

## Specification

Liquid culture medium for the enrichment and detection of *Listeria* ssp. according to ISO standards.

## Presentation

10 Prepared bottles  
Bottles 250 ml  
with: 225 ± 5 ml

### Packaging Details

1 box with 10 bottles 250 ml. White thermo resistant polypropylene cap.

### Shelf Life

12 months

### Storage

2-25°C

## Composition

Composition (g/l):

|                               |         |
|-------------------------------|---------|
| Peptone from meat.....        | 5.0000  |
| Casein Peptone.....           | 5.0000  |
| Yeast extract.....            | 5.0000  |
| Meat extract.....             | 5.0000  |
| Sodium chloride.....          | 20.0000 |
| Disodium phosphate.....       | 12.0000 |
| Monopotassium phosphate.....  | 1.3500  |
| Esculin.....                  | 1.0000  |
| Lithium chloride.....         | 3.0000  |
| Ammonium ironIII citrate..... | 0.5000  |
| Nalidixic ac.....             | 0.0100  |
| Acriflavine.....              | 0.0125  |

## Description /Technique

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Half Fraser Broth is a modification of Fraser Broth which contains half of the concentration of nalidixic acid and acriflavine to aid in the recovery of stressed cells.

Half Fraser Broth is used as the primary enrichment broth according to the EN ISO 11290 for the detection of *Listeria*.

### Technique

For the inoculation of bottles, follow the standard laboratory method or the applicable norms, (Stab inoculation, loop inoculation, dilution banks , etc ...).

The use methodology is described in the EN ISO 11290.

Note: The medium can show the possible presence of precipitates not affecting its correct performance.

## Quality control

### Physical/Chemical control

Color : Brown-yellowish      pH: 7.2 ± 0.2 at 25°C

### Microbiological control

Inoculate: Practical range 100 ± 20 CFU; Min. 50 CFU (Productivity)/ 10<sup>4</sup>-10<sup>6</sup> (Selectivity).

Microbiological control according to ISO 11133:2014/ Adm 1:2018.

Aerobiosis. Incubation at 30 ± 1 °C during 18-24 h

### Microorganism

*Escherichia coli* ATCC® 8739 (1)

*Enterococcus faecalis* ATCC® 19433 (2)

*Listeria monocytogenes* ATCC® 13932, WDCM 00021 + (1) + (2)

*Listeria monocytogenes* ATCC® 35152, WDCM 00109 + (1) + (2)

### Sterility Control

Incubation 48 hours at 30-35°C and 48 hours at 20-25°C: NO GROWTH

Check at 7 days after incubation in same conditions

### Growth

Inhibited. Confirm in TSA at 37°C±1 reading 24 ± 3h

Partial Inhibition. Confirm in TSA at 37°C±1 reading 24 ±

> 10 CFU. Blue-green coln. w. opaque halo (Ottaviani

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**Bibliography**

- ATLAS, R.M. (1993) Handbook of Microbiological Media. CRC Press. Boca Raton. Florida.
- FRASER, J.A. & W.H. SPERBER (1988) Rapid detection of *Listeria* spp. In food and environmental samples by esculin hydrolysis. J. Food Prot. 51:762-765.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- ISO 11290-1:2017 Standard. Microbiology of the food chain. Horizontal method for the detection and enumeration of *Listeria monocytogenes* and for *Listeria* spp.- Part 1: Detection Method
- ISO 11290-2:2017 Standard. Microbiology of the food chain. Horizontal method for the detection and enumeration of *Listeria monocytogenes* and for *Listeria* spp.- Part 2: Enumeration Method.
- McCLAIN, D. & W.H. LEE (1988) Development of a USDA-FSIS method for isolation of *Listeria monocytogenes* from raw meat and poultry. J.AOAC 71:660-664.
- VANDERZANT, C & D.F. SPLITTSTOESSER (1992) Compendium of methods for the microbiological examination of foods. APHA. Washington. DC.