

BIOMARK Laboratories-INDIA

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TECHNICAL SHEET

B1414	Selective secondary enrichment medium: Fraser broth	
Formula		
Ingredients:	gms/lit.	
ISO 11290 Specification - Half Fraser	B1414- Fraser Broth : Fraser broth	
Ingredients	g / L	Ingredients
Enzymatic digest of animal Tissues	5.00	Proteose Peptone
Enzymatic digest of casein	5.00	Tryptone
Yeast extract	5.00	Yeast extract
Meat extract	5.00	Meat extract
Sodium chloride	20.00	Sodium chloride
Disodium hydrogen phosphate dehydrate	9.50	Disodium hydrogen phosphate
Potassium dihydrogen phosphate	1.35	Potassium Dihydrogen phosphate
Esculin	1.00	Aesculin
Lithium chloride	3.00	Lithium Chloride
Final pH (at 25°C)	7.2±0.2	Final pH (at 25°C)
Supplements to be added after autoclaving		Supplements to be added after autoclaving (BF117I)
Nalidixic acid	0.020	Nalidixic acid
Acriflavin hydrochloride (Trypaflavin)	0.025	Acriflavin hydrochloride (Trypaflavin)
Ammonium Iron citrate	0.50	
Final pH (at 25°C) : 7.2 ± 0.2		
Directions :		
Suspend 54.9 gram (the equivalent weight of dehydrated medium per litre) in 1000 ml purified / 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.		
WARNING: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin, wash with plenty of water immediately		
Principle :		
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).		
QC Tests – (I)Dehydrated Medium		
	Colour :	Cream to light yellow
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	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

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(III) Q.C. Test Microbiological					
Cultural characteristics observed on addition of supplement after 24-48 hours at 35- 37°C.					
	MICROORGANISM (ATCC)	GROWTH	ESCULIN HYDROLYSIS		
	Listeria monocytogenes (19118)	Good-luxuriant	Positive reaction, blackening of medium		
	Listeria monocytogenes (19111)	Good-luxuriant	Positive reaction, blackening of medium		
	Listeria monocytogenes (19112)	Good-luxuriant	Positive reaction, blackening of medium		
	Staphylococcus aureus (25923)	Inhibited	-		
	Escherichia coli (25922)	Inhibited	-		
	Enterococcus faecalis (29212)	Inhibited	-		
Precautions :	1. For Laboratory Use.				
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
Limitations :	1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium				
	2. 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				
	3. Presence of L.monocytogenes is often masked by other Listeria species like L.inocua and L.ivanovii.				
	4. Further subculture of organisms on selective media is required.				
Use:	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				
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
B1414	54.9 g/l	9.104/ lit	7.2 ± 0.2	Fraser supplement (BF002)& (BF117I)	121 ⁰ 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. The information contained in this publication is based on our in-house studies and market performance and is to the best of our knowledge true and accurate. BIOMARK LABORATORIES reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.