Enriched Thioglycollate Broth

M738

Intended Use:

Recommended for isolation, cultivation and identification of a wide variety of obligate anaerobic bacteria from clinical and non-clinical samples.

Composition**

Ingredients	g / L
Tryptone	17.000
Soya peptone	3.000
Dextrose (Glucose)	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 purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at Δ118-121°C for 15 minutes. Aseptically add 10% rabbit or horse serum. Dispense in tubes or flasks as desired. Cool and dry under 85% N_2,10% H_2 and 5% CO_2 atmosphere.
Δ corresponds to at 12-15 lbs pressure respectively.

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.
Tryptone 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.

Type of specimen

Clinical : wound swabs, skin swabs or scrapings, tooth tartar etc.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. The tubes should not be reheated as frequent boiling leads to development of toxic products.
2. Prior to use the medium should be boiled once to remove the absorbed oxygen.
3. Before inoculation, the tubes should be brought to room temperature
4. The medium should not be used in fermentation process as medium contains yeast extract which is high in carbohydrate content.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

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

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 between 10-30°C in tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

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 46:39
3. Brewer J. H., 1943. J. Bacteriol., 46:39
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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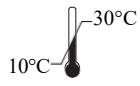
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP

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CE Marking

Do not use if package is damaged

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