

Oxford Agar Base

Catalog : HB4171-4

Oxford Agar Base is used for selective isolation of *Listeria monocytogenes*.

Approximate Formula:

Ingredients	gm/liter
Special Peptone	23.0
Soluble Starch	1.0
Sodium Chloride	5.0
Esculin	1.0
Ferric Ammonium Citrate	0.5
Lithium Chloride	15.0
Agar	13.0
Final pH7.0±0.2 at 25°C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 5.85g of the medium in 100ml distilled water or deionized water. Mix well and heat with frequent agitation to completely dissolve the powder. Sterilize in an autoclave at 121°C (15 lbs.) for 15 minutes. When cooling to approx 50°C, add one piece of OXA Supplements. Mix thoroughly. Pour into petri dishes.

Principle and Interpretation:

Special peptone and soluble starch provide carbon and nitrogen sources, vitamins and growth factors. Sodium chloride maintains a balanced osmotic pressure. *Listeria* hydrolyzed esculin and reacted with ferric ions to form black 6, 7-dihydroxycoumarin. Lithium chloride inhibits gram-negative bacilli. Polymyxin E, acriflavine, cefotetan, fosfomycin are antibiotics can inhibit the growth of gram-negative bacteria and a large part of gram-positive bacteria. Cycloheximide is antifungal agent which inhibit the yeast growth. Agar is the solidifying agent.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellow gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Oxford Agar Base must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 35±1°C for 24-48 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Colony characteristics
<i>Listeria monocytogenes</i>	ATCC 19115	10-100	Luxuriant	≥70%	Grey-black colonies with a black halo
<i>Listeria innocua</i>	ATCC 33090	10-100	Luxuriant	≥70%	Grey-black colonies with a black halo
<i>Escherichia coli</i>	ATCC 25922	> 10 ³	Inhibited	/	/
<i>Staphylococcus Aureus</i>	ATCC 6538	> 10 ³	Inhibited	/	/

References:

- 1.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.
- 2.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