

Oxford Agar Base

Ref no. 1292

Description

A selective identification medium for the isolation of *Listeria monocytogenes* from food and clinical material. Columbia agar is the nutrient base to which selective inhibitors have been added. Lithium chloride is used to inhibit enterococci and acriflavine to inhibit some Gram-negative and Gram-positive species. Further selective agents may be added after autoclaving to increase the selectivity; these are colistin, fosfomycin, cefotetan and cyclohexamide. Aesculin is included in the formula as a differential indicator. *L. monocytogenes* will hydrolyse aesculin to aesculetin which reacts with the iron salt to give a black precipitate around the colonies. Lab M's formulation has been used to successfully isolate *Listeria* from such diverse products as chicken giblets and dairy cheeses. The advisability of using this medium at two levels of selectivity has been recognised.

Typical Formula g/litre

Pepton proteose	23,0 g
Maize starch	1,0 g
Agar	16,0 g
Sodium chloride	5,0 g
Aesculin	1,0 g
Lithium chloride	15,0 g
Ferric ammonium citrate	0,5 g

Supplements mg/l:

Cycloheximide	400 mg
Sulfate colistin	20 mg
Acriflavin	5 mg
Cefotetan	2 mg
Phosphomicin	10 mg

Method for reconstitution

Weigh 57.5 grams of powder. Add to 1 litre of deionised water. Allow to soak for 10 minutes, swirl to mix then sterilise by autoclaving at 121°C for 15 minutes. Allow to cool to 47°C, add 2 vials of selective supplement G0030 (one vial/ 500ml of medium) mix well and pour plates.

Appearance: Pale yellow, slightly opaque gel.

pH: 7.2 ± 0.2

Minimum Q.C. organisms: *L. monocytogenes* WDCM 00021
E. coli (inhibition) WDCM 00013

Inoculation:

Surface, streak out to single colonies. This medium is highly selective, a heavy inoculum can be used.

Incubation:

30°C aerobically for 24-48 hours.

Growth Characteristics

organism	colony size (mm)	shape & surface	colour	other
<i>L. monocytogenes</i>	0.5-1.0	CV.E.G.	Grey/Green	Black/brown around colonies diffusion
Enterococci	p.p. 0.5	CV.E.G.	Black	Usually no growth

Storage:

ready to use plates – 6-12°C;
bottles – 6-25°C;

dehydrated medium – 3-20°C.

Packaging: **cat No.1292** ready to use plates (1x10 pcs);
 cat No. 236 dehydrated medium (500 g).

Expiration: ready to use plates – 90 days;
 dehydrated medium – 3 years.

References

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- Donnelly. C.W., Gregory J. Baigent (1986). Method for flow cytometric detection of *Listeria monocytogenes* in milk. Appl. & Environ.Microbiol.Oct. 689-695.
- Bolton, C.F.J. Preston P.M.L. Personal communication. Lovett, J. Francis, D.W. Hunt. J.M. (1987). *Listeria monocytogenes* in raw milk:Detection, Incidence and Pathogenicity. Journ. Food Protect. Vol. 50. No. 3: 188-192.
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