



## Soyabean Casein Digest Medium (Casein Soyabean Digest Broth)

MM011

Soyabean-Casein Digest Medium is a general purpose medium used for cultivation of a wide variety of microorganisms and for sterility testing of moulds and lower bacteria in accordance with Indian Pharmacopoeia.

### Composition\*\*

Ingredients	Gms / Litre
Pancreatic digest of casein	17.000
Papaic digest of soyabean meal	3.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	2.500
Dextrose monohydrate	2.500
pH after sterilization ( at 25°C)	7.3±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 29.77 grams of dehydrated medium in 1000 ml purified/ distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired. Sterilize by autoclaving at 15lbs pressure (121°C) for 20 minutes.

### Principle And Interpretation

Soyabean Casein Digest Medium is recommended by Indian Pharmacopoeia as sterility testing medium (1). The formulation is in accordance with the harmonized formulation of USP/EP/BP/JP/IP (1,3,4,5,6)It is also used for the sensitivity testing by the tube dilution method for antimicrobial agents (2). It is also employed in diagnostic research in microbiology.

The combination of pancreatic digest of casein and papaic digest of soyabean meal makes this medium nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Natural sugars in soyabean promote growth of fastidious organism. Dextrose monohydrate is the fermentable source of carbon and dipotassium hydrogen phosphate serves as the buffer in the medium. Sodium chloride maintains the osmotic balance of the medium.

This medium is recommended by IP for sterility checking for detection of yeast and moulds.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Light yellow coloured clear solution without any precipitate.

#### pH

7.10-7.50

#### Growth Promotion Test

Growth Promotion is carried out in accordance with the method of IP.

#### 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  $\leq 100$  cfu(at 30-35°C for 18-24 hours).

#### Sterility Testing + Validation

The medium is tested with suitable strains of microorganisms inoculating  $\leq 100$ 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.

**Cultural Response**

<b>Organism</b>	<b>Inoculum (CFU)</b>	<b>Growth</b>	<b>Incubation temperature</b>	<b>Incubation period</b>
<b>Growth promoting</b>				
<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
<b>Sterility Testing- Growth promotion+ Validation</b>				
<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>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

Key : - \* - Formerly known as *Aspergillus niger*

**Storage and Shelf Life**

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

**Reference**

1. Indian Pharmacopoeia, 2010, Govt. of India, the controller of Publication, Delhi, India.

- 2.Wright and Welch, 1959-60, Antibiotics Ann., 61.
- 3.The United States Pharmacopoeia, 2011, The United States Pharmacopoeial Convention. Rockville, MD.
- 4.British Pharmacopoeia, 2011, The Stationery office British Pharmacopoeia
- 5.European Pharmacopoeia, 2011, European Dept. for the quality of Medicines.
- 6.Japanese Pharmacopoeia, 2008.

Revision : 1 / 2011



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