

# TECHNICAL DATA SHEET

Article No. 9594

**Oxford Agar Selective Supplement (Listeria Oxford Selective Supplement)**

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## SPECIFICATION

Sterile selective supplement used for *Listeria* isolation in food samples.

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## COMPOSITION (G/VIAL)

Cycloheximide.....	0.2000
Colistin sulphate.....	0.0100
Acriflavine.....	0.0025
Cefotetan.....	0.0010
Phosphomycin sodium salt.....	0.0050

Reconstitute the original freeze-dried vial by adding:

Sterile solvent (50 % ethanol/water)            9 ml

Each vial is enough to supplement 500ml of Oxford Listeria Agar (base) (Art. no. 8519).

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## DESCRIPTION

Oxford Agar Selective Supplement is added to Oxford Agar (base) in order to obtain a complete selective medium for the detection of *Listeria monocytogenes* from clinical and food specimens.

*Listeria monocytogenes* plays an important role in human and animal illness and the sources of infections are numerous. The lack of an effective selective medium has been a gap in the detection of *Listeria*, as it can be easily and completely overgrown by competing flora.

With this supplement, which supplies the selective inhibitory components acriflavine, colistin sulphate, cefotetan, cycloheximide and fosfomycin, the competing flora is inhibited. *Listeria monocytogenes* is differentiated because it hydrolyses aesculin, producing black zones around the colonies.

Gram-negative bacteria are completely inhibited and also most of the unwanted Gram-positive species. Some strains of enterococci grow poorly and exhibit a weak aesculin reaction, usually after 40 h incubation. Some staphylococci may grow as aesculin-negative colonies.

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## TECHNIQUE

Collect, dilute and prepare samples and volumes as required according to specifications, directives, official standard regulations and/or expected results.

Reconstitute the vial with 9 ml of sterile diluent (50 % ethanol/water) in aseptic conditions and add it to 500 ml of Oxford Agar (base) cooled to 50°C. Do not overheat once supplemented.

Pour the complete medium into Petri dishes and, once solidified on a flat surface, spread the plates by streaking or spiral plate method.

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Persönlich haftende Gesellschafterin:  
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Amtsgericht Stuttgart / HRB-Nr. 252035  
Geschäftsführer: Lutz-Alexander Geyer / Thomas Roth

Incubate the plates in aerobic atmosphere at 35 ±2 °C for 24-48 h.

Incubation times longer than those mentioned above or different incubation temperatures may be required depending on the sample or the specifications. After incubation, enumerate all the colonies that have appeared onto the surface of the agar, observing any blackening of the medium due to esculin hydrolysis, typical for *Listeria* strains. Presumptive isolation of *Listeria* must be confirmed by further microbiological and biochemical tests.

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## QUALITY CONTROL

- Physical/chemical control: Colour yellow-orange  
pH at 25 °C
- Microbiological control: Reconstitute 1 vial as indicated, shake and dissolve completely.  
Distribute the complete medium, cooled to 50 °C, into 90 mm plates.

Microorganism	Growth	Remarks
<i>Listeria monocytogenes</i> ATCC® 13932	Good – Esculin positive reaction	None
<i>Escherichia coli</i> ATCC® 25922	Inhibited	None
<i>Enterococcus faecalis</i> ATCC® 29212	Inhibited	None
<i>Listeria monocytogenes</i> ATCC® 35152	Good – Esculin positive reaction	None

- Sterility control: Add 5ml of the sample to 100 ml TSB and 100 ml thioglycolate.  
Incubation 48 h at 30-35 °C and 48 h at 20-25 °C: No growth.

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## REFERENCES

- ATLAS, R.M. (1993) Handbook of Microbiological Media. CRC Press. Boca Raton. Florida.
- CURTIS, G.D, R.G. MITCHELL, A.F. KING & E.J. GRIFFIN (1989) A selective differential medium for the isolation of *Listeria monocytogenes*. Letters Appl. Microbiol. 8:95-98.
- ISO 11133:2014. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- ISO 11290 standard (1996) Microbiology of food and animal feeding stuff. Horizontal method for the detection and enumeration of *Listeria monocytogenes*. Part 1 - Detection method. Part 2 - Enumeration method.
- VANDERZANT, C. & D.F. SPLITTSTOESSER (1992) Compendium of methods for the microbiological examination of foods. APHA. Washington DC.

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## STORAGE

2-25 °C

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## SHELF LIFE

49 months from date of production.

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