



Soyabean Casein Digest Medium, Sterile powder

M011G

Soyabean Casein Digest Medium, Sterile powder is a gamma (g) irradiated sterile powder recommended for the evaluation of sterility in manufacturing process.

Composition**

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

**Formula adjusted, standardized to suit performance parameters

Directions

Sterile powder can be used directly for the evaluation of sterility in manufacturing process. For sterile liquid medium aseptically add 30 grams in 1000 ml sterile distilled / purified water. Heat if necessary to dissolve the medium completely. DO NOT AUTOCLAVE OR OVERHEAT. Excessive heating is detrimental. Dispense aseptically in sterile tubes or flasks as desired.

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

Principle And Interpretation

Soyabean Casein Digest Medium is recommended by various pharmacopoeia as sterility testing medium (1, 2). It is also used for the sensitivity testing by the tube dilution method for antimicrobial agents (3).

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. 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 may have green tinge homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear solution

Reaction

Reaction of 3.0% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Sterility Testing

No growth is observed after 14 days for Bacteria at 30-35°C and for Fungi at 20-25°C.

Test for Mycoplasma (PCR)

Negative for Mycoplasma

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).

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.

Cultural Response

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 Typhimurium</i> ATCC 14028	50 -100	luxuriant	30 -35 °C	18 -24 hrs
<i>Salmonella Abony</i> 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- Growth promotion+ Validation				
<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 Abony</i> 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 and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

- 1.The United States Pharmacopoeia / National Formulary, 2012, 35.The United States Pharmacopeial Convention Inc., Rockville, MD.
- 2.Indian Pharmacopeia, 2010, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
- 3.Wright and Welch, 1959-60, Antibiotics Ann., 61.

Revision : 02 / 2015

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