

**BIOMARK Laboratories-INDIA**

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**TECHNICAL SHEET**

<b>B1413</b>	<b>Selective primary enrichment medium: half-Fraser broth</b>		
<b>Formula</b>			
<b>Ingredients:</b>	<b>gms/lit.</b>		
<b>ISO 11290 Specification - Half Fraser</b>	<b>B1413- Half Fraser Broth : Fraser broth</b>		
<b>Ingredients</b>	<b>g / L</b>	<b>Ingredients</b>	<b>g / L</b>
Enzymatic digest of animal Tissues	5.00	Proteose Peptone	5.00
Enzymatic digest of casein	5.00	Tryptone	5.00
Yeast extract	5.00	Yeast extract	5.00
Meat extract	5.00	Meat extract	5.00
Sodium chloride	20.00	Sodium chloride	20.00
Disodium hydrogen phosphate dehydrate	9.50	Disodium hydrogen phosphate	9.50
Potassium dihydrogen phosphate	1.35	Potassium Dihydrogen phosphate	1.35
Esculin	1.00	Aesculin	1.00
Lithium chloride	3.00	Lithium Chloride	3.00
Final pH ( at 25°C)	7.2±0.2	Final pH ( at 25°C)	7.2±0.2
<b>Supplements to be added after autoclaving</b>		<b>Supplements to be added after autoclaving (BF117I)</b>	
Nalidixic acid	0.01	Nalidixic acid	0.01
Acriflavin hydrochloride (Trypaflavin)	0.012	Acriflavin hydrochloride (Trypaflavin)	0.012
Ammonium Iron citrate	0.50		
Final pH (at 25°C): 7.2 + 0.2			
<b>Directions:</b>			
Suspend 27.4 gms in 500ml. distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to room temperature and add the contents of one vial of Fraser Supplement (BF002). Mix well and pour into sterile tubes or plates.			
<b>WARNING:</b> Lithium chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin, wash with plenty of water immediately.			
<b>Principle :</b>			
This medium contains tryptone, yeast extract and beef extract which provide essential nutrients like carbon and nitrogenous compounds including vitamins, amino acids and trace ingredients. Phosphates maintain the buffering capacity of the medium. The high salt tolerance (of sodium chloride) of Listeria is used as means to inhibit the growth of Enterococci. Lithium chloride is also used to inhibit Enterococci, which also possess the ability to hydrolyze esculin. Growth of accompanying bacteria is largely inhibited by the addition of Nalidixic acid and Acriflavin hydrochloride (BF002).			
<b>QC Tests – (I)Dehydrated Medium</b>			
	Colour:	Cream to light yellow	
	Appearance:	Homogeneous Free Flowing powder	
<b>(II)Rehydrated medium</b>			
	pH (post autoclaving/heating) :	7.2 ± 0.2	
	Colour (post autoclaving/heating) :	Basal medium: Yellow coloured After addition : Fluorescent yellow coloured	
	Clarity (post autoclaving/heating) :	Basal medium: Clear to slightly opalescent After addition : clear solution with slight precipitate forms in tubes	
<b>( III) Q.C. Test Microbiological</b>			
	Cultural characteristics observed after 24-48 hours at 35- 37°C.		
	<b>MICROORGANISM (ATCC)</b>	<b>GROWTH</b>	<b>ESCULIN HYDROLYSIS*</b>
	Listeria monocytogenes (19118 )	Good-luxuriant	Positive reaction, blackening of medium

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	Listeria monocytogenes (19111)	Good-luxuriant	Positive reaction, blackening of medium		
	Listeria monocytogenes (19112)	Good-luxuriant	Positive reaction, blackening of medium		
	Staphylococcus aureus (25923)	Inhibited	-		
	Key: + = blackening of medium * = sub cultured on Listeria selective agar				
<b>Precautions :</b>	1. For Laboratory Use. 2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
<b>Limitations :</b>	Individual organisms differ in their growth requirement and may show variable growth patterns on the medium				
	Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement				
	Presence of L. monocytogenes is often masked by other Listeria species like L. innocua and L. ivanovii.				
	Further subculture of organisms on selective media is required.				
<b>Use:</b>	Recommended, recommended as a primary as well as secondary enrichment medium, for the isolation and enumeration of Listeria monocytogenes from food and animal feeds. The composition and performance criteria of this media is as per the specification laid down in ISO 11290-1:2017, ISO 11290-2:2017 and ISO 11133:2014 (E) /Amd.: 2020				
<b>Storage:</b>	Dehydrated medium- below 30°C Prepared medium– Between 2 to 8°C				
<b>Packing :</b>	500 gm. bottle				
<b>Product profile:</b>	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
<b>B1413</b>	54.8 g/l	9.124/ lit	7.2 ± 0.2	Fraser supplement (BF002)and (BF117I)	121 <sup>0</sup> C/15 min

**Disclaimer:**

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related BIOMARKLABORATORIES publications.

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