75805 Oxford Agar (Listeria Oxford Medium)

For the isolation and cultivation of *Listeria monocytogenes* from specimens containing a mixed bacterial flora.

Composition:

Ingredients	Grams/Litre
Special peptone	23.0
Lithium chloride	15.0
Sodium chloride	5.0
Corn starch	1.0
Esculin	1.0
Ferric ammonium citrate	0.5
Agar	10.0

Final pH 7.0 +/- 0.2 at 25°C

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:
Dissolve 27.8 g in 500 ml distilled water and mix thoroughly. Bring to the boil by gently heating. Autoclave at 121°C for 15 minutes and cool to 45-50°C. Aseptically add 1 vial of sterile supplement (1.07006.0010). Mix well and distribute.

Principle and Interpretation:
The Oxford Agar is based on the formula of Curtis et al. for isolation of Listeria monocytogenes. Special peptone provides nitrogen, vitamins and minerals. Corn starch is omitted to reduce opalescence. Sodium chloride ensures osmotic balance.
The addition of lithium chloride and antibiotics like acriflavin, colistin sulfate, cefotetan, cefotaxim, cycloheximide and fosfomycin suppress the growth of gram-negative bacteria and most gram-positive bacteria. Lithium chloride gives the medium selectivity due to the high salt tolerance of *Listeria*. The antibiotics are the components in the the Oxford Listeria Selective Supplement (51352). Some certain strains of Staphylococci may grow as esculin negative colonies.
Listeria monocytogenes hydrolyses esculin to esculetin and forms a black complex with iron(lll)ions. Therefore, *Listeria monocytogenes* form brown-green coloured colonies with a black halo.

Cultural characteristics after 24-48 hours at 35°C.

Organisms (ATCC)	Growth	Esculin hydrolysis
Listeria monocytogenes (19118)	+++	+
Listeria monocytogenes (19117)	+++	+
Staphylococcus aureus (25923)	-/+	-
Enterococcus faecalis (29212)	-	
Escherichia coli (25922)	-	

References:
1. G.D.W. Curtis et al., Selective differential medium for the isolation of L. monocytogenes, Lett. Appl. Microbiol. 8, 95 (1989)
2. P. van Netten et al., Int. J. of Food Microbiol., 6, 187 (1988)
3. P.S. Hayes et al., Appl. Environ. Microbiol., 51, 438 (1986)
4. P.A. Kramer, D. Jones, Media selective for Listeria monocytogenes, J. Appl. Bacteriol. 32, 381 (1969)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.