

## Tryptic Soy Agar + Lactamator 500 IU + Neutralizing (Irradiated)

General purpose medium for environmental monitoring with inactivation of  $\beta$ -lactam antibiotics and disinfectants..

TYPICAL FORMULA	(g/l)
Casein Peptone	15.0
Soy Peptone	5.0
Sodium Chloride	5.0
Agar	15.0
Histidine	1.0
Lecithin	0.7
Polysorbate 80	5.0
Sodium Thiosulfate	0.5
Lactamator	500 IU
Final pH 7.3 $\pm$ 0.2	

### DESCRIPTION

Tryptic Soy Agar + Lactamator 500 IU + Neutralizing (Irradiated) is a general purpose medium used for environmental monitoring with inactivation of  $\beta$ -lactam antibiotics (penicillins, cephalosporins and carbapenems) and disinfectants.

These gamma-irradiated, triple-bagged plates are particularly suitable for use in restricted areas like isolators and clean rooms.

### PRINCIPLE

Casein peptone and soy peptone provide amino acids, nitrogen, carbon, minerals, vitamins and other nutrients which support the growth of microorganism. Sodium chloride maintains the osmotic balance of the medium. Agar is the solidifying agent. Histidine inactivates aldehydes. Lecithin neutralizes quaternary ammonium compounds. Polysorbate 80 (Tween 80) is effective against phenolic compounds and mercurial derivatives. Sodium thiosulfate neutralizes halogen compounds. Lactamator is a mixture of Penicillinase and Cephalosporinase, designed for the inactivation of a wide range of beta-lactam antibiotics.

- 1 International Unit (IU) is defined as the amount of enzyme needed to hydrolyze 1  $\mu$ mole of Penicillin G (Penicillinase) or 1  $\mu$ mole of Cephalosporin C (Cephalosporinase) per minute at pH 7.0 at 25°C.

### TECHNIQUE

Use settle plate sampling method. Alternatively, if sample is being cultured from a swab, inoculate the plates by streaking directly the swab on the medium surface.

For detection of bacteria incubate the plates at 30-35°C for 18-72 hours.

For detection of yeasts and moulds incubate at 20-25°C for 2-7 days.

### INTERPRETATION OF RESULTS

Observe daily for the formation of colonies.

### STORAGE AND TRANSPORT CONDITIONS

2-8°C away from light, until the expiry date on the label. However, our stability studies have shown that the transport at 18-25°C for 4 days, or at 35-39°C for 48 hours, does not alter in any way the performance of the product. Eliminate if signs of deterioration or contamination are evident.

### WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used by properly trained operators only.

### DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

### REFERENCES

1. Swanson, K.J., F.F. Busta, E.H. Peterson, and M.G. Johnson (1992). Colony Count Methods, p. 75-95.
2. USP 33 – NF 28 (2011) <62> Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. The United States Pharmacopeial Convention, Rockville, MD. USA.
3. USP 33 – NF 28 (2011) <1116> Microbiological evaluation of clean rooms. The United States Pharmacopeial Convention, Rockville, MD. USA.
4. European Pharmacopoeia 7.0 (2011) 7<sup>th</sup> ed. Chapters 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. Council of Europe Strasbourg, France.



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## PRODUCT SPECIFICATIONS

### NAME

Tryptic Soy Agar + Lactamator 500 IU + Neutralizing (Irradiated)

### PRESENTATION

Ready-to-use plates (90 mm) containing  $22 \pm 1$  ml of medium

### STORAGE

2-8°C

### PACKAGING

Ref.	Content	Packaging
10104S	20 plates	<ul style="list-style-type: none"> <li>• 10 triple-bagged plates</li> <li>• 2 x 10 plates in cardboard box</li> </ul>

### pH OF THE MEDIUM

$7.3 \pm 0.2$

### USE

Tryptic Soy Agar + Lactamator 500 IU + Neutralizing (Irradiated) is a general purpose medium used for environmental monitoring with inactivation of  $\beta$ -lactam antibiotics (penicillins, cephalosporins and carbapenems) and disinfectants. Particularly suitable for use in restricted areas

### TECHNIQUE

Refer to technical sheet of the product

### APPEARANCE OF THE MEDIUM

Clear or slightly opalescent, amber

### SHELF LIFE

4 months

### QUALITY CONTROL










- Control of general characteristics, label and print
- Sterility control  
48 hours and 7 days at  $22.5 \pm 2.5^\circ\text{C}$ , in aerobiosis  
48 hours and 7 days at  $32.5 \pm 2.5^\circ\text{C}$ , in aerobiosis
- Microbiological control  
Inoculum for productivity: 50-100 CFU  
Inoculum for evaluation of lactamator activity:  $10^4$ - $10^5$  CFU  
Incubation Conditions: 18-24 h at  $32.5 \pm 2.5^\circ\text{C}$ , 48-72 h at  $22.5 \pm 2.5^\circ\text{C}$ , in aerobiosis

Microorganism		Growth
<i>Staphylococcus aureus</i>	ATCC® 6538	Good
<i>Escherichia coli</i>	ATCC® 8739	Good
<i>Pseudomonas aeruginosa</i>	ATCC® 9027	Good
<i>Bacillus subtilis</i>	ATCC® 6633	Good
<i>Candida albicans</i> *	ATCC® 10231	Good
<i>Aspergillus brasiliensis</i> *	ATCC® 16404	Good

### Control of penicillinase and cephalosporinase activities with disc diffusion method

Microorganism	Specification
<i>Staphylococcus aureus</i> ATCC® 6538	No inhibition by Penicillin G 10 IU, Ampicillin 10 $\mu\text{g}$ , Cefotaxime 30 $\mu\text{g}$ , Cefepime 30 $\mu\text{g}$ and Meropenem 10 $\mu\text{g}$

### TABLE OF SYMBOLS

 Batch code	 Do not reuse	 Manufacturer	 Use by	 Fragile, handle with care
 Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult instructions for use	



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