



Technical Data

Soyabean Casein Digest HiCynth™ Medium (Tryptone Soya HiCynth™ Broth)

MCD011

Soyabean Casein Digest HiCynth™ 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
HiCynth™ Peptone No.3*	17.000
HiCynth™ Peptone No.5*	3.000
Sodium chloride	5.000
Dextrose (Glucose)	2.500
Dipotassium hydrogen phosphate	2.500
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

*Chemically defined peptones

Directions

Suspend 30 grams in 1000 ml purified/ distilled water. Heat if necessary to dissolve the medium completely. Mix well and dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

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 Casein Digest Medium is recommended by various pharmacopoeias as a sterility testing and as a microbial limit testing medium (1, 2, 3). This medium is a highly nutritious medium used for cultivation of a wide variety of organisms (4). Soyabean Casein Digest HiCynth™ Medium is the modification of the same using chemically defined peptone free from animal and vegetable peptones to avoid BSE/TSE risks associated with animal peptones.

HiCynth™ peptone No. 3 and HiCynth™ peptone No. 5 provides nitrogen and carbon source, amino acids, long chain peptides and vitamins for the growth of microorganisms. Dextrose and dibasic potassium phosphate serve as the carbohydrate source and the buffer, in the medium. Sodium chloride maintains the osmotic balance of the medium, respectively

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 3.0% w/v aqueous solution at 25°C . 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 not more than 100 cfu (at 30-35°C for 18-24 hours for bacteria)

Growth promotion is carried out as per USP/EP/BP/JP.

Cultural Response

Please refer disclaimer Overleaf.

Organism	Inoculum (CFU)	Growth	Incubation temperature	Incubation period
Growth promoting				
<i>Staphylococcus aureus</i> ATCC 6538	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Staphylococcus aureus</i> ATCC 25923	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> ATCC 8739	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> ATCC 25922	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> NCTC 9002	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Pseudomonas aeruginosa</i> ATCC 9027	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Pseudomonas aeruginosa</i> ATCC 27853	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Bacillus subtilis</i> ATCC 6633	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Micrococcus luteus</i> ATCC 9341	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Salmonella</i> Typhimurium ATCC 14028	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Salmonella</i> Abony NCTC 6017	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Streptococcus pneumoniae</i> ATCC 6305	50 -100	luxuriant	30 -35 °C	18 -24 hrs

Sterility Testing + Validation

The medium is tested with suitable strains of microorganisms inoculating ≤ 100 cfu 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.

<i>Staphylococcus aureus</i> ATCC 6538	50 -100	luxuriant	20 -25 °C	≤ 3 d
<i>Staphylococcus aureus</i> ATCC 25923	50 -100	luxuriant	20 -25 °C	≤ 3 d
<i>Escherichia coli</i> ATCC 8739	50 -100	luxuriant	20 -25 °C	≤ 3 d
<i>Escherichia coli</i> ATCC 25922	50 -100	luxuriant	20 -25 °C	≤ 3 d
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<i>Micrococcus luteus</i> ATCC 9341	50 -100	luxuriant	20 -25 °C	≤ 3 d
<i>Salmonella</i> Typhimurium ATCC 14028	50 -100	luxuriant	20 -25 °C	≤ 3 d
<i>Salmonella</i> Abony NCTC 6017	50 -100	luxuriant	20 -25 °C	≤ 3 d
<i>Streptococcus pneumoniae</i> ATCC 6305	50 -100	luxuriant	20 -25 °C	≤ 3 d
<i>Candida albicans</i> ATCC 10231	50 -100	luxuriant	20 -25 °C	≤ 5 d
<i>Candida albicans</i> ATCC 2091	50 -100	luxuriant	20 -25 °C	≤ 5 d
* <i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	luxuriant	20 -25 °C	≤ 5 d

Storage and Shelf Life

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

Reference

1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, M.d.
2. The United States Pharmacopeia, 2016, USP 39, The United States Pharmacopeial Convention, Rockville, MD.
3. Indian Pharmacopeia, 2014, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
4. Forbes B. A., Sahm D. F. and Weissfeld A. S., 1998, Bailey & Scotts Diagnostic Microbiology, 10th Ed., Mosby, Inc. St. Louis, Mo.

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