Thiogel Medium

M610

Intended Use:

Recommended for cultivation of strictly anaerobic, aerobic as well as facultative microorganisms and for the identification of pure cultures on the basis of their ability to liquefy gelatin.

Composition**

Ingredients	g / L
Tryptone	17.000
Soya peptone	3.000
Dextrose (Glucose)	6.000
Sodium chloride	2.500
Sodium thioglycollate	0.500
L-Cystine	0.250
Sodium sulphite	0.100
Gelatin	50.000
Agar	0.700
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 80.05 grams in 1000 ml purified/distilled water, preheated to a temperature of 50°C. Mix well and allow to stand for 5 minutes. Heat to boiling to dissolve the medium completely. Dispense in test tubes filling them half full. Sterilize by autoclaving at Δ118°C for 15 minutes.

Δ corresponds to 12 lbs pressure.

Principle And Interpretation

Proteolytic organisms digest proteins and consequently liquefy gelatin or coagulated serum. Liquefaction of gelatin, being the commonest proteolytic property, is routinely used as an index of proteolytic activity. Gelatin will not by itself support the growth of many pathogens and is therefore incorporated into a nutrient medium (1). In Thiogel Medium, gelatin is incorporated into Thioglycollate Medium without Indicator (2). Thioglycollate Medium was modified by Brewer (3,4) by replacing meat infusion in original formulation by plant soya (5) and casein peptones (6) to enhance growth. Thioglycollate Medium is used for cultivation of strict anaerobes, microaerophiles and aerobic microorganisms and for identifying the pure cultures on the basis of their ability to liquefy gelatin.

Tryptone, Soya peptone, dextrose and L-cystine in the medium provide nitrogenous and carbonaceous compounds, trace elements, sulphur, and fermentable carbohydrate etc. Thioglycollate is the reducing agent, which binds to the molecular oxygen and thus inhibits the accumulation of peroxides, which are toxic to some microorganisms. Small amount of agar renders and maintains anaerobic condition at the bottom of the tube so that incubation under anaerobic conditions is not necessary. Gelatin serves as the substrate for determining the presence or absence of gelatinase enzyme in microorganisms.

Type of specimen

Pure isolates from clinical samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Do not heat tubes more than once to drive off absorbed oxygen; frequent boiling results in the development of toxic products. However, it is recommended that media should be boil prior to its use to enhance recovery rate (2).
2. Bring the media to room temperature prior to inoculation (2).
3. Do not shake or invert tubes when boiling (2).

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 coarse powder

Gelling

Semisolid, comparable with 5.0% gelatin gel.

Colour and Clarity of prepared medium

Light straw coloured opalescent viscous gel forms in tubes.

Reaction

Reaction of 8.0% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Gelatin liquefaction
** *Bacillus spizizenii* ATCC 6633 (00003*)	50-100	good-luxuriant	negative reaction
Bacteroides fragilis ATCC 25285	50-100	good-luxuriant	negative reaction
Clostridium sporogenes ATCC 11437	50-100	good-luxuriant	positive reaction
Micrococcus luteus ATCC 10240	50-100	good-luxuriant	negative reaction
Neisseria meningitidis ATCC 13090	50-100	good-luxuriant	negative reaction
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant	negative reaction

Key : *Corresponding WDCM numbers. **Formerly known as *Bacillus subtilis* subsp. *spizizenii*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Reference

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3. Brewer J. H., 1940, Jour. Amer. Medi. Assoc., 115, 598
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6. Vera H. D., 1944, J. Bacteriol., 47, 59
7. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
8. 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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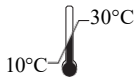
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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