OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Thioglycollate Agar

Principle

Thioglycolate Agar is used for the cultivation of aerobic as well as anaerobic microorganisms from pharmaceutical products. It is consisting of casein enzymic hydrolysate, L-cystine, dextrose, yeast extract, sodium chloride, sodium thioglycolate, resazurin and agar. Casein enzymic hydrolysate and yeast extract provides nitrogen, carbon, vitamins and other growth factors. Dextrose as a energy source. L-Cystine lower the oxidation-reduction potential of the medium by removing oxygen to maintain a low Eh and prevent accumulation and toxicity of peroxides. Sodium thioglycolate neutralizes the antibacterial effect of preservatives and heavy metals in commercial products. Sodium chloride source of essential ions. Resazurin is an indicator, it is colorless in reduced state and turns pink in oxidized state.

Use: For the growth and cultivation of anaerobic microorganisms.

Contents*

Ingredients	Gram/Litre
Casein enzymic hydrolysate	15.000
L-Cystine	0.500
Dextrose	5.500
Yeast extract	5.000
Sodium chloride	2.500
Sodium thioglycolate	0.500
Resazurin	0.001
Agar	20.00
pH at 25˚C	7.1 ±0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 49.00 grams in 1000 ml distilled water, boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in desired. Ensure complete solidification and inoculate test sample aseptically.

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Specimens types analyzed
Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken
These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation
The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Beige colored free flowing, homogeneous powder**
Reaction of 4.9% solution	**7.1 ± 0.2 at 25˚C**
pH	**6.90 – 7.30**
Gelling	**Firm comparable with 2% agar gel**
Color and clarity of ready medium	**Light amber colored clear to slightly opalescent gel (turns red due to aeration on standing)**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

Different Microbial Response: Cultural characteristics observed after an incubation at 35±2°C for 40-48 hours under anaerobic condition.

Organism	ATCC no.	Inoculum	Growth	Recovery
Clostridium perfringens	**3624**	**50-100**	**Luxuriant**	**≥ 60%**
Clostridium sporogenes	**11437**	**50-100**	**Luxuriant**	**≥ 60%**

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. **Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.**
2. **Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.**

Disclaimer:

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