Soyabean HiVeg Medium

MV011

Soyabean HiVeg Medium is a general purpose medium used for cultivation of a wide variety of microorganisms and recommended for sterility testing of moulds and lower bacteria.

Composition**

Ingredients	Gms / Litre
HiVeg hydrolysate	17.000
Papaic digest of soyabean meal	3.000
Dextrose	2.500
Sodium chloride	5.000
Dibasic potassium phosphate	2.500
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 25°C.

Note: If any fibres are observed in the solution, it is recommended to filter the solution through a 0.22 micron filter to eliminate the possibility of presence of fibres.

Principle And Interpretation

Soyabean HiVeg Medium is prepared by completely replacing animal based peptones with vegetable peptones that makes the medium free of BSE/TSE risks. It is the modification of Soyabean Casein Digest Medium recommended by various pharmacopeias for sterility testing of various products and sensitivity testing of antimicrobial agents by tube dilution method (1-3) . This is a very nutritious medium supporting the growth of a variety of organisms (4). The combination of HiVeg hydrolysate and papaic digest of soyabean meal makes this medium nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Dextrose and dipotassium phosphate serves as the carbohydrate source and the buffer in the medium. Sodium chloride maintains the osmotic balance of the medium.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Light yellow coloured clear solution without any precipitate.

Reaction
pH of 3.00% w/v aqueous solution at 25°C (after sterilization). pH : 7.3±0.2

pH
7.10-7.50

Stability test
Light yellow coloured clear solution without any precipitation or sedimentation at room temperature for 7 days

Growth promoting properties
Clearly visible growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating <=100 cfu(at 30-35°C for 18-24 hours for bacteria and 5 days for fungal). Growth promotion is carried out as per USP/EP/BP/JP.

Sterility Testing + Validation
The medium is tested with suitable strains of microrganisms inoculating <=100cfu and incubating at 20-25°C for not more than 3 days in case of bacteria and not more than 5 days in case of fungi.

Cultural Response

Organism	Growth	Incubation temperature	Incubation period	Inoculum (CFU)
Growth promoting				
Salmonella Abony NCTC 6017	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Streptococcus pneumoniae ATCC 6305	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Candida albicans ATCC 10231	luxuriant	20 -25 °C	<=5 d	50 -100
Candida albicans ATCC 2091	luxuriant	20 -25 °C	<=5 d	50 -100
**Aspergillus brasiliensis ATCC 16404*	luxuriant	30 -35 °C	<=5 d	50 -100
Pseudomonas aeruginosa ATCC 9027	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Bacillus subtilis ATCC 6633	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Micrococcus luteus ATCC 9341	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Salmonella Typhimurium ATCC 14028	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Escherichia coli ATCC 25922	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Escherichia coli NCTC 9002	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Pseudomonas aeruginosa ATCC 27853	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Staphylococcus aureus ATCC 25923	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Escherichia coli ATCC 8739	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Staphylococcus aureus ATCC 6538	luxuriant	30 -35 °C	18 -24 hrs	50 -100
Sterility Testing- Growth promotion+Validation				
Staphylococcus aureus ATCC 25923	luxuriant	20 -25 °C	<=3 d	50 -100
Escherichia coli ATCC 8739	luxuriant	20 -25 °C	<=3 d	50 -100
Escherichia coli ATCC 25922	luxuriant	20 -25 °C	<=3 d	50 -100
Escherichia coli NCTC 9002	luxuriant	20 -25 °C	<=3 d	50 -100
Pseudomonas aeruginosa ATCC 9027	luxuriant	20 -25 °C	<=3 d	50 -100
Pseudomonas aeruginosa ATCC 27853	luxuriant	20 -25 °C	<=3 d	50 -100
Micrococcus luteus ATCC 9341	luxuriant	20 -25 °C	<=3 d	50 -100
Salmonella Abony NCTC 6017	luxuriant	20 -25 °C	<=3 d	50 -100
Streptococcus pneumoniae ATCC 6305	luxuriant	20 -25 °C	<=3 d	50 -100
Bacillus subtilis ATCC 6633	luxuriant	20 -25 °C	<=3 d	50 -100
Salmonella Typhimurium ATCC 14028	luxuriant	20 -25 °C	<=3 d	50 -100
Staphylococcus aureus ATCC 6538	luxuriant	20 -25 °C	<=3 d	50 -100

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry date on label.

Reference

1.MacFaddin, J. F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria vol. 1. Baltimore: Williams and Wilkins.

2.The United States Pharmacopeia, 2008, USP31/NF26, The United States Pharmacopeial Convention, Rockville, MD.
3.Indian Pharmacopeia, 2007, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
4.Forbes, B. A., Sahm, D. F . and Weissfield, A. S. 2002. Bailey and Scott's Diagnostic Microbiology. 11 ed. St Louis: The C.V. Mosby Co.

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