

DEMI FRASER BROTHMedium for primary enrichment of *Listeria spp.***TYPICAL FORMULA (g/L)**

| | |
|---------------------------------------|--------|
| Tryptone | 5.0 |
| Peptone | 5.0 |
| Lithium Chloride | 3.0 |
| Beef Extract | 5.0 |
| Yeast Extract | 5.0 |
| Sodium Chloride | 20.0 |
| Disodium Hydrogen Phosphate anhydrous | 9.5 |
| Potassium Dihydrogen Phosphate | 1.35 |
| Aesculin | 1.0 |
| Nalidixic Acid | 0.01 |
| Acriflavine | 0.0125 |
| Final pH=7.2 ± 0.2 | |

DESCRIPTIONDEMI FRASER BROTH is used for selective enrichment of *Listeria spp* from foods and animal stuffs.

DEMI FRASER BROTH is recommended by:

- 1) AFNOR V08-055, ISO/TC 34/SC9 for secondary enrichment of *Listeria* in foods and it is indicated by ISTISAN 96/35 report for *Listeria* determination in foods (except milk and dairy products).
- 2) USDA-FSIS for the second enrichment of *Listeria* in foods and environment specimens.
- 3) Decree of the Italian Ministry of Health dated 7-02-93 for *Listeria* determination with MPN method.
- 4) ISO 11290-1:1996 for primary enrichment of *Listeria* in foods and animal stuffs.

PRINCIPLE

Peptones and yeast extract provide nitrogen, carbon, sulphur and vitamins. Lithium chloride and sodium chloride maintains the osmotic balance of the medium. Beside the high concentration of sodium chloride has a selective activity. Disodium phosphate and monopotassium phosphate are buffering agents. Hydrolysis of esculin produces esculetin which reacts with ferric ions thus forming a black compound indicating the presence of *Listeria spp.* Ferric ammonium citrate, contained in *Listeria Fraser Supplement*, increases selectivity of the medium.

PREPARATION

Suspend 55 g in 1 litre of distilled water. Heat until completely dissolved. Autoclave at 121°C for 15 minutes. Cool to 45-50°C and aseptically add 2 vials of *Listeria Fraser Supplement* (ref. 81028). Dispense into sterile final containers.

TECHNIQUE

Inoculate 225 ml of Demi Fraser Broth with 25 g of sample and homogenize. Incubate at 30+/-1°C for 24+/-2 hours. Then subculture in *Listeria Fraser Broth*.

STORAGE

10-30°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

WARNING and PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. The product must be used only by properly trained operators.

DISPOSAL of WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

1. Fraser, J.A., and W.H. Sperber (1988) . J. Food Prot , 51, 762-765.
2. Ordinanza ministero della Sanità del 07-12-93: Limiti di *Listeria monocytogenes* in alcuni prodotti alimentari. Gazzetta Ufficiale della Repubblica Italiana n.291 del 13-12-93.
3. NF V08-055: December 1993, Food microbiology. Detection of *Listeria monocytogenes*. Routine method.
4. ISO 11290: Microbiology of food and animal feeding stuffs- Horizontal Method for the detection and enumeration of *Listeria monocytogenes*.

PRODUCT SPECIFICATIONS

NAME

DEMI FRASER BROTH

PRESENTATION

Dehydrated medium.

PACKGING

| Code | Content | Packaging |
|--------|---------|-----------------------------------|
| 610091 | 500 g | 500 g of powder in plastic bottle |
| 620091 | 100 g | 100 g of powder in plastic bottle |

pH OF THE MEDIUM

7.2 ± 0.2

USE

DEMI FRASER BROTH is used for selective enrichment of *Listeria spp* from foods and animal stuffs.

TECHNIQUE

Refer to technical sheet of the product.

APPEARANCE OF THE MEDIUM

Free-flowing, homogeneous powder, tan in color.
 Light amber medium, slightly opalescent.

SHELFLIFE

4 years

QUALITY CONTROL

- Control of general characteristics, label and print.
- Microbiological control:
 Inoculum for productivity: 10-100 UFC/ml.
 Inoculum for selectivity: 10⁴-10⁵ UFC/ml.
 Inoculum for specificity: ≤ 10⁴ UFC/ml.
 Incubation conditions: 24+/-2 h at 30 ± 1°C.

| Microorganism | | Growth |
|-------------------------------|------------|-----------|
| <i>Listeria monocytogenes</i> | ATCC 35152 | Good |
| <i>Listeria monocytogenes</i> | ATCC 19111 | Good |
| <i>Escherichia coli</i> | ATCC 25922 | Inhibited |
| <i>Enterococcus faecalis</i> | ATCC 19433 | Inhibited |

TABLE OF SYMBOLS

| | | | |
|-----------------------------|---|--|---|
| LOT Batch code |  Caution, consult accompanying documents |  Manufacturer |  Contains sufficient for <n> tests |
| REF Catalogue number |  Temperature limitation |  Use by | |

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