



Casein Soyabean Digest Broth

ME011

Casein Soyabean Digest Broth is recommended as 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 European Pharmacopoeia.

Composition**

Ingredients	Gms / Litre
Tryptone #	17.000
Soya peptone ##	3.000
Glucose monohydrate	2.500
Sodium chloride	5.000
Dipotassium hydrogen phosphate	2.500
pH after sterilization (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Pancreatic digest of casein

Papaic digest of soyabean meal

Directions

Suspend 29.77 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml Water R /purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks or as desired.

Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes or as per validated cycle.

Principle And Interpretation

Casein Soya bean Digest Broth is recommended as sterility testing medium by European pharmacopoeia(1). The media formulation is in accordance with the harmonized media 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).

The combination of tryptone and soya peptone makes this medium nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Natural sugars in the soya promote growth of fastidious organism. Glucose monohydrate serves as the immediate carbohydrate source while phosphate salt buffers the medium to maintain the pH. Sodium chloride maintains the osmotic balance of the medium.

This medium is also recommended as pre-enrichment medium for Salmonella growth by European Pharmacopoeia. It is also used for preparing test suspension during sterility sample testing.

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 harmonized method of EP.

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

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. European Pharmacopoeia 2011, European Dept. for the Quality, of Medicines
2. Wright and Welch, 1959-60, Antibiotics Ann., 61.
3. British Pharmacopoeia, 2011, The Stationery office British Pharmacopoeia
4. The United States Pharmacopoeia, 2011, The United States Pharmacopoeial Convention, Rockville, MD.
5. Indian Pharmacopoeia, 2010, Govt. of India, the controller of Publication, Delhi, India.
6. Japanese pharmacopoeia 20

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