LISTERIA AGAR BASE OXFORD ISO 11290 -1

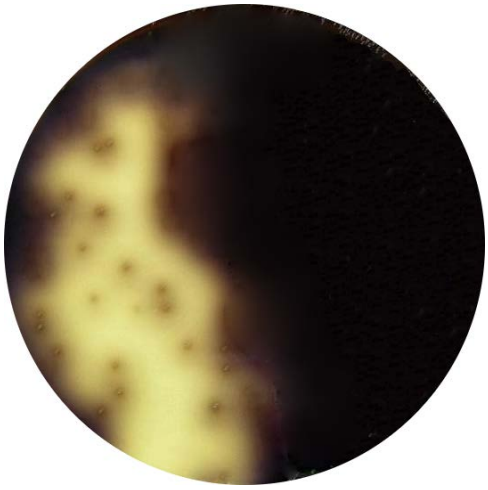
CAT Nº: 1133

Selective medium for the detection of *Listeria monocytogenes*

FORMULA IN g/l

Peptones	23.0	Esculin	1.0
Lithium Chloride	15.0	Ferric Ammonium Citrate	0.50
Sodium Chloride	5.0	Bacteriological Agar:	10.0
Maize Starch	1.0		

Final pH 7.0 ± 0.2 at 25°C



Listeria monocytogenes
ATCC 19111

PREPARATION

Suspend 27.8 grams of the medium in 500 ml of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121ºC for 15 minutes. Cool to 45 -50ºC and aseptically add one vial of Oxford Listeria Selective Supplement (Cat. 6003), previously reconstituted in 5 ml of sterile distilled water/acetone. Homogenize gently and dispense into Petri dishes. The prepared medium should be stored at 8-15°C. The color is amber.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

Oxford Listeria Selective Supplement (Cat. 6003):

(Composition: each vial for 500ml)

Cycloheximide ..... 200 mg
Colistin Sulfate ..... 10 mg
Fosfomycin..... 5 mg
Acryflavine ..... 2.5 mg
Cefotetan ..... 1 mg

Caution: Oxford Listeria Selective Supplement contains cycloheximide and is very toxic if swallowed, inhaled or comes into contact with skin. Wear gloves and eye/face protection.

USES

LISTERIA AGAR BASE OXFORD is a selective medium for Listeria according to the Oxford formula and it is recommended for the detection of *Listeria monocytogenes* from clinical samples and food products. It is used directly or for confirmation after using Listeria Enrichment Broth Base Fraser (Cat.1120).

All *Listeria* species hydrolyze the esculin to esculetin that reacts with the iron ions producing black colonies and a blackening of the medium. Another advantage of this medium is that Peptones and Maize starch provides a rich nutrient base for growth and the addition of Ferric ammonium citrate improves the growth of *L. monocytogenes.* Lithium chloride is an inhibiting agent, together with the other antibiotics from the supplement, which inhibit the growth of Gram-

negative bacteria and a large part of Gram-positive ones. Cycloheximide inhibits yeasts. Inoculate sample and incubate at 35 ± 2°C for 24 - 48 hours. Confirmation of *Listeria* is done by biochemical and serological identifications tests.

Although typical *L.monocytogenes* colonies are almost always visible after 24 hours incubation , incubation should be prolonged a further 24 hours in order to detect slower growing strains.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures, with Oxford Listeria Selective Supplement (Cat.6003) added, after incubation at a temperature of 35 ± 2ºC and observed after 24-48 hours.

Microorganisms	Growth	Colony Color
Listeria monocytogenes ATCC 19111	Good	Brown-gray colonies with black center and black halo
Staphylococcus aureus ATCC 25923	Inhibited	White Colonies
Escherichia coli ATCC 25922	Null	
Enterococcus faecalis ATCC 29212	Null	

According ISO 11133 48 h/ 37 ºC (Productivity and Selectivity)

Microorganisms	Inoculum (cfu/ml)	Productivity Quantitative	Selectiviity Qualitative
Listeria monocytogenes ATCC 19111	10^2	pr ≥ 0.9	
Escherichia coli ATCC 8739	10^4/ 10^6		Inhibited
Enterococcus faecalis ATCC 29212	10^4/ 10^6		Inhibited

BIBLIOGRAPHY

ISO NORMATIVE 11290-1 Microbiology of food and animal feeding stuffs -- Horizontal method for the detection and enumeration of *Listeria monocytogenes* -- Part 1: Detection method

Curtis, G.D.W. Mitchell, R.G., King, A.F., Griffin E.J.A selective medium for the isolation of *Listeria monocytogenes*. Letters in Appl.Microbiol.8.95-98

ISO

STORAGE

Once opened keep powdered medium closed to avoid hydration.

GENTAUR

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