



Technical Data

Soyabean Casein Digest Agar w/ Lecithin and Tween 80 w/ MP1808GT beta-Lactamase II (gamma-irradiated)(Triple pack)

Recommended for determining efficiency of containers, equipment surfaces, water miscible cosmetics and for inactivation of cephalosporins of first, second, third and fourth generation.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	15.000
Papaic digest of soyabean meal	5.000
Sodium chloride	5.000
Lecithin	0.700
Polysorbate 80 (Tween 80)	5.000
Agar	15.000
Glycerol	1.000

**Formula adjusted, standardized to suit performance parameters

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate. Alternatively this medium can also be used for environmental monitoring of clean rooms in production areas of Pharmaceutical industries where production of antibiotics like Penicillins and Cephalosporins is carried out.

Principle And Interpretation

Soyabean Casein Digest Agar with Lecithin and Polysorbate 80 and beta-lactamase is used in plates (1) for the detection and enumeration of microorganisms present on surfaces of sanitary importances (2, 3) and also in environmental monitoring of clean room for facilities where production of Penicillins and Cephalosporins is carried out.

Casein enzymic hydrolysate and papaic digest of soyabean meal provide nitrogenous compounds and other nutrients essential for microbial replication. Lecithin and polysorbate 80 (Tween 80) are neutralizers reported to inactivate residual disinfectants from where the sample is collected (4). Lecithin neutralizes quaternary ammonium compounds and polysorbate 80 neutralizes phenolic disinfectants, hexachlorophene, formalin and with lecithin ethanol (5).

Beta-lactamase added in the medium will inactivate the beta-lactam antibiotics thus enabling the growth of resistant strains present in the environment of clean rooms where production of antibiotics is carried out.

Quality Control

Appearance

Sterile Soyabean Casein Digest Agar w/Tween 80 and lecithin and W/ 4.5 IU per plate of beta-Lactamase II in 90mm plate (gamma-irradiated) (Triple pack).

Colour

Light yellow coloured medium.

Quantity of Medium

30ml of medium in 90mm plates.

Reaction

7.10- 7.50

Dose of Irradiation (Kgy)

15.00- 25.00

Cultural Response

Growth Promotion Test of as such plates was carried out and growth was observed after incubation at 30-35°C for < = 3 days. Simultaneously growth promotion test was carried out on plates which were seeded with 1 mcg/ml of respective antibiotics.

Recovery Rate

Recovery rate is considered 100% for bacteria growth on Soyabean Casein Digest Agar.

Sterility Test

Passes release criteria.

Cultural Response

Organism	Inoculum (CFU)	Growth	Lot value (CFU)	Recovery	Incubation temperature	Incubation period
Escherichia coli ATCC 25922						
w/o antibiotic	50 -100	Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Cephalothin		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Cefamandole		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Cefotaxime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Ceftazidime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Cefepime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Imipenem		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
Staphylococcus aureus ATCC 25923						
w/o antibiotic		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Cephalothin		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Cefamandole		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Cefotaxime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Ceftazidime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Cefepime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Penicillin		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
Staphylococcus aureus ATCC 29213						
w/o antibiotic	50 -100	Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/ Penicillin		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
Pseudomonas aeruginosa ATCC 27853						
w/o Antibiotic	50 -100	Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/Cefotaxime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/Ceftazidime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/Cefepime		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
w/Imipenem		Luxuriant	35 -100	>=70 %	30 -35 °C	18 -24 hrs
Growth promoting						
<i>Candida albicans</i> ATCC 10231	50 -100	luxuriant	35 -100	>=70 %	30 -35 °C	<=5 d
<i>Candida albicans</i> ATCC 2091	50 -100	luxuriant	35 -100	>=70 %	30 -35 °C	<=5 d
<i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	Good-luxuriant	25 -70	50 -70 %	30 -35 °C	<=5 d
<i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	Luxuriant	35 -100	>=70 %	20 -25 °C	<=5 d

Storage and Shelf Life

Store between 15-25°C. Use before expiry date on the label.

Reference

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- MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
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