B963I	FRASER BROTH BASE

Formula

Ingredients :	Gms/lit.
Casein enzymic hydrolysate	5.00
Peptic digest of animal tissue	5.00
Yeast extract	5.00
Meat extract	5.00
Sodium chloride	20.00
Lithium chloride	3.00
Disodium hydrogen phosphate.2H2O	12.00
Potassium dihydrogen phosphate	1.35
Esculin	1.00

Final pH (at 25°C) : 7.2 ± 0.2

Directions :

Suspend 54.92 grams (equivalent weight of dehydrated medium per litre) in 1000 ml distilled water. Heat if necessary, to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Fraser Selective Supplement (BF117I) and 2 vials of Fraser Supplement (BF002) to 1000 ml medium for primary enrichment or 1 vial of each to 500 ml medium for secondary enrichment. Mix well and dispense as desired.

Warning: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin wash with plenty of water immediately.

Principle :

Casein enzymic hydrolysate, beef extract and Yeast extract provide nitrogen, vitamins and minerals. Sodium phosphate and potassium phosphate are buffering agents. Differentiation is aided by including ferric ammonium citrate in the final medium. Since all Listeria species hydrolyze esculin, the addition of ferric ions to the medium will detect the reaction.

Selectivity is provided by the presence of lithium chloride, nalidixic, acid and acriflavine in the formula. The high salt tolerance of Listeria is used as a means to inhibit growth of Enterococci.

QC Tests – (I)Dehydrated Medium		
	Colour :	Cream to yellow
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	pH (post autoclaving/heating) :	7.2 ± 0.2
	Colour (post autoclaving/heating) :	Light yellow to yellow
	Clarity (post autoclaving/heating) :	Basal medium : Clear solution with slight precipitate. After addition : clear solution with slight precipitate forms in tubes.
(III)Q.C. Test Microbiological		

Cultural characteristics observed on addition of BF117I and BF002 after an incubation at 35-37°C for 24-48 hours.

MICROORGANISM (ATCC)	GROWTH	ESCULIN HYDROLYSIS*
Listeria monocytogenes (19111)	good-luxuriant	+
Listeria monocytogenes (19112)	good-luxuriant	
Listeria monocytogenes (19117)	good-luxuriant	
Listeria monocytogenes (19118)	good-luxuriant	
Enterococcus faecalis (29212)	Inhibited	-
Escherichia coli (25922)	Inhibited	-
Staphylococcus aureus (25923)	Inhibited	-

Key : + = blackening of medium
* = subculture on Listeria selective agar

Precautions :	1. For Laboratory Use.				
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
	3. HARMFUL. Irritating to eyes, respiratory system and skin. May cause harm to the unborn child. Avoid contact with skin and eyes. Do not breathe dust. Wear suitable protective clothing. Keep container tightly closed. Target organ(s) : Blood, Kidneys, Nerves.				
Limitations :	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.				
	2. Since Listeria species other than L. monocytogenes can grow on these media, an identification of Listeria monocytogenes must be confirmed by biochemical and serological testing.				
	3. Poor growth and a week esculin reaction may be seen after 40 hours incubation for some enterococci.				
Use :	Fraser broth base with added supplements is recommended by ISO committee as primary as well as secondary enrichment for isolation, and enumeration of Listeria monocytogenes from foods and animal feeds.				
Storage :	Dehydrated medium- below 30°C Prepared medium– Between 2 to 8°C.				
Packing :	500 gm. bottle				
Product profile:	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
B963I	54.92g/l	9.10L	7.2 ± 0.2	Fraser selective supplement (BF117I) and Fraser Supplement (BF002)	121^0C / 15 minutes