TM 2165 – LISTERIA SELECTIVE PRIMARY BROTH BASE

INTENDED USE

For selective enrichment of *Listeria* species from foods.

PRODUCT SUMMARY AND EXPLANATION

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. Only *Listeria monocytogenes* from the genus *Listeria*; causes infections in humans. *L. monocytogenes* primarily causes meningitis, encephalitis or septicemia in humans. In pregnant women, *Listeria monocytogenes* often causes an influenza like bacteremic illness that, if untreated, may lead to ammionitis and infection of the fetus, resulting in abortion, still birth or premature birth. Contaminated foods are the primary vehicles of transmission. The pathogenicity of *Listeria ivanovii* for humans is uncertain.

COMPOSITION

Ingredients	Gms / Ltr
Casein peptone	12.000
Meat Peptone	3.000
Soya peptone	5.000
Sodium chloride	10.000
Dextrose (Glucose)	1.000
Sodium carbonate	0.230
Yeast extract	5.000
Esculin	1.000
Disodium hydrogen phosphate	9.600
Potassium hydrogen phosphate	1.350
Lithium chloride	5.000

PRINCIPLE

This medium consists of Meat peptone, tryptone, soya peptone and yeast extract which provide essential nutrients like carbon and nitrogenous compounds including vitamins, long chain amino acids and trace ingredients. Phosphates buffer the medium while sodium chloride maintains osmotic equilibrium. Nalidixic acid and Acriflavin in added supplement inhibits the growth of gram-negative and gram-positive organisms respectively except *Listeria* species. *Listeria* species hydrolyze esculin to glucose and esculetin.

INSTRUCTION FOR USE

- Dissolve 53.18 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of NAMC Listeria Selective Supplement.
- Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Fluorescent yellow coloured clear solution.
pH (at 25°C) : 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Listeria monocytogenes	19111	50-100	Good-luxuriant	35-37°C	24-48 Hours
Listeria monocytogenes	19112	50-100	Good-luxuriant	35-37°C	24-48 Hours
Listeria monocytogenes	19117	50-100	Good-luxuriant	35-37°C	24-48 Hours
Listeria monocytogenes	19118	50-100	Good-luxuriant	35-37°C	24-48 Hours
Listeria inocua	33090	50-100	Good-luxuriant	35-37°C	24-48 Hours
Listeria ivanovii	19119	50-100	Good-luxuriant	35-37°C	24-48 Hours
Staphylococcus aureus subsp. aureus	25923	>=10^4	None-poor	35-37°C	24-48 Hours
Escherichia coli	25922	>=10^4	Inhibited	35-37°C	24-48 Hours
Enterococcus faecalis	29212	50-100	None-poor	35-37°C	24-48 Hours

PACKAGING:

In pack size of 500 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.

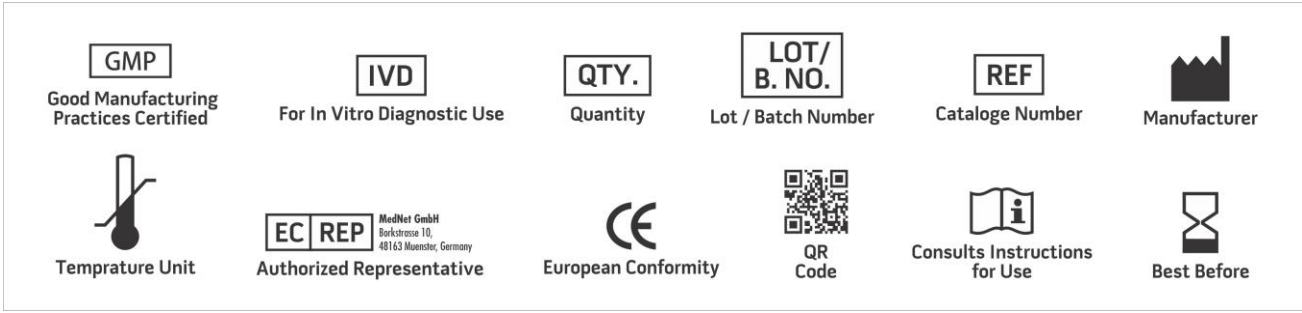
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. A.D. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Lovette J., Francis D.W. and Hunt J.M., 1987, J. Food Prot., 50:188.
4. Lee W.K. and McClain D., 1986, Appl. Environ. Microbiol., 52:1215.
5. McClain D. and Lee W.H., 1988, J. Assoc. Off. Anal. Chem., 71:660. 8. Downes F. P. and Ito K. (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
6. 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.
7. Nieman R. E., and Lorber B., 1980, Rev. Infect. Dis. 2 : 207-227.
8. Schuchat A. B., Swaminathan and C. V. Broome, Clin. Microbiol. Rev.4:169-183.
9. Seeliger H. P. R., and Jones D., 1986, Bergeys Manual of Systematic Bacteriology, Vol. The Williams and Wilkins Co., Baltimore.



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

***For Lab Use Only**

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