

## **CM 22405 - SOYABEAN CASEIN DIGEST AGAR PLATE W/ LECITHIN AND TWEEN 80 W/ $\beta$ - LACTAMASE ( $\gamma$ -IRRADIATED) (TRIPLE PACK)**

### **INTENDED USE**

For determining efficiency of containers, equipment surfaces, water miscible cosmetics and inactivation of  $\beta$ -lactam antibiotics.

### **PRODUCT SUMMARY AND EXPLANATION**

Soyabean Casein Digest Agar with Tween 80, Soya lecithin and beta-lactamase is used in plates for the detection and enumeration of microorganisms present on surfaces of sanitary importance and also in environmental monitoring of clean room for facilities where production of  $\beta$ -lactam group of antibiotics is carried out.

The media are gamma irradiated in the packaging material to assure a reduction of the microbial load potentially present in the medium, on the dishes, and on the packaging material.

### **COMPOSITION**

Ingredients	Gms / Ltr
Casein enzyme hydrolysate	15.000
Agar	15.000
Papaic digest of Soybean	5.000
Sodium chloride	5.000
Polysorbate 80 (Tween 80)	5.000
Beta-lactamase/Plate	5.000 IU
Lecithin	0.700

### **PRINCIPLE**

Medium contains Casein enzymic hydrolysate and papaic digest of soyabean meal which provide nitrogenous compounds and other nutrients essential for microbial replication. Sodium chloride is added to maintain cellular osmotic equilibrium. Lecithin and Tween 80 are neutralizers added to the formulation to inactivate germicidal or disinfectant residues. Quaternary ammonia compounds are neutralized by lecithin, while phenolic disinfectants and hexachlorophene are neutralized by Tween 80. Together, lecithin and Tween 80 neutralize ethanol. Addition of beta-lactamase enables the growth of resistance strains present in the environment of clean room by inactivating the beta-lactam antibiotics. Agar is used as a solidifying agent.

### **INSTRUCTION FOR USE**

Either streak, inoculate or surface spread the test inoculum aseptically on the plate. Alternatively, these plates can also be used as settle plates for environmental monitoring.

### **QUALITY CONTROL SPECIFICATIONS**

<b>Appearance</b>	:	Light yellow color, clear to slightly opalescent gel.
<b>Quantity of Medium</b>	:	25 ml of medium in 90 mm plates.
<b>pH (at 25°C)</b>	:	7.3 ± 0.2
<b>Dose of irradiation</b>	:	15-25 kGy
<b>Sterility Check</b>	:	Passes release criteria



## INTERPRETATION

Growth Promotion test was carried out and growth was observed after incubation. Recovery rate is considered 100% for bacteria growth on Soya Agar. Simultaneously, cultural characteristics was observed on plates which were seeded with 1 mcg per ml respective antibiotic or Minimum Inhibitory Concentration (MIC).

### Growth Promotion Test

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	30-35°C	18-24 hours
<i>Escherichia coli</i>	25922	50-100	Luxuriant	30-35°C	18-24 hours
<i>Pseudomonas aeruginosa</i>	27853	50-100	Luxuriant	30-35°C	18-24 hours
<i>Enterococcus faecalis</i>	29212	50-100	Luxuriant	30-35°C	18-24 hours

### Cultural Response

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100				
w/o antibiotic			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Cephalothin			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Cefotaxime			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Ceftazidime			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Imipenem			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Ertapenem			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Meropenem			Luxuriant	>=70%	30-35°C	18-24 hours
<i>Staphylococcus aureus</i>	25923	50-100				
w/o antibiotic			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Penicillin			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Cephalothin			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Cefotaxime			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Ceftazidime			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Imipenem			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Ertapenem			Luxuriant	>=70%	30-35°C	18-24 hours
w/ Meropenem		Luxuriant	>=70%	30-35°C	18-24 hours	

### PACKAGING:

Triplelayered packing containing 5 No. of plates with one silica gel desiccant bag packed inside it.

### STORAGE

On receipt, store the plates at 15–30 °C. Avoid freezing and overheating. Do not open until ready to use. Prepared plates stored in their original sleeve wrapping until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times. Allow the medium to warm to room temperature before inoculation.

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

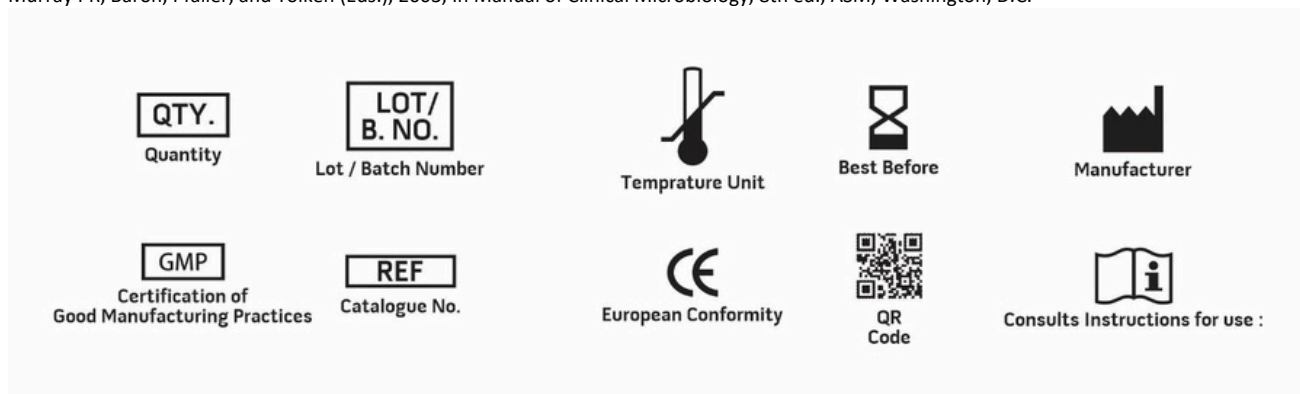
### DISPOSAL

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



## REFERENCES

1. Hall and Hartnett, 1964, Public Hlth. Rep., 79:1021.
2. Richardson (Ed)., 1985, Standard Methods for the Examination of Dairy Products, 15th ed., APHA, Washington, D.C.
3. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Brummer, 1976, Appl. Environ. Microbiol., 32:80.
5. Favero (Chairm), 1967, Biological Contamination Control Committee, a state of the art report.,Am. Assoc. for contamination control.
6. Murray PR, Baron, Pfaller, and Tenenbaum (Eds.), 2003, In Manual of Clinical Microbiology, 8th ed., ASM, Washington, D.C.



**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For LabUse Only**

