395.
3. Brewer J. H., 1943. J. Bacteriol., 46:395.

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