A basal medium that is recommended for the cultivation of fungi.

**Fluid Thioglycollate Medium**

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| REF: V.1/FT01.100 100 gram REF: V.1/FT01.250 250 gram |  REF: V.1/FT01.500 500 gram  |

# CLINICAL SIGNIFICANCE

# Brewer (1) formulated Fluid Thioglycollate Medium for rapid cultivation of aerobes as well as anaerobes including microaerophiles by adding a reducing agent and small amount of agar. The BP (2), EP (3), USP (4), and AOAC (5) have recommended the media for sterility testing of antibiotics, biologicals and foods and for determining the phenol coefficient and sporicidal effect of disinfectants. However, it is intended for the examination of clear liquid or water-soluble materials. Fluid Thioglycollate Medium is also routinely used to check the sterility of stored blood in blood banks

# METHOD PRINCIPLE

# Dextrose, tryptone, yeast extract, L-cystine provide the growth factors necessary for bacterial multiplication. L-cystine and sodium thioglycollate allows Clostridium to grow in this medium even under aerobic conditions. Also the small amount of agar used in the medium favors the growth of aerobes as well as anaerobes in the medium, even if sodium thioglycollate is deleted from the medium. Sodium thioglycollate act as a reducing agent and neutralizes the toxic effects of mercurial preservatives and peroxides formed in the medium, thereby promoting anaerobiosis, and making the medium suitable to test materials containing heavy metals. Any increase in the oxygen content is indicated by a colour change of redox indicator, resazurin to red. The small amount of agar helps in maintaining low redox potential for stabilizing the medium.

# MEDIA COMPOSITION

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| --- | --- |
| **Item**  | **Formula in g/L**  |
| Casein peptone Yeast extract DextroseSodium chlorideL-CystineSodium thioglycollate Resazurin Agar  | 15552.50.50.50.0010.750 |

##

## Final pH 7.1 ± 0.2 at 25°C

# PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person.

Good Laboratories practices using appropriate precautions should be followed in:

* Wearing personnel protective equipment (overall, gloves, glasses...).
* Do not pipette by mouth.
* In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries, seek medical advice immediately.
* Handle specimens and inoculated culture bottles as though capable of transmitting infectious agents. All inoculated culture bottles, specimen collection needles, and blood drawing devices should be decontaminated according to country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the Fluid Thioglycollate Medium material safety data sheet.

# MEDIA STORAGE AND STABILITY

**Lab.Vie**. Potato Dextrose Agar should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a 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.

## PROCEDURE

## Suspend 29.25 grams in 1000 ml distilled water, mix well. Heat if necessary to ensure complete solution. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 25°C and store in a cool dark place preferably below 25°C.

## Note: If more than the upper one-third of the medium has acquired a pink-purple colour, the medium may be restored once by heating in a water bath or in free flowing steam until the pink-purple colour disappears

## Deterioration

**Lab.Vie**. Fluid Thioglycollate Medium is Cream to yellow homogeneous free flowing powder. Prepared Media is Light straw coloured, clear to slightly opalescent solution with upper 10% or less medium pink-purple on standing. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

**SPECIMEN COLLECTION AND PRESERVATION**

# For clinical samples follow appropriate techniques for handling specimens as per established guidelines (11, 12). For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (9, 10, 13). After use, contaminated materials must be sterilized by autoclaving before discarding.

# TYPE OF SPECIMEN

# Pharmaceutical samples for sterility testing, clinical samples- pus, wounds

# EQUIPMENT REQUIRED NOT PROVIDED

# Sterile cups

# Sterile tubes

# Incubator

# Autoclave

# QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact the technical support.

# PERFORMANCE CHARACTERISTICS

Cultural characteristics observed after incubation at 35 - 37°C for 18 - 24 hours

|  |  |
| --- | --- |
| **Microorganism** | **Growth** |
| *Clostridium sporogenes ATCC 19404* | Luxuriant |
| *Clostridium sporogenes ATCC 11437* | Luxuriant |
| *Micrococcus luteus ATCC 9341* | Luxuriant |
| *Bacteroides fragilis ATCC 23745* | Luxuriant |
| *Bacteroides vulgatus ATCC 8482* | Luxuriant |
| *Streptococcus pneumoniae ATCC 6305* | Luxuriant |
| *Streptococcus pneumoniae ATCC 6305* | Luxuriant |
| *Staphylococcus aureus subsp. aureus ATCC 25923* | Luxuriant |
| *Staphylococcus aureus subsp. aureus ATCC 6538* | Luxuriant |
| *Salmonella Abony NCTC 6017* | Luxuriant |
| *Escherichia coli NCTC 9002* | Luxuriant |
| *Escherichia coli ATCC 25922* | Luxuriant |
| *Pseudomonas aeruginosa ATCC 27853* | Luxuriant |
| *Pseudomonas aeruginosa ATCC 9027* | Luxuriant |

# REFERENCES

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7. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

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| **SYMBOLS IN PRODUCT LABELLING**  |
|   IVD For in-vitro diagnostic use  |   Number of <n> test in the pack  |
|  LOT Batch Code/Lot number  | A black and white triangle with a exclamation mark  Description automatically generated Caution  |
|  REF Catalogue Number  | Do not use if package is damaged   |
|   Temperature Limitation   Expiration Date   Manufactured by  |  Consult Instruction for use      |

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