CM 22061 – HALF FRASER BROTH BASE (ISO 11290-1:2017)

INTENDED USE

Fortheselectiveenrichment of Listeria species from foods.

PRODUCT SUMMARY AND EXPLANATION

Listeriamonocytogenesis aGram-positive, non-spore forming, aerobic to facultatively anaerobic, rod shaped bacterium, which exhibits pathogenicity towards humans and other animals. Although not generally recognized as a food-borne pathogen, three recent outbreaks of listeriosis may indicate that this organism is becoming more prevalent as an agent of food-borne disease. Fraser Broth Base and Fraser Supplements are based on the formulation of Fraser and Sperber. Fraser supplements results in a higher detection rate of Listeria monocytogenes.

COMPOSITION

Ingredients	Gms / Ltr
Sodium chloride	20.000
Disodium hydrogen phosphate	9.570
Casein enzymic hydrolysate	5.000
Peptic digest of animal tissue	5.000
Meat extract	5.000
Yeast extract	5.000
Lithium chloride	3.000
Monopotassium phosphate	1.350
Esculin	1.000

PRINCIPLE

Themedium consists of Casein enzyme hydrolysate, peptic digest of animal tissue, meat extract and yeast extract which serves as a source of carbon, nitrogen, vitamins and minerals. Disodium phosphate and mono potassium phosphate are buffering agents. Addition of ferric ammonium citrate in the medium helps to differentiate the esculin hydrolysis, resulting in the blackening of the medium by Listeria species. Lithium chloride and high salt concentration makes the medium selective for Listeria species.

INSTRUCTION FOR USE

Dissolve 54.92 gofthe powder in 1000 mL distilled water.
Gently heat to boiling with gentle swirling and dissolve the powder completely.
Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
Cool to 45°C-50°C and aseptically add 2 vials of rehydrated Fraser supplement and if required, add one vial of rehydrated Fraser Selective supplement to make the medium selective.
Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder :Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium :Basal medium: Yellow coloured clear solution with slight precipitate.
After addition: Fluorescent yellow coloured clear solution with slight precipitate forms in tubes.
pH (at 25°C) :7.2±0.2

INTERPRETATION

Cultures were incubated at 30 ± 1°Cunder aerobic atmosphere and examined for growth at 24-26 hours. Following incubation, 10µL was sub-cultured ontoTryptone Soya Agar (TM 345) at 37 ± 1°C and examined for growth at 22-26 hours or onto L. Mono Differential AgarBase (TM 1443) at 37 ± 1°C and plates examined for growth at 44-52 hours.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Esculin hydrolysis	Incubation temperature	Incubation Period	Recovery on TM 1443	Recovery on TM 345
Listeria monocytogenes	19114	50-100	Good	Positive (Blackening of medium)	30±1°C	25±1 hours	>10 bluish green colonies	-
Listeria monocytogenes	19115	50-100	Good	Positive (Blackening of medium)	30±1°C	25±1 hours	>10 bluish green colonies	-
Enterococcus faecalis	29212	≥1000	Partial Inhibition	Negative	30±1°C	25±1 hours	-	<100 CFU
Staphylococcus aureus	25923	≥1000	Partial Inhibition	Negative	30±1°C	25±1 hours	-	-
Escherichia coli	25922	≥1000	Partial Inhibition	Negative	30±1°C	25±1 hours	-	-

PACKAGING:

Inpacksizeof500 gm bottles.

STORAGE

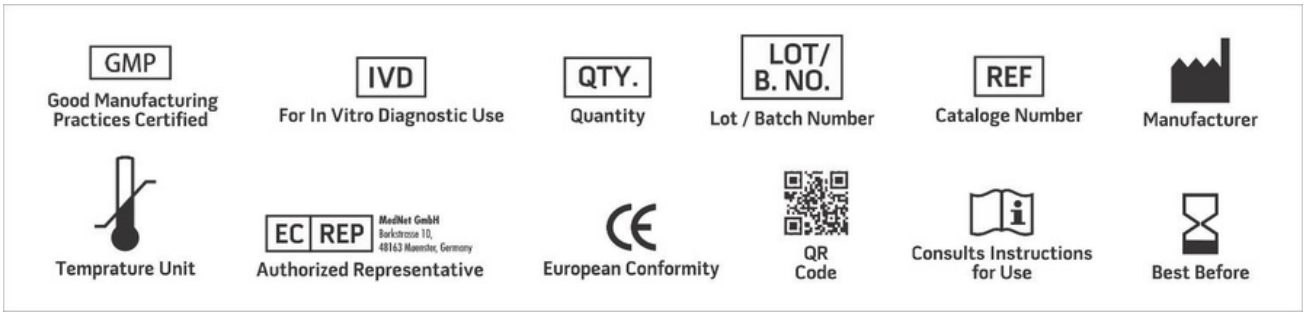
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Nieman R. E., and Lorber B., 1980, Rev. Infect. Dis. 2 : 207-227.
2. Schuchat A. B., Swaminathan and C. V. Broome, Clin. Microbiol., Rev. 4 : 169-183
3. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
4. Fraser and Sperber, 1988, J. Food Prot., 51:762-765. 5. Cowart R. E. and Foster B. G., 1985, J. Infect. Dis.; 151:172.



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

*For LabUse Only