Thioglycollate HiVeg™ Agar

MV608

Intended Use:

Recommended for cultivation of anaerobic microorganisms.

Composition**

Ingredients	g / L
HiVeg™ hydrolysate	15.000
L-Cystine	0.500
Dextrose (Glucose)	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 purified/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. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

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). Thioglycollate Agar is also recommended for the cultivation of *Clostridium* species (2) and in the culture of *Desulfotomaculum nigrificans*.

Thioglycollate HiVeg™ Agar is prepared by completely replacing animal based peptone with vegetable peptones to avoid BSE/TSE risks associate with animal peptones. HiVeg™ hydrolysate, yeast extract provides nitrogenous and carbonaceous 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.

Type of specimen

Food samples

Specimen Collection and Handling:

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (1). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Due to nutritional variations, certain strains may show poor growth.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

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 (turning red due to aeration on standing) clear to slightly opalescent 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

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

Organism	Inoculum (CFU)	Growth	Recovery
Clostridium botulinum ATCC 25763	50-100	luxuriant	>=50%
Clostridium perfringens ATCC 12924	50-100	luxuriant	>=50%
Clostridium sporogenes ATCC 11437	50-100	luxuriant	>=50%

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in 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.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
2. The United States Pharmacopoeia-National Formulatory (USP-NF), 2022
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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