Gifu Anaerobic HiVeg™ Agar w/o dextrose w/ 0.15% Agar MV2033

Recommended as a general culture medium for identification and strain preservation of anaerobic bacteria.

Composition**

Ingredients	Gms / Litre
HiVeg™ peptone	10.000
Soya Peptone	3.000
HiVeg™ peptone no.3	10.000
Yeast extract	18.50
HiVeg™ extract	3.400
Potassium dihydrogen phosphate	2.500
Sodium chloride	3.000
L-Cysteine hydrochloride	0.300
Agar	1.500
Final pH (at 25°C)	7.3±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 52.2 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Dispense into tubes or flasks or as desired. Sterilize by autoclaving at 10 lbs pressure (115°C) for 15 minutes. Store at room temperature in dark place. Do not store in a refrigerator.

Principle And Interpretation

Gifu Anaerobic HiVeg™ Agar w/o dextrose w/ 0.15% agar is a semi solid medium for identification and strain preservation of anaerobic bacteria. It is prepared by completely replacing animal based peptones with vegetable peptones to avoid the BSE/TSE risks associated with animal peptones. Combination of HiVeg™ Peptones favour growth of fastidious anaerobic organisms such as such as streptococci, pneumonococci and meningococci. This medium is also suitable for tests of various biochemical properties and motility studies (5). Anaerobic organisms require reducing condition and an absence of dissolved oxygen in the medium. Strict anaerobes obtain its energy and intermediates through oxidation utilizing hydrogen acceptors other than oxygen. Pre-reducing the medium by boiling to drive off the oxygen can expel this (3). Anaerobic bacteria vary in their sensitivy to oxygen and nutritional requirements (1). HiVeg™ peptone, HiVeg™ peptone No.3, HiVeg™ extract , Soya peptone and Yeast extract provides nitrogen, carbon compounds, long chain amino acids, vitamin B complex and other sources of minerals for growth. L-Cysteine hydrochloride acts as a reducing agent and favours growth of anaerobic organisms. Sodium chloride maintains osmotic equilibrium (2). Phosphates buffers the medium.

Type of specimen

Isolated Microorganism

Specimen Collection and Handling

For isolated microorganism samples follow appropriate techniques for handling specimens as per established guidelines (3,4). 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. Some organisms may show poor growth due to nutritional variations.

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

Light yellow to brownish yellow homogeneous free flowing powder

Gelling

Semisolid , comparable with 0.15% Agar gel

Colour and Clarity of prepared medium

Amber coloured semisolid gel forms in tube

Reaction

Reaction of 5.22% w/v aqueous solution at 25°C. pH : 7.3±0.1

Cultural Response

Cultural characteristics observed in an anaerobic atmosphere after an incubation at 35 - 37°C for 48 - 72 hours.

Organism	Inoculum (CFU)	Growth
Streptococcus pyogenes ATCC 19615	50-100	good - luxuriant
Bacteroides vulgatus ATCC 8482	50-100	good - luxuriant
Clostridium sporogens ATCC 11437	50-100	good - luxuriant
Clostridium perfringens ATCC 13124 (00007*)	50-100	good - luxuriant

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and Use freshly prepared medium. 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. Collee J.G., Fraser A.G., Marminon B.P., Simmons A.,)(Eds), 1996, Mackie and McCartney. Practical Medical Microbiology, 14th Ed., Churchill Livingstone.
2. Gibbons R.J., and MacDonald J.B., 1960, J. Bacteriol, 80:164-170
3. Isenberg, H.D. (2nd Ed.), Clinical Microbiology Procedures Handbook, American Society for Microbiology, Washington, D.C.
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.
5. Nissui Manual, Microbiological products Nissui Pharmaceutical Co., 1983.

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