Modified Shieh Agar (LMG Medium 215)

M2049

Intended Use:

Recommended for the cultivation and maintenance of *Flacobacterium sp*, *Flexibacter spp* .

Composition**

Ingredients	Gms / Litre
Peptone	5.000
Yeast extract	1.000
Magnesium sulphate,heptahydrate	0.300
Dipotassium phosphate	0.100
Potassium dihydrogen phosphate	0.050
Sodium bicarbonate	0.050
Sodium acetate	0.010
Barium chloride	0.009
Calcium chloride, dihydrate	0.0067
Ferrous sulphate, heptahydrate	0.001
Agar	15.000
Final pH (at 25°C)	7.2±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 21.38 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Cool to 45-50°C. Mix well and pour into sterile Petri plates or tubes or as desired.

Principle And Interpretation

Flavobacteria are found in soil and fresh water in a variety of environments. Several species are known to cause disease in freshwater fish (1). Some study suggests that *Flavobacterium spp* may play a pathogenic role in patients with advanced HIV disease (2).

Modified Shieh Agar is basic culture media used for maintaining *Flavobacterium spp* and *Flexibacter spp* . The original shieh's recipe was modified by omitting glucose, pyruvate and citrate as these were found not supporting the growth(3).

Peptone and yeast extract provide the necessary nitrogen, carbon compounds, vitamins and also some trace ingredients necessary for the growth of bacteria. Phosphates buffers the medium. Sodium chloride maintains the osmotic equilibrium of the medium. Other salts are source of inorganic ions.

Type of specimen

Clinical samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic 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. Some strains may show poor growth due to nutritional variations.

Performance and Evaluation

Performace 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 1.5% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 2.14% w/v aqueous solution at 25°C. pH : 7.2±0.1

pH
7.10-7.30

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

Organism	Inoculum (CFU)	Growth
Flavobacterium species ATCC 51823	50-100	good-luxuriant
Escherichia coli ATCC 25922 (00013)*	50-100	good-luxuriant
Staphylococcus aureus subsp. aureus ATCC 25923 (00034)*	50-100	good-luxuriant

Key: (*) Corresponding WDCM numbers

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 inorder 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. Use before expiry date on the label. 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 (4,5).

Reference

1. Bernardet; et al. (Jul 1994). "Cutting a Gordian Knot: Emended Classification and Description of the Genus Flavobacterium, Emended Description of the Family Flavobacteriaceae, and Proposal of Flaviobacterium hydatis nom. nov. (Basonym, Cytophaga aquatalis Strohl and Tait 1978)". Int J Syst Bacteriol. 46 (3): 447–53. doi:10.1099/00207713-46-1-128.
2. Manfredi R, Department of Clinical and Experimental Medicine, University of Bologna, Italy.
3. Handbook of Microbiological Media, Fourth edition, Ronald Atlas.
4.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
5. 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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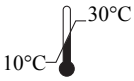
IVD	In vitro diagnostic medical device
CE	CE Marking
	Storage temperature
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