

Soyabean Casein Digest Agar Plate w/ 5% Sheep blood

MP5211

Intended use:

A general purpose medium used for the cultivation of wide variety of microorganisms and to study the haemolytic reactions.

Composition**

Ingredients	Gms / Litre
Tryptone #	15.000
Soya peptone	5.000
Sodium chloride	5.000
Agar	15.000
Sheep blood	50 ml
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 (6, 3).

Tryptone Soya Agar conforms as per USP (6) and is used in microbial limit test and antimicrobial preservative - effective test. Gunn et al (2) 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..

Type of specimen

Isolated Microorganism

Specimen Collection and Handling:

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.

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 Soyabean Casein Digest Agar Plate w/ 5% Sheep blood in 90 mm disposable plates.

Colour of medium

Red coloured medium

Quantity of medium

25 ml of medium in 90 mm disposable plates.

pH

7.10-7.50

Sterility Test

Passes release criteria

Cultural response

Cultural characteristics was observed after an incubation for Bacterial at 30-35°C 18-24 hours and for Fungal at 30-35°C <=5days.

Organism	Inoculum (CFU)	Growth	Recovery	Haemolysis
<i>Bacillus subtilis subsp. spizizenii</i> ATCC 6633 (00003*)	50 -100	luxuriant	>=70 %	none
<i>Staphylococcus aureus subsp. aureus</i> ATCC 25923 (00034*)	50 -100	luxuriant	>=70 %	beta
<i>Staphylococcus aureus subsp. aureus</i> ATCC 6538 (00032*)	50 -100	luxuriant	>=70 %	beta
<i>Escherichia coli</i> ATCC 25922 (00013*)	50 -100	luxuriant	>=70 %	none
<i>Escherichia coli</i> ATCC 8739 (00012*)	50 -100	luxuriant	>=70 %	none
<i>Escherichia coli</i> ATCC 11775 (00090*)	50 -100	luxuriant	>=70 %	none
<i>Escherichia coli</i> NCTC 13167 (00179*)	50 -100	luxuriant	>=70 %	none
<i>Escherichia coli</i> NCTC 9002	50 -100	luxuriant	>=70 %	none
<i>Pseudomonas aeruginosa</i> ATCC 27853 (00025*)	50 -100	luxuriant	>=70 %	-
<i>Pseudomonas aeruginosa</i> ATCC 9027 (00026*)	50 -100	luxuriant	>=70 %	-
<i>Pseudomonas aeruginosa</i> ATCC 10145 (00024*)	50 -100	luxuriant	>=70 %	-
<i>Salmonella</i> Abony NCTC 6017 (00029*)	50 -100	luxuriant	>=70 %	-
<i>Micrococcus luteus</i> ATCC 9341	50 -100	luxuriant	>=70 %	-
<i>Streptococcus pneumoniae</i> ATCC 6305	50 -100	luxuriant	>=70 %	-
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50 -100	luxuriant	>=70 %	-
<i>Enterococcus faecalis</i> ATCC 29212 (00087*)	50 -100	luxuriant	>=70 %	-
<i>Candida albicans</i> ATCC 10231 (00054*)	50 -100	luxuriant	>=70 %	-
<i>Candida albicans</i> ATCC 2091 (00055*)	50 -100	luxuriant	>=70 %	-

# <i>Aspergillus brasiliensis</i> ATCC 16404 (00053*)	50 -100	good	50-70%	-
<i>Clostridium perfringenes</i> ATCC 13124 (00007*)	50 -100	luxuriant	>=70 %	-

Key : (#)- Formerly known as *Aspergillus niger* (*) - Corresponding WDCM numbers

Storage and Shelf Life

On receipt store between 2-8°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 (4,5).

Reference

1. Forbes B. A., Sahm A. S. and Weissfeld D. F., 1998, Bailey and Scotts Diagnostic Microbiology, 10th Ed., Mosby Inc. St. Louis, Mo
2. Gunn B. A., Ohashi D K., Gaydos C. A., Holt E. S., 1977, J. Clin. Microbiol., 5(6) : 650.
3. Indian Pharmacopoeia, 2018, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
5. 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.
6. The United States Pharmacopoeia , 2019, The United States Pharmacopoeial Convention Inc., Rockville, MD.

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Disclaimer :

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