

## LISTERIA OXFORD AGAR BASE (ISO 11290)

Basal medium without antibiotics and acriflavine for the isolation of *Listeria monocytogenes* according to ISO 11290.

### TYPICAL FORMULA (g/L)

Tryptone	10.0
Yeast Extract	5.0
Meat Extract	5.0
Peptone	3.0
Sodium Chloride	5.0
Starch	1.0
Esculine hydrate	1.0
Ammonium Ferric Citrate	0.5
Lithium Chloride	15.0
Agar	14.5
Final pH 7.3 ± 0.1	

### DESCRIPTION

LISTERIA OXFORD AGAR BASE (ISO 11290) is a basal medium without antibiotics and acriflavine for the isolation of *Listeria monocytogenes* according to ISO 11290.

### PRINCIPLE

Tryptone, meat extract and peptone are a source of amino acids, nitrogen, minerals, vitamins, carbon and other factors which increase the growth of microorganisms. Yeast extract provides amino acids and vitamins of group B. Sodium chloride maintains the osmotic balance of the medium. Starch acts as a protective substance against toxic molecules which can be present in the medium. Hydrolysis of starch during sterilization supplies a little amount of glucose which represents a source of energy. Agar is the solidifying agent. The presence of esculin and ammonium ferric citrate allows a presumptive identification of the black colonies. In fact the *Listeria* species hydrolyze esculine to glucose and esculetin which reacts with the ferric ions in the medium.

The addition of *Listeria* Oxford Supplement provides the selective agents (Cefotetan, Phosphomycin, Colistin, Cycloheximide, Acriflavine) which inhibit the contaminating flora.

### PREPARATION

Suspend 60.0 g of powder in 1 litre of distilled or deionized water. Heat to boiling and shake until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C. Aseptically add 2 vials of *Listeria* Oxford Supplement (ref. 81629). Dispense in final containers.

### TECHNIQUE

Streak a loopful of the suitable enrichment broth, incubated with the sample to analyze, onto the surface of the medium. Incubate at 36 ± 1°C for 24-48 hours.

### INTERPRETATION OF RESULTS

Observe for the presence of *Listeria* typical colonies which are grey-brown in color, with brown or black halo. Particularly *L. monocytogenes* shows a typical convex form.

### STORAGE

10-30°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

### WARNING and PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. The product must be used only by properly trained operators.

### DISPOSAL of WASTE

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

### REFERENCES

1. TIL-IDF (1988). Provisional of Recommended Method. Milk and Milk Products. Detection *Listeria* Monocytogenes.
2. ISO 11290-1:1996 - Microbiology of food and animal feeding stuffs – horizontal method for the detection and enumeration of *Listeria* monocytogenes. Part 1: detection method.
3. ISO 11290-1:96/AMD 1:2004 – Modification of the isolation media and haemolysis test, and inclusion of precision data.



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## PRODUCT SPECIFICATIONS

### NAME

LISTERIA OXFORD AGAR BASE (ISO 11290)

### PRESENTATION

Dehydrated culture medium

### STORAGE

10-30°C

### PACKAGING

Code	Content	Packaging
610231	500 g	500 g of powder in plastic bottle
620231	100 g	100 g of powder in plastic bottle

### pH OF THE MEDIUM

7.0 ± 0.2

### USE

LISTERIA OXFORD AGAR BASE (ISO 11290) is a basal medium without antibiotics and acriflavine for the isolation of *Listeria monocytogenes* according to ISO 11290.

### TECHNIQUE

Refer to technical sheet of the product.

### APPEARANCE OF THE MEDIUM

Clear medium, dark amber in color.

### SHELF LIFE






4 years

### QUALITY CONTROL

- Control of general characteristics, label and print
- Sterility control  
7 days at 25 ± 1°C, in aerobiosis  
7 days at 36 ± 1°C, in aerobiosis
- Microbiological control  
Inoculum for productivity: 10-100 UFC/ml  
Inoculum for selectivity: 10<sup>4</sup>-10<sup>5</sup> UFC/ml  
Inoculum for specificity: ≤ 10<sup>4</sup> UFC/ml  
Incubation conditions: 24-48 h at 36 ± 1°C

Microorganism		Growth	Characteristics
<i>Listeria monocytogenes</i>	ATCC 19111	Good	Grey colonies/ black halo
<i>Escherichia coli</i>	ATCC 25922	Inhibited	
<i>Enterococcus faecalis</i>	ATCC 29212	Inhibited	
<i>Candida albicans</i>	ATCC 10231	Inhibited	

### TABLE of SYMBOLS

<b>LOT</b> Batch code	 Caution, consult accompanying documents	 Manufacturer	 Contains sufficient for <n> tests
<b>REF</b> Catalogue number	 Temperature limitation	 Use by	



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