



HiFast™ Listeria Enrichment Broth Base

M2048

Recommended for the rapid and selective enrichment of *Listeria* species from food samples in 24 hours.

Composition**

Ingredients	Gms / Litre
Peptone	28.000
Salt mix	10.000
Carbohydrate mixture	6.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 44.0 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add the rehydrated contents of one vial of Rapid Listeria Selective Supplement (FD342). Mix well and dispense in sterile tubes or flasks as desired .

Principle And Interpretation

Listeria species are widely distributed and are isolated from soil, decaying vegetable matter, sewage, water, animal feed, fresh and frozen poultry, meats, raw milk, cheese and asymptomatic human and animal carriers (1). Only *Listeria monocytogenes* from the genus *Listeria*; causes infections in humans. *L.monocytogenes* primarily causes meningitis, encephalitis or septicemia in humans (2, 3). In pregnant women, *Listeria monocytogenes* often causes an influenza like bacteremic illness that, if untreated, may lead to amnionitis and infection of the fetus, resulting in abortion, still birth or premature birth. Contaminated foods are the primary vehicles of transmission (4).

HiFast™ Listeria Enrichment Broth Base is recommended for selective enrichment of *Listeria* species from food samples. This medium contains peptone and carbohydrate mixture which provide essential nutrients like carbon and nitrogenous compounds including vitamins, long chain amino acids and trace ingredients. Being nutritionally rich, the medium supports rapid growth of microorganisms in 18-24 hours. Salt mix helps in buffering the medium. The selective supplement added to the medium helps in inhibiting the non target organism. It can be used as an selective enrichment medium prior to plating on an selective or chromogenic medium for *Listeria*.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured clear solution.

Reaction

Reaction of 4.4% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural response

Cultural characteristics observed with added Rapid Listeria Selective Supplement after an incubation at 30-35°C for 22-26 hours.

Organism	Inoculum (CFU)	Growth
Cultural response		
<i>Staphylococcus aureus</i> ATCC 25923 (00034*)	≥10 ³	inhibited
<i>Listeria monocytogenes</i> serovar 1 ATCC 19111 (00020*)	50-100	good-luxuriant
<i>Listeria monocytogenes</i> ATCC 7644	50-100	good-luxuriant

* - Corresponding WDCM number

Storage and Shelf Life:

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use.

Product performance is best if used within stated expiry period.

Reference

1. Seeliger H. P. R., and Jones D., 1986, Bergeys Manual of Systematic Bacteriology, Vol. The Williams and Wilkins Co., Baltimore.
2. Nieman R. E., and Lorber B., 1980, Rev. Infect. Dis. 2 : 207-227.
3. Schuchat A. B., Swaminathan and C. V. Broome, Clin. Microbiol. Rev. 4: 169-183.
4. Murray P. R., Baron E. J., Jorgensen J. H., Tenover F. C., Tenover R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.

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