Thioglycollate Broth

Intended Use

Recommended for cultivation and isolation of obligate and facultative anaerobic and microaerophilic bacteria and for sterility tests.

Typical Composition (g/liter)

Tryptone 15.0; Yeast extract 5.0; D (+) glucose 5.50; Sodium Chloride 2.50; L-cystine 0.5; Sodium thioglycollate 0.5

Mode of Action

The thioglycollate media are thus suitable for the examination of materials, which contain heavy metals or heavy metal preservatives. The higher viscosity of the Fluid Thioglycollate Medium prevents rapid uptake of oxygen. Any increase in the oxygen content is indicated by the redox indicator sodium resazurin, which changes its colour to red. Tryptone serves as a source of nitrogen and carbon compounds, long chain amino acids and other essential nutrients. Yeast extract serve as source of essential nutrients to the contaminants, if present. Dextrose serves as the energy source. Sodium chloride maintains the osmotic equilibrium of the medium whereas L-cystine, an amino acid, also serves as source of essential growth factors.

Preparation

Suspend 29 g Thioglycollate Broth/litre, dispense into tubes, autoclave 15min at 121 °C).

Storage

Store between 2-8°C. Use before expiry date on the label.

Specimen

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

Pharmaceutical: Sterility testing of viscous products.

Experimental Procedure 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.

Inoculate the culture medium with the sample material taking care that the sample reaches the bottom of the tubes. In order to ensure anaerobiosis, the medium can then be over laid with 1cm of sterile liquid paraffin or agar solution.

Incubation: several days at the optimal incubation temperature (35-37 °C)

Quality Control

Organism	Growth
Clostridium sporogenes ATCC 11437	Luxuriant
Clostridium sporogenes ATCC 19404	Luxuriant
Bacillus subtilis ATCC 6633	Luxuriant
Micrococcus luteus ATCC 9341	Luxuriant
Pseudomonas aeruginosa ATCC 9027	Good
Bacteroides vulgatus ATCC 8482	Luxuriant
Staphylococcus aureus ATCC 6538	Good
Escherichia coli ATCC 25922	Good
Clostridium perfringens ATCC 13124	Luxuriant
Salmonella Typhimurium ATCC 14028	-

Reference

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5. European Pharmacopeia II, Chapter VIII, 3.