

Soyabean Casein Digest HiVeg[®] Agar (Tryptone Soya HiVeg[®] Agar)(Casein Soyabean Digest HiVeg[®] Agar)

MV290

Intended use

Recommended as a general purpose medium used for cultivation of wide variety of microorganisms from various samples.

Composition**

Ingredients	g/ L
HiVeg [®] hydrolysate	15.000
Soya peptone	5.000
Sodium chloride	5.000
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40 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. If desired, aseptically add 5% v/v defibrinated blood in previously cooled medium to 45-50°C for cultivation. Mix well and pour into sterile Petri plates.

Principle And Interpretation

This medium is prepared by completely replacing animal based peptones with vegetable peptones that are free of BSE/TSE risks. Soyabean HiVeg[®] Agar is the modification of Soyabean Casein Digest Agar with replacement of tryptone by HiVeg[®] hydrolysate. Soyabean HiVeg[®] Agar can be used as a general purpose medium used for multiple applications e.g. as a blood culture medium, as maintenance medium for culture collections (including maintenance of stock cultures), for testing bacterial contaminants and isolating fastidious organisms on enrichment with blood. It serves as a nutritive base to which variety of supplements can be added. On supplementation with blood it can be also used to determine haemolytic bacteria (1, 2). This medium can also be used for sensitivity testing by tube dilution method of antimicrobial agents, plate counting, against animal based Soyabean Casein Digest Agar.

This medium is employed for cultivation and isolation of fastidious and non-fastidious microorganisms. The combination of HiVeg[®] hydrolysate and soya peptone makes this media nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains the osmotic balance.

Type of specimen

Pharmaceutical samples.

Specimen Collection and Handling:

For Pharmaceutical samples follow appropriate techniques for sample collection, handling and processing as per pharmacopeias (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. Further biochemical testing is required on pure colonies for complete identification.

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 5-7%w/v sterile defibrinated blood :

Cherry red coloured opaque gel forms in Petri plates

pH of 4.0% w/v aqueous solution at 25°C .

pH

7.10-7.50

Cultural response

Cultural characteristics was observed after an incubation for Bacterial at 30-35°C 18-24 hours and for Fungal at 30-35°C <=5days.

Organism	Inoculum (CFU)	Observed Lot value (CFU)	Recovery	Observed Lot value (CFU) w/blood	Recovery w/ blood	Haemolysis
<i>Bacillus spizizenii</i> ATCC 6633 (00003)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	none
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034)*	50 -100	35 -100	≥70 %	35 -100	≥70%	beta
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 6538 (00032)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	beta
<i>Escherichia coli</i> ATCC 25922 (00013)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	none
<i>Escherichia coli</i> ATCC 8739 (00012)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	none
<i>Escherichia coli</i> ATCC 11775 (00090)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	none
<i>Escherichia coli</i> NCTC 13167 (00179)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	none
<i>Pseudomonas aeruginosa</i> ATCC 27853 (00025)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	-
<i>SPseudomonas paraaeruginosa</i> ATCC 9027 (00026)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	-
<i>Pseudomonas aeruginosa</i> ATCC 10145 (00024)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	-
<i>Salmonella</i> Abony NCTC 6017(00029)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	-
<i>Kokuria rhizophila</i> ATCC 9341	50 -100	35 -100	≥70 %	35 -100	≥70 %	-
<i>Streptococcus pneumoniae</i> ATCC 6305	50 -100	35 -100	≥70 %	35 -100	≥70 %	-
<i>Salmonella</i> Typhimurium ATCC 14028 (00031)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	-
<i>Enterococcus faecalis</i> ATCC 29212 (00087)*	50 -100	35 -100	≥70 %	35 -100	≥70 %	-

<i>Candida albicans</i> ATCC 10231 (00054)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
<i>Candida albicans</i> ATCC 2091 (00055)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
# <i>Aspergillus brasiliensis</i> ATCC 16404 (00053)*	50 -100	25 -70	50-70%			-
<i>Clostridium perfringenes</i> ATCC 13124 (00007)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-

Key : (#)- Formerly known as *Aspergillus niger* , (^)- Formerly known as *Bacillus subtilis* subsp. *spizizenii* , (\$)- Formerly known as *Pseudomonas aeruginosa*, (@)- Formerly known as *Micrococcus luteus*(*) - 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 (5,6).

Reference

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2. MacFaddin 1985, Media for isolation-cultivation-identification-maintenancemedical bacteria Vol, I, Williams, & Wilkins, Baltimore, MD.
3. The United States Pharmacopoeia-National Formulary (USP-NF), 2022
4. Indian Pharmacopoeia, 2022, Indian Pharmacopoeia Commission, Ministry of Health and Family Welfare Government of India.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
6. 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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Disclaimer :

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