Fraser Secondary Enrichment Broth Base

Intended Use
Fraser Secondary Enrichment Broth Base is used for isolation, cultivation and enrichment of *Listeria monocytogenes* from food and environmental samples.

Summary
Listeria monocytogenes is a Gram-positive, non-sporeforming, aerobic to facultatively anaerobic, rod-shaped bacterium which exhibits pathogenicity towards humans and other animals. Although not generally recognized as a food-borne pathogen, three recent outbreaks of listeriosis may indicate that this organism is becoming more prevalent as an agent of food-borne disease.
Fraser secondary enrichment broth base is based on the original formulation described by Catherine W. Donnelly and Gregory J. Baigent, and its later modifications of United States Department of Agriculture Food Safety Inspection Service (USDA-FSIS) UVM Secondary Enrichment Broth.
Fraser Secondary Enrichment Broth Base and Fraser supplements are based on the formulation of Fraser and Sperber. This modification and two-step selective enrichment method developed (USDA-FSIS method) results in a higher detection rate of *Listeria monocytogenes.*

Principle
Proteose peptone, casein enzymic hydrolysate, cara beef extract and yeast extract serves as a source of carbon, nitrogen, vitamins and minerals. Disodium phosphate and mono potassium phosphate are buffering agents. Ferric ammonium citrate is included for the visualization of esculin hydrolysis, resulting in the blackening of the medium by *Listeria* species. Lithium chloride and high salt concentration makes the medium selective for *Listeria* species.

Formula*

Ingredients	**g/L**
Proteose Peptone	5.0
Casein Enzymic hydrolysate	5.0
Yeast Extract	5.0
Cara Beef Extract#	5.0
Sodium Chloride	20.0
Disodium Phosphate	12.0
Lithium Chloride	3.0
Monopotassium Phosphate	1.35
Esculin	1.0
Ferric Ammonium Citrate	0.5
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.
Equivalent to Beef Extract

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Food and Dairy samples
Water samples
Clinical samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 57.85 g of the powder in 990 mL purified / distilled water and mix thoroughly.
2. Boil with frequent agitation to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool the medium to 45°C and aseptically add rehydrated contents of 1 vial of Fraser enrichment supplement or Fraser selective supplement (204060350005).
5. Mix thoroughly and dispense as desired.

Quality Control

Dehydrated Appearance: Cream to yellow homogeneous free flowing powder.
Prepared Appearance: Basal medium: Amber coloured clear solution with slight precipitate.
After addition: Fluorescent amber coloured clear solution with slight precipitate forms in tubes.
Cultural Response: Cultural characteristics observed with added Fraser enrichment supplement or Fraser Selective Supplement after an incubation at 35°C-37°C for 24-48 hours.

Organism (ATCC)	Growth	Esculin Hydrolysis
Listeria monocytogenes strain Li 23 (19114)	Good	Positive (Blackening of medium)
Listeria monocytogenes serotype 4b (19115)	Good	Positive (Blackening of medium)
Enterococcus faecalis (29212)	Inhibited	Negative
Escherichia coli (25922)	Inhibited	Negative

Interpretation of Results

Examine the agar plates for suspected colonies. For further identification and confirmation of *Listeria* species, consult appropriate references.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

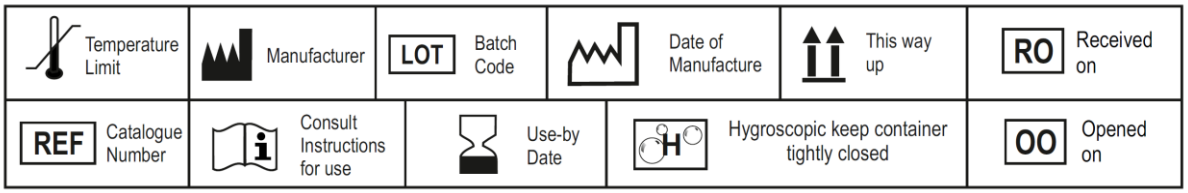
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Donnelly C.W. and Baigent G.J. (1986) Appl. Environ. Microbiol. 52. 689-695.
2. Fraser and Sperber. 1988. J. Food Prot. 51:762.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201060140500	Dehydrated Culture Media	500 g



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Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.