

Nutrient HiVeg[®] Agar w/ 1% HiVeg[®] Peptone

MV012

Intended use

Recommended as a general purpose culture medium which may be used as an enriched medium by incorporating 10% blood or other biological fluids.

Composition**

Ingredients	g / L
HiVeg [®] peptone	10.000
Sodium chloride	5.000
HiVeg [®] extract [#]	5.000
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 35.0 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. 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

Nutrient HiVeg[®] Agar w/1% HiVeg[®] Peptone has almost double concentration of the nitrogen sources than that used in Nutrient HiVeg[®] Agar, making it more nutritive. Nutrient media are basic culture media used for maintaining microorganisms, cultivating fastidious organisms by enriching with serum or blood and are also used for purity checking prior to biochemical or serological testing (1,2,3). It is one of the several non-selective media useful in routine cultivation of microorganisms (4,5). Nutrient HiVeg[®] Agar w/ 1% HiVeg[®] Peptone is prepared by completely replacing animal based peptone with vegetable peptones to avoid BSE/TSE risks associated with animal peptones. HiVeg[®] extract and HiVeg[®] peptone provide the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients to non-fastidious organisms like *Bacillus subtilis* and *Staphylococcus aureus*. Sodium chloride maintains osmotic equilibrium of the medium. With the addition of 10% v/v blood or other biological fluids like ascitic fluid, serum etc., this media is recommended for growing fastidious organisms.

Type of specimen

Food and dairy samples; Water samples

Specimen Collection and Handling:

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4,5,6). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards(7). 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. This medium is general purpose medium and may not support the growth of fastidious organisms.

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 1.5% Agar gel

Colour and Clarity of prepared medium

Basal medium : Light yellow coloured clear to slightly opalescent gel. After addition of 5%v/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates

Reaction

Reaction of 3.5% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed with added 5% v/v sterile defibrinated blood, after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Growth w/ Blood	Recovery w/ Blood	Haemolysis
<i>Neisseria meningitidis</i> ATCC 13090	50-100	good	50-70%	luxuriant	≥70%	none
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	50-100	luxuriant	≥70%	luxuriant	≥70%	beta
<i>Streptococcus pneumoniae</i> ATCC 6303	50-100	good	50-70%	luxuriant	≥70%	alpha
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	good	50-70%	luxuriant	≥70%	beta
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 6538 (00032*)	50-100	luxuriant	≥70%	luxuriant	≥70%	beta

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 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 (6,7).

Reference

- Lapage S., Shelton J. and Mitchell T., 1970, Methods in Microbiology', Norris J. and Ribbons D., (Eds.), Vol. 3A, Academic Press, London.
- MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
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- American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
- Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
- Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
- 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.

Disclaimer :

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