

# Demi Fraser Broth



Medium used for the isolation and identification of *Listeria* spp.

\*Equally use with Half Fraser Broth (MFDS).

## • CONTENTS (Liter)

Tryptose	10.0 g
Beef Extract	5.0 g
Yeast Extract	5.0 g
Sodium Chloride	20.0 g
Disodium Hydrogen Phosphate Anhydrous**	9.6 g
Monopotassium Phosphate	1.35 g
Esculin	1.0 g
Nalidixic Acid	0.01 g
Acriflavine HCl	0.0125 g
Lithium Chloride	3.0 g
Final pH = 7.2 ± 0.2 at 25°C	

\*\*Equivalent to 12.0 G of Disodium Hydrogen Phosphate Dihydrate

## • PROCEDURE

Suspend 54.97 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Aseptically add 2 vials of Fraser *Listeria* supplement A (MB-F1828). Mix well. Pour into tubes.

### Fraser *Listeria* supplement A

1 vial content (each vial is sufficient for 500 mL of medium)

Ferric Ammonium Citrate 0.25 g

## • INTERPRETATION

Demi Fraser Broth is a medium used for the isolation and identification of *Listeria* spp. Tryptose, beef extract and yeast extract provide nitrogen, carbon, vitamins and minerals. Sodium chloride maintains the osmotic balance. Disodium hydrogen phosphate and monopotassium phosphate are the buffering agents. *Listeria* species hydrolyze esculin to esculetin and dextrose. The esculetin reacts with the ferric ions to form a dark brown or black complex. Selectivity is provided by nalidixic acid, acriflavine HCl and lithium chloride. Demi Fraser Broth is a modification of Fraser *Listeria* Broth (MB-F1166) which contains half of nalidixic acid and acriflavine HCl.

## • TECHNIC

Inoculate the specimen using a sterile needle to the medium. Incubate at 35 ± 2°C for 24 - 48 hours. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige

### Prepared medium

Appearance: slightly opalescent

Color: light amber

Incubation conditions:  $35 \pm 2^{\circ}\text{C}$  / 24 - 48 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics
<i>Listeria monocytogenes</i>	15313	50-100	good	blackening
<i>Enterococcus faecalis</i>	29212	$\geq 10^3$	partially inhibited	-
<i>Escherichia coli</i>	25922	$\geq 10^3$	inhibited	-
<i>Staphylococcus aureus</i>	25923	$\geq 10^3$	inhibited	-

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at  $2 - 8^{\circ}\text{C}$ .

## • REFERENCES

1. Fraser, J., and W. Sperber (1988). J. Food Prot , 51: 762-765.
2. AFNOR (1993). Food Microbiology- Detection of *Listeria monocytogenes*-Routine method, V 08-055.
3. Refer to the MFDS.

## • PACKAGE

Cat. No : MB-D1091 Demi Fraser Broth	500 G
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