

# Thioglycollate Fluid Medium without Indicator

Cat. 1516

For the cultivation and isolation of obligate and facultative aerobic, anaerobic and microaerophilic bacteria

## Practical information

| Applications | Categories  |
|--------------|-------------|
| Enrichment   | General use |

Industry: Pharmaceutical/Veterinary

Regulations: USP

## Principles and uses

Thioglycollate Medium without Indicator is an enriched general-purpose medium for the recovery of a wide variety of microorganisms

The medium is characterized by its ability to support the growth, from a minimal inoculum, of a great variety of aerobes, anaerobes and microaerophilic microorganisms. The lack of an indicator avoids possible toxicity to organisms, making this a choice medium for diagnostics, particularly useful for sterile materials which contain mercurial preservatives.

Casein and Soy peptones provide nitrogen, vitamins, minerals and amino acids essential for growth. Sodium thioglycollate and L-Cystine lower the oxidation-reduction potential by removing oxygen to maintain a low Eh. Dextrose is the carbohydrate energy source and allows a rapid and vigorous growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Bacteriological agar delays the dispersion of CO<sub>2</sub> and diffusion of O<sub>2</sub>.

This medium supports a minimal inoculation with early visible signs of growth. Strict aerobes develop in the upper part, whereas anaerobes develop at the bottom of the medium tube. This medium supports the growth of aerobic microorganisms such as members of the genus Brucella, of strict anaerobes such as Clostridium acetobutyricum, Clostridium novyi, Actinomyces bovis, Bacteroides, Lactobacillus, and other bacteria. Pathogenic fungi frequently grow well in this medium. The medium can be used with the addition of 10% serum for the cultivation of Trichomonas vaginalis and other microorganisms that utilize serum for added growth.

## Formula in g/L

|                       |      |                |      |
|-----------------------|------|----------------|------|
| Bacteriological agar  | 0,75 | Casein peptone | 17   |
| Dextrose              | 6    | L-Cystine      | 0,25 |
| Sodium chloride       | 2,5  | Sodium sulfite | 0,1  |
| Sodium thioglycollate | 0,5  | Soy peptone    | 3    |

## Preparation

Suspend 30 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes. For optimal performance the tubes should be boiled and cooled to ambient temperature before use. Boiling restores the uniformly hazy appearance of the medium.

## Instructions for use

- Inoculate portions of Thioglycollate Medium without Indicator.
- It is indicated to be incubated at 35±2 °C for 24h.

## Quality control

| Solubility | Appearance  | Color of the dehydrated medium | Color of the prepared medium | Final pH (25°C) |
|------------|-------------|--------------------------------|------------------------------|-----------------|
| w/o rests  | Fine powder | Beige                          | Amber slightly opalescent    | 7,0 ± 0,2       |

## Microbiological test

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Clostridium sporogenes, Pseudomonas aeruginosa, Staphylococcus aureus

Incubation conditions: (30-35 °C / <=3 días).

Inoculation conditions: (<=100 CFU).

Resto of strains:

Incubation conditions: (35±2 °C / 24 h).

### Microrganisms

### Specification

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|                                     |                        |
|-------------------------------------|------------------------|
| Candida albicans ATCC 10231         | Good growth, turbidity |
| Clostridium sporogenes ATCC 11437   | Good growth, turbidity |
| Neisseria meningitidis ATCC 13092   | Good growth, turbidity |
| Aspergillus brasiliensis ATCC 16404 | Good growth, turbidity |
| Streptococcus pyogenes ATCC 19615   | Good growth, turbidity |
| Bacteroides fragilis ATCC 25285     | Good growth, turbidity |
| Staphylococcus aureus ATCC 25923    | Good growth, turbidity |
| Staphylococcus aureus ATCC 6538     | Good growth, turbidity |
| Bacillus subtilis ATCC 6633         | Good growth, turbidity |
| Pseudomonas aeruginosa ATCC 9027    | Good growth, turbidity |

## Storage

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Temp. Min.:2 °C

Temp. Max.:25 °C

## Bibliography

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Baron, E.J. C.R. Peterson, S.M. Finegold 1994. Bailey and Scott's diagnostic Microbiology, 9th ed. MosBy-Year Book, Ing; St. Louis, M.O. The United States Pharmacopoeial Convention, 1995. 23th ed. P. 1686-1690.