

# Fluid Thioglycollate Medium

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

## General Information

This medium complies with the recommendations of the harmonized method in the European Pharmacopeia 5.6 and the United States pharmacopeia 29 (2006).

## Mode of Action

The reducing agents thioglycollate and cystine ensure an anaerobiosis which is adequate even for fastidious anaerobes. The sulfhydryl groups of these substances also inactivate arsenic, mercury and other heavy metal compounds.

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.

## Typical Composition (g/litre)

Peptone from casein 15.0; yeast extract 5.0; D(+)glucose 5.5; L-cystine 0.5; sodium chloride 2.5; sodium thioglycollate 0.5; sodium resazurin 0.001; agar-agar 0.75.

## Preparation

Suspend 30 g Fluid Thioglycollate Medium/litre, dispense into tubes, autoclave (15 min at 121 °C).

pH: 7.1 ± 0.2 at 25 °C.

The prepared media are clear and yellowish.

## Quality control

Test strains	Inoculum	Growth
<i>Staphylococcus aureus</i> ATCC 6538	10-100	good
<i>Bacillus subtilis</i> ATCC 6633	10-100	good
<i>Clostridium sporogenes</i> ATCC 19404	10-100	good
<i>Bacteroides vulgatus</i> ATCC 8482	10-100	good
<i>Micrococcus luteus</i> ATCC 9341	10-100	good
<i>Pseudomonas aeruginosa</i> ATCC 9027	10-100	good
<i>Clostridium perf.</i> 13124	10-100	good
<i>Clostridium sporogenes</i> ATCC 11437	10-100	good

## Storage

The culture media should always be freshly prepared. Fluid Thioglycollate Medium cannot be used if more than the upper third of the butt has turned pink due to the presence of oxygen and if this colouration does not disappear after boiling once.

## Experimental Procedure and Evaluation

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 overlaid with 1 cm of sterile liquid paraffin or agar solution.

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

Anaerobes grow in the lower part of the culture.

## Literature

American Public Health Association: Compendium of methods for the microbiological examination of foods. - 3<sup>rd</sup> ed. (1992).

European Pharmacopeia II, Chapter VIII. 3.

United States Pharmacopeia XXVI, Chapter "Microbial Limit Tests", 2003.

## Ordering Information

Product	Ordering No.	Pack size
Fluid Thioglycollate Medium	1.08191.0500	500 g
Fluid Thioglycollate Medium	1.08191.5000	5 kg
Agar-agar purified	1.01614.1000	1 kg
Paraffin viscous	1.07160.1000	1 l