

Thioglycollate Broth NIH

Cat. 1241

For sterility assays of biological and pharmaceutical products.

Practical information

Applications	Categories
Diluent	General use

Industry: Pharmaceutical/Veterinary / Clinical

Regulations: NIH



Principles and uses

Thioglycollate Broth is prepared according to the formula of the National Institute of Health (NIH) and the United States Pharmacopoeia (USP). Is used in detecting microorganisms in normally sterile materials, and is an alternative to certain products that are turbid or cannot readily culture because of the viscosity.

Casein peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly the B-group. 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 for a rapid and vigorous growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance.

Formula in g/L

Casein peptone	15	L-Cystine	0,5
Sodium chloride	2,5	Sodium thioglicollate	0,5
Yeast extract	5	Dextrose anhydrous	5

Preparation

Suspend 28,5 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. The medium does not contain agar or Resazurin and is preferable that it is freshly prepared, eliminating any dissolved oxygen before use, by heating in boiling water or in a water bath.

Instructions for use

- Inoculate and incubate at $35 \pm 2^\circ\text{C}$ for 18 - 48 hours.
- Anaerobic conditions can also be used with this medium.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
		Beige	Amber, slightly opalescent.	$7,1 \pm 0,2$

Microbiological test

Incubation conditions: (35±2 °C / 18-48 h)

Microorganisms

Candida albicans ATCC 10231
Clostridium sporogenes ATCC 19404
Streptococcus pyogenes ATCC 19615
Bacteroides fragilis ATCC 25285
Escherichia coli ATCC 25922
Bacillus subtilis ATCC 6633

Specification

Good growth, turbidity.
Good growth, turbidity.
Good growth, turbidity.
Good growth, turbidity.
Good growth, turbidity.
Good growth, turbidity.

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

U.S. Pharmacopoeia XVI, 1960