Soybean Casein Digest Agar Plate w/ 2% Glycerol (Lockable plate, γ-irradiated, Triple pack) MP5281LGT

Intended use:

Recommended as a general-purpose medium used for cultivation of a wide variety of microorganisms.

Composition**

Ingredients	g / L
Tryptone #	15.000
Soya peptone	5.000
Sodium chloride	5.000
Agar	15.000
Glycerol	20.000ml
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters
Equivalent to Pancreatic digest of casein

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

Soyabean Casein Digest Agar is a widely used medium, which supports the growth of wide variety of organisms even that of fastidious ones such as *Neisseria*, *Listeria* and *Brucella* etc. The medium with addition of blood provides perfectly defined haemolysis zones, while preventing the lysis of erythrocytes due to its sodium chloride content. It has been frequently used in the health industry to produce antigens, toxins etc. It's simple and inhibitor-free composition makes it suitable for the detection of antimicrobial agents in the food and other products. Tryptone Soya Agar is recommended by various pharmacopoeias as sterility testing medium (1,2).

It can also be used in microbial limit test and antimicrobial preservative - effective test. Gunn et al (3) used this medium for the growth of fastidious organisms and study of haemolytic reaction after addition of 5%v/v blood. The combination of tryptone and soya peptone makes this media nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains the osmotic balance. Glycerol is additional source of carbon. Soyabean Casein Digest Agar does not contains X and V growth factors. It can be conveniently used in determining the requirements of these growth factors by isolates of *Haemophilus* by the addition of X-factor (DD020), V-factor (DD021), and X+V factor discs (DD022) factor to inoculated TSA plates (4).

Type of specimen

Environmental monitoring samples

Specimen Collection and Handling:

For Environmental monitoring samples follow appropriate techniques for sample collection, handling and processing (5,6). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the pack. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3.It is recommended to store the plates at 24-30°C to avoid minimum condensation.
4.Further serological and biochemical testing is required for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Sterile Soybean Casein Digest Agar Plate w/ 2% Glycerol (Lockable Plate, γ-irradiated, Triple pack) in 90 mm disposable plates with smooth surface and absence of black particles/cracks/bubbles)

Colour of medium

Light yellow coloured medium

Quantity of medium

30 ml of medium in 90 mm disposable plates.

pH

7.10-7.50

Dose of irradiation (Kgy)

13.00- 20.00

Sterility Check

Passes release criteria

Cultural Response

Growth Promotion was observed after an incubation at 30-35°C for 18-24 hours for bacteria and for fungus <=5 days.

Recovery rate

Recovery rate is considered 100% for bacterial growth on Soyabean Casein Digest Agar and fungal growth on Sabouraud Dextrose Agar.

Growth promoting properties

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).

Organism	Inoculum (CFU)	Growth	Recovery	Incubation temperature	Incubation period
** *Bacillus spizizenii* ATCC 6633 (00003*)	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
Staphylococcus aureus subsp. aureus ATCC 6538 (00032*)	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
Escherichia coli ATCC 25922 (00013*)	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
Pseudomonas aeruginosa ATCC 27853 (00025*)	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
^*Pseudomonas paraeruginosa* ATCC 9027 (00026*)	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
Salmonella Abony NCTC 6017 (00029*)	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
$Kocuria rhizophila ATCC 9341	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
Salmonella Typhimurium ATCC 14028 (00031*	50 -100	luxuriant	>=70 %	30-35°C	18-24 hrs
Candida albicans ATCC 10231 (00054*)	50 -100	luxuriant	>=70 %	30-35°C	<=5 days
Candida albicans ATCC 2091 (00055)*	50 -100	luxuriant	>=70 %	30-35°C	<=5 days

Candida albicans ATCC 10231 (00054*)	50 -100	luxuriant	>=70%	30-35°C	<=5 days
# Aspergillus brasiliensis ATCC 16404 (00053*)	50 -100	luxuriant	>=70%	30-35°C	<=5 days
# Aspergillus brasiliensis ATCC 16404 (00053*)	50 -100	luxuriant	>=70 %	20-25°C	<=5 days
Clostridium sporogenes ATCC 19404	50 -100	luxuriant	>=70 %	30-35°C (incubated anaerobically)	<=48 hrs

Key : (*) - Corresponding WDCM Numbers
^ Formerly known as *Pseudomonas aeruginosa* **Formerly known as *Bacillus subtilis* subsp. *spizizenii*
# Formerly known as *Aspergillus niger* $ Formerly known as *Micrococcus luteus*

Storage and Shelf Life

On receipt store between 20-30°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1.The United States Pharmacopoeia-National Formulatory (USP-NF), 2022.
2.Indian Pharmacopoeia, 2022, Indian Pharmacopoeia Commission, Ministry of Health and Family Welfare Government of India.
3.Gunn B. A., Ohashi D K., Gaydos C. A., Holt E. S., 1977, J. Clin. Microbiol., 5(6) : 650.
4.Forbes B. A., Sahm A. S. and Weissfeld D. F., 1998, Bailey and Scotts Diagnostic Microbiology, 10th Ed., Mosby Inc. St. Louis, Mo
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
6.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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