



ONE Broth–Listeria



A novel broth for the complete selective enrichment of *Listeria* species from food samples in 24 hours.

Simple

No subculturing from primary to secondary broths. Simply incubate for 24 hours and sub-culture onto agar medium

Fast

At 24 hours ONE Broth™ gave comparable recovery of *Listeria* compared to a conventional two broth, 48 hour method^{1,2,3}.

Improved Recovery

Higher levels of *Listeria* were recovered from samples when compared to the ISO method^{2,3}

Efficient

A single broth instead of two, means savings on time and materials

Listeria Precis

ONE Broth–Listeria is the enrichment broth used in the AFNOR validated Listeria Precis™ method

ONE Broth–Listeria

This novel enrichment broth incorporates a carefully balanced mixture of peptones, carbohydrates and salts to give optimal resuscitation, recovery and growth of even low numbers of *Listeria* spp. from food samples after 24 hours.

Recovery of *Listeria* spp. after 24 hours using Oxoid Novel Enrichment Broth–Listeria (ONE Broth–Listeria) has been shown to be comparable and in some cases better than using the ISO 11290-11 combined Fraser and Half Fraser broth enrichment procedure². Convenient freeze-dried vials provide easy addition of selective agents to the broth base allowing recovery of *Listeria* spp. while inhibiting a wide range of competing flora.

Internal trials and an evaluation carried out on behalf of Oxoid at Leatherhead Food International show that at 24 hours ONE Broth–Listeria is capable of the improved recovery of *Listeria* when compared to Half Fraser Broth alone or Half Fraser followed by full Fraser Broth. In addition, the number of *Listeria* cells detected after broth enrichment for 24 hours was found to be higher with ONE Broth–Listeria than with Half Fraser Broth.

ONE Broth–Listeria offers the benefit of requiring a single enrichment medium at one temperature, with no need to sub-culture into a secondary enrichment broth. *Listeria* recovery levels at 24 hours are at least equivalent to the ISO enrichment method for and in some cases are improved^{2,3}.

Protocol for Listeria Precis Method

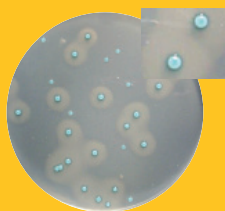
Day 0: Enrichment

25g or 25mL of sample + 225mL ONE Broth–Listeria
Incubate for 24 ± 2 hours at 30°C



Day 1: Plating

Using a 10µL microbiological loop inoculate a single *Brilliance* Listeria plate. Incubate for 22–26 hours at 37°C



(for meat samples, re-incubate plates that show no blue colonies with halos for a further 22–26 hours at 37°C)

Select green-blue colonies with halos for confirmation

Day 2: Results

If present, confirm blue/green colonies with halos as *L. monocytogenes* using the O.B.I.S. mono test. Alternatively, confirm using standard ISO methods.**



For *Listeria monocytogenes* enumeration:

Resuscitate any organisms present in the sample by adding 25g or 25mL to 225mL of Buffered Peptone Water and incubate for 1 hour at 20°C. Inoculate a single *Brilliance* Listeria plate with 100µL, and incubate for 45–51 hours at 37°C. Inspect the plate for characteristic blue/green colonies with halos and count. Confirm using O.B.I.S. mono or alternatively, confirm using standard ISO methods.** Calculate CFU/g or CFU/mL of sample.

**If there is insufficient material to carry out an O.B.I.S. mono test, or if a mixed culture of *L. monocytogenes* and other *Listeria* species is suspected, first purify suspect colonies by subculture onto a second *Brilliance* Listeria plate.

Directions

Suspend 22 grams of ONE Broth–Listeria Base in 500mL of distilled water. Mix well and sterilize by autoclaving at 121°C for 15 minutes. Cool the medium to below 50°C, and aseptically add the contents of one vial of ONE Broth–Listeria Selective Supplement reconstituted as directed.

Method of Use

1. Add 25g of food sample to 225mL of ONE Broth–Listeria and stomach for a minimum of 30 seconds to mix the sample.
2. Incubate the broth without agitation at 30°C for 24 ± 2 hours.
3. Gently agitate the bag then, using a microbiological loop, remove 10µL and inoculate onto a suitable agar medium e.g. *Brilliance* Listeria Agar and incubate appropriately (37°C for 24–48 hours).
4. Confirm presumptive colonies on the agar plates as *Listeria monocytogenes* or *Listeria* spp.

Enrichment/resuscitation media	SIZE/FORMAT	ORDER CODE
ONE Broth–Listeria in Bottles	10x225mL	BO1066S*
ONE Broth–Listeria in ReadyBags	3x3 litres	FR60031*
ONE Broth–Listeria Base	500g	CM1066B
ONE Broth–Listeria Supplement for 500mL	10 vials	SR0234E
ONE Broth–Listeria Supplement for 2.25 litres	10 vials	SR0234B
Buffered Peptone Water (ISO) in Bottles	10x225mL	BO1067S*
Buffered Peptone Water (ISO) in ReadyBags	4x3 litres	BM1104T*
Buffered Peptone Water	500g	CM0509B

Plating media

<i>Brilliance</i> Listeria (ready-to-use 90mm plates)	10 plates	PO1102A*
<i>Brilliance</i> Listeria Agar Base	500g	CM1080B
<i>Brilliance</i> Listeria Agar Base 2 litre pack	134.4g	CM1080E
<i>Brilliance</i> Listeria Selective Supplement for 500mL	10 vials	SR0227E
<i>Brilliance</i> Listeria Differential Supplement for 500mL	10 vials	SR0228E

Confirmation

Oxoid Listeria Latex Test Kit	100 tests	DR1126A
O.B.I.S. mono Kit	60 tests	ID0600M
Microbact™ 12L	20 tests	MB1128A
Remel RapID™ CB Plus Panel	20 panels	R8311008*
Gram Stain Kit	4x250mL	R40080*
Microbact Oxidase Strips	50 tests	MB0266A
Tryptone Soya Broth	500g	CM0129B
Yeast Extract Powder	500g	LP0021B
Agar Bacteriological	500g	LP0011B
Blood Agar Base No. 2	500g	CM0271B
Defibrinated Sheep Blood	25mL	SR0051B*

Quality Control Organisms – Culti-Loops™

<i>Listeria monocytogenes</i> ATCC®7644™†	5 loops	CL3970*
<i>Staphylococcus aureus</i> ATCC® 25923™†	5 loops	CL7010*
<i>Listeria innocua</i> ATCC®33090™†	5 loops	CL9005*
<i>Escherichia coli</i> ATCC®25922™†	5 loops	CL7050*
<i>Enterococcus faecalis</i> ATCC®29212™†	5 loops	CL7030*
<i>Rhodococcus equis</i> ATCC®6939™†	5 loops	CL5400*

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* Check code and availability with your local Oxoid Representative

For more information about these products, please visit www.oxoid.com

References:

1. ISO 11290-1 (Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of *Listeria monocytogenes* – part 1).
2. Oxoid Poster - Folio No. 1033, July 2004.
3. Data on file at Oxoid.

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