

# Specification

Liquid culture medium for the enrichment of Listeria, according to Lovett et al.

Formula \* in g/L

V	
Casein peptone	17.00
Yeast extract	6.00
Soy peptone	3.00
Sodium chloride	
Dextrose	
Dipotassium phosphate	2.50

Final pH 7,3 ±0,2 at 25 °C

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

### Directions

Dissolve 36 g of powder in 1 L of distilled water and distribute 500 mL per flask. Sterilize in the autoclave at 121°C for 15 minutes. Cool to 50°C and aseptically add to each flask the contents of one vial of Listeria Supplement for Selective Enrichment according to FDA/IDF (Art. No. DSHB3159). Homogenize and distribute into suitable containers.

Note: Prepared medium (broth + supplement) must be kept away from light, since it promotes the production of acriflavine oxidised photo complexes that repress Listeria growth.

## Description

This media formulation according to Lovett *et al.* has been adopted by the FDA for the analysis of food, and it is recommended by the IDF/FIL for the selective enrichment of *Listeria* in milk samples, due to its good results in the recovery of stressed bacteria.

## Technique

Mix the sample (25 mL or 25 g) with 225 mL of complete enrichment broth and incubate à 30°C for 7 days. Make subcultures after 24 hours, 48 hours and 7 days in the following way:

- Inoculate 0,5 mL of enrichment culture onto solid medium for the Listeria isolation (Oxford Agar Base, or Palcam Agar Base, with their respective selective supplements).

- Alkalinize 0,5 mL of enrichment culture by mixing with 4,5 mL of 0,5% sterile KOH solution and inoculate onto solid medium for Listeria isolation.

Necessary supplements

Distilled water (Solvent)

Quality control

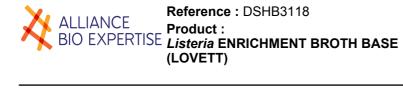
**Incubation temperature:** 30°C ± 1 **Incubation time:** 24-48 h **Incubation time:** Practical range 100 ± 20 CFU. Min. 50 CFU (productivity) according to ISO 11133:2014/Amd 1:2018.

Microorganism	Growth	Remarks
Listeria monocytogenes ATCC <sup>®</sup> 13932	Good	-
Listeria monocytogenes ATCC <sup>®</sup> 35152	Good	-
Enterococcus faecalis ATCC <sup>®</sup> 19433	Inhibited	w. selective supplement
Escherichia coli ATCC <sup>®</sup> 25922	Inhibited	w. selective supplement

# References

· ATLAS, R.M. (1993) Handbook of Microbiological Media. CRC Press. Boca Raton. Florida.

- · LOVETT, J., D.W. FRANCIS & J.M. HUNT (1988) Listeria monocytogenes in raw milk: Detection, incidence and pathogenicity. J. Food Protect. 50:188-192.
- · LOVETT, J. & A.D. HITCHINS (1989) Listeria isolation. FDA (Food and Drug Adminstrations) Bacteriological Analytical Manual. 6th ed. Supplement Sept. 1987 (2nd Print):29.01.
- 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.



Storage For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).