CM 22764 – HALF FRASER BROTH

INTENDED USE

For collection and shipment of clinical specimen

PRODUCTS UMMARY AND EXPLANATION

HalfFraserBrothis recommendedfor theprimary enrichment and enumeration of Listeria spp. from food and animal feeds. This medium is made selective for Listeria spp. by adding antimicrobial agents like acriflavine and nalidixic acid with the basal medium.

COMPOSITION

Ingredients	Gms/Ltr
Sodium Chloride	20.000
Disodium hydrogen phosphate dihydrate	9.600
Enzymatic digest of animal tissues	5.000
Enzymatic digest of casein	5.000
Yeast extract	5.000
Meat Extract	5.000
Lithium Chloride	3.000
Potassium dihydrogen phosphate	1.350
Esculin	1.000
Ferric Ammonium citrate	0.500
Acriflavine Hydrochloride	0.0125
Nalidixic Acid Sodium Salt	0.010

PRINCIPLE

Thismedium contains Enzymatic digest of animal tissue, Enzymatic digest of casein, yeast extract and Meat extract which provides essential nutrients like carbon and nitrogenous compounds including vitamins, amino acids and trace ingredients. Phosphates helps to maintain the buffering capacity of the medium. All Listeria species exhibit beta- glucosidase activity which is evident by the blackening of the medium. Listeria species hydrolyze the esculin to form esculetin, which further reacts with the ferric ions of ferric ammonium citrate to result in a visible, black brown precipitate. Ferric ammonium citrate also enhances the growth of L.monocytogenes. The high concentration of sodium chloride acts as an inhibitory agent for Enterococci spp., simultaneously allowing the selective growth of Listeria spp. Lithium chloride is also used to inhibit Enterococci, which also have the ability to hydrolyse the esculin. Addition of Nalidixic acid and Acriflavin hydrochloride largely helps in inhibiting the growth of accompanying bacteria. The tubes showing blackening after incubation should be sub cultured on L.mono Differential Agar base or Chromogenic Listeria Agar Base (Modified) for complete identification.

INSTRUCTION FOR USE

Labelthe readyto usebag.Inoculate the sample and Incubate at specified temperature and time.
Note:It is a ready to use broth media in bag. The medium is pre sterilized; hence the sterilization is not required.

QUALITY CONTROL SPECIFICATIONS

Appearance of Prepared media :Sterile yellow colour medium in a plastic bottle
pH (at 25°C) :7.2 ± 0.2
Sterility test :Passes release criteria

INTERPRETATION

Culture Characteristics observed after incubation at 30±1°C for 25±1 hours. Further subculture is carried out on L.mono Differential Agarbase (TM 1443) at 37±1°C for 44±4 hours or on Tryptone Soya Agar (TM 345) at 37 ± 1°C and examined for growth at24±2 hours.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Esculin hydrolysis	Recovery on	Colour of colony	Recovery
Listeria innocua	33090	50-100	Luxuriant	Positive reaction, Blackening	>10 cfu	Blue green colonies w/opaque halo	appNlicoatble
Listeria monocytogenes	35152	50-100	Luxuriant	Positive reaction, Blackening	>10 cfu	Blue green colonies w/opaque halo	appNlicoatble
Enterococcus faecalis	29212	≥1000	Partial to Complete Inhibition	-	-	-	< 100 colonies
Enterococcus faecalis	19433	≥ 1000	Partial to Complete Inhibition	-	-	-	< 100 colonies
Escherichia coli	8739	50-100	Inhibition	-	-	-	Total inhibition
Escherichia coli	25922	50-100	Inhibition	-	-	-	Total inhibition

PACKAGING:

Inpacksizeof05 liters.

STORAGE

Onreceipt,store bags in the dark at 10–25 °C. Avoid freezing and overheating. Do not open until ready to use. Minimize exposure to light. Bag media stored as labeled until just prior to use may be inoculated up to the expiration date and incubated for the recommended incubation times. Allow the medium to warm to room temperature before inoculation.

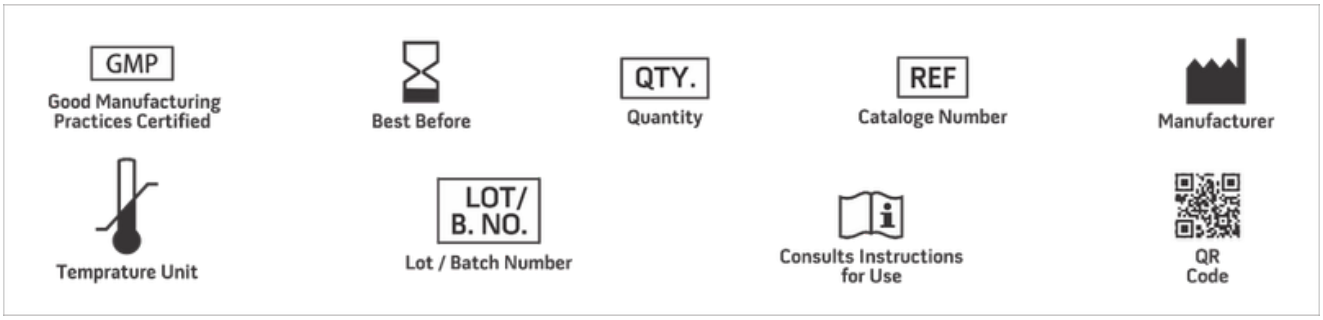
DISPOSAL

Afteruse,prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Fraser,J.A.and Sperber, W.H. 1988. J. Food Protect. 51: 762-765.

2. McClain, D. and Lee, W.H. 1988. J. Assoc. Off. Anal. Chem. 71: 660-664.
3. ISO NORMATIVE 11290-1. 1997. Horizontal method for the detection and enumeration of Listeria monocytogenes Part 1: Detection Method.
4. Downes, F.P. and Ito, K., (Ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association,



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only