



## Thioglycollate Agar

M608

Thioglycollate Agar is recommended for cultivation of anaerobic microorganisms.

### Composition\*\*

Ingredients	Gms / Litre
Casein enzymic hydrolysate	15.000
L-Cystine	0.500
Dextrose	5.500
Yeast extract	5.000
Sodium chloride	2.500
Sodium thioglycollate	0.500
Resazurin	0.001
Agar	20.000
Final pH ( at 25°C)	7.1±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 49.0 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

### Principle And Interpretation

Thioglycollate Agar is used for the cultivation of aerobic as well as anaerobic microorganisms in the performance of sterility tests. It is prepared based on the formula specified by US Pharmacopoeia (1) and APHA (2). This medium neither requires anaerobic jar nor any special sealing for the cultivation of anaerobes. Thioglycollate Agar is also recommended for the cultivation of *Clostridium* species (1) and in the culture of *Desulfotomaculum nigrificans* .

Casein enzymic hydrolysate, yeast extract provides nitrogenous compounds, vitamin B and other essential growth nutrients. Dextrose is the fermentable carbohydrate and energy source. Resazurin is the redox indicator. Thioglycollate neutralizes the bacteriostatic effect of mercurial compounds used as the preservatives in the injection solution. If the solution used in test is a bacteriostatic ingredient then it is necessary to ascertain the bacteriostatic activity of the product.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 2.0% Agar gel.

#### Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent (turning red due to aeration on standing) gel forms in Petri plates.

#### Reaction

Reaction of 4.9% w/v aqueous solution at 25°C. pH : 7.1±0.2

#### pH

6.90-7.30

#### Cultural Response

M608: Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours under anaerobic condition.

Organism	Inoculum (CFU)	Growth	Recovery
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#### Cultural Response

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<i>Clostridium botulinum</i> ATCC 25763	50-100	luxuriant	>=50%
<i>Clostridium perfringens</i> ATCC 12924	50-100	luxuriant	>=50%
<i>Clostridium sporogenes</i> ATCC 11437	50-100	luxuriant	>=50%

### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label

### Reference

1. The United States Pharmacopoeia, 1985 21st rev. U.S. Pharmacopocial Convention, Rockville, M.D.
2. Speck M. L.(ed.), 1985, Compendium of Methods for the Microbiological examination of Foods, 2nd ed., APHA, Washington, D.C.

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