PRODUCT SPECIFICATION SHEET

Soyabean Casein Digest Agar w/ beta Lactamase 90mm Plates (γ-irradiated) (Triple pack) (EP007IT)

Intended Use
Soyabean Casein Digest Agar w/ beta Lactamase Plate (EP007IT) is a general purpose medium for cultivation of wide variety of organisms and for inactivation of beta-lactam antibiotics.

Product Summary and Explanation
β-lactam antibiotics (beta lactam antibiotics) are broad class of antibiotics, consisting of all antibiotic agents that contain a β-lactam ring in their molecular structures. This includes penicillin derivatives (penams), cephalosporins (cephems), monobactams, and carbapenems. Most β-lactam antibiotics work by inhibiting cell wall biosynthesis in the bacterial organism and are the most widely used group of antibiotics. β-Lactamase enzyme synthesized by bacteria breaks the beta-Lactam ring of antibiotic, deactivating the molecule's antibacterial properties.[1,2] Soyabean Casein Digest Agar with beta-Lactamase plate is especially designed for the inactivation of a broad range of beta-Lactam antibiotics. It is used for environmental and antibiotic sterility testing.

Principles of the Procedure
Soyabean Casein Digest Agar w/ beta Lactamase contains a combination of casein enzymic hydrolysate and papaic digest of soyabean meal which provides amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains the osmotic balance in both the media. Beta-lactamase added in the medium facilitates the growth of resistant strains present in the environment of clean rooms where production of antibiotics is carried out as it will inactivate the beta-lactam antibiotics.

Formula / Liter

Ingredients	Gms / Litre
Pancreatic digest of casein	15.00
Papaic digest of soyabean meal	5.00
Sodium chloride	5.00
Agar	15.00
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
1. Prepared plated media are For *in vitro* Diagnostic Use or For Laboratory Use as labeled.
2. Directions for use should be read and followed carefully.
3. If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation.
4. Observe aseptic techniques and established precautions against microbiological hazards throughout all procedures, since it must be assumed that all specimens/samples collected might contain infectious microorganisms.

Product Deterioration
Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

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

Quality Control Specifications

Appearance	Sterile Soyabean Casein Digest Agar w/ beta-lactamase I in 90mm disposable plate (gamma-irradiated) (Triple packed)
Colour	Light yellow coloured medium
Reaction	7.10- 7.50
Quantity of medium	25ml of medium in 90mm plates

Dose of irradiation : 10.00- 25.00

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

Concentration
Concentration of Penicillinase added: 10IU per plate

Sterility Check: Passes release criteria.
Expected 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 Benzyl Penicillin.

Sr. No.	Organisms	Results to be achieved CFU)					
		Inoculum (CFU)	Growth	Recovery	Observed Lot value (CFU)	Growth w/ antibiotic	Recovery w/ antibiotic
1.	*Pseudomonas aeruginosa ATCC 27853*	50 - 100	luxuriant	>=70 %	35 -100	luxuriant	>=70 %
2.	*Proteus mirabilis ATCC 25933*	50 - 100	luxuriant	>=70 %	35 -100	luxuriant	>=70 %
3.	*Escherichia coli ATCC 25922*	50 - 100	luxuriant	>=70 %	35 -100	luxuriant	>=70 %
4.	*Staphylococcus aureus ATCC 25923*	50 - 100	luxuriant	>=70 %	35 -100	luxuriant	>=70 %
5.	*Staphylococcus aureus ATCC 29213*	50 - 100	luxuriant	>=70 %	35 -100	luxuriant	>=70 %
6.	*Enterococcus faecalis ATCC 29212*	50 - 100	luxuriant	>=70 %	35 -100	luxuriant	>=70 %

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Refer appropriate references for standard test procedures.

Results
Refer appropriate references and procedures for interpretation of results.

Storage
On receipt, store plates at 15-25°C.

Expiration
Refer to the expiration date stamped on the pack. Prepared plates stored in their original sleeve wrapping at 20-25°C until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times.

Product Disposal
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

Limitations of the Procedure
1. Some diagnostic tests may be performed with the primary plate. However, a pure culture is recommended for the majority of biochemical tests and other identification procedures.
2. Consult appropriate references for further information.

Packing Information

It is triple layered packing containing 10 No. of plates. The primary packaging bag contains 5 plates packing with two nos. of a silica gel desiccant bag and it is packed by using five layered plastic bag.
Then these two 5 plates stacks it is packed into second plastic bag which is labeled and then 10plates into tertiary packing (Plastic bag).
Cartons are used for packaging the bagged stacks. The sealing seams of the bags are heat-sealed. The bags allow easy opening without the use of sharp objects such as scissors or knives. Bags can be peeled open at the ends of the stacks by tearing apart both plastic films of the bag. Apply aseptic techniques. Once the outer bag is opened, appropriate measures should be used to maintain the sterility of the inner bags and the contents.

Packaging
Product Name : Soyabean Casein Digest Agar w/ 10IU/plate beta Lactamase
Product Code : EP007IT
Available Pack sizes : γ -irradiated,90mm, Triple Pack (Pack of 10 plates)

References
1. Abraham EP, Chain E (1940). "An enzyme from bacteria able to destroy penicillin". Nature 46: 837.
2. Wright and Welch, 1959-60, Antibiotics Ann., 61.

Further Information
For further information please contact your local MICROMASTER Representative.

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