

CM 21007 – LPM AGAR BASE

INTENDED USE

For isolation and cultivation of *Listeria monocytogenes* from food and dairy products.

PRODUCT SUMMARY AND EXPLANATION

L. monocytogenes is a gram-positive foodborne human pathogen responsible for serious infections in pregnant women that may ultimately result in abortion, stillbirth, birth of child with meningitis or primary bacteremia in adults and juveniles. The organism has been isolated from commercial dairy and other food processing plants, and is ubiquitous in nature, being present in a wide range of unprocessed foods and in soil, sewage and silage and river water. *Listeria* species grow over a pH range of 4.4 to 9.6, and survive in food products with pH levels outside these parameters. Motility is most pronounced at 20°C.

Lee and McClain developed LPM Agar, which is a modification of McBride *Listeria* Agar. It enhances the recovery of low numbers of *L. monocytogenes* from mixed microflora in samples. APHA also recommends this medium for food and dairy sample testing.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	5.000
Peptone	5.000
Beef extract	3.000
Glycine anhydride	10.000
Lithium chloride	5.000
Sodium chloride	5.000
Phenylethyl alcohol	2.500
Agar	15.000

PRINCIPLE

This medium consists of Tryptone, Peptone and Beef extract which are sources of nitrogen, vitamins and minerals. Sodium chloride maintains the osmotic balance of the medium. Glycine anhydride improves recovery of *Listeria*. Lithium chloride, moxalactam and phenyl ethanol aids in suppression of both gram-positive and gram-negative organisms including *Staphylococcus*, *Proteus* and *Pseudomonas* species. *Listeria monocytogenes* show blue-green iridescence when examined with oblique transmitted light.

INSTRUCTION FOR USE

Dissolve 50.50 grams in 1000 ml purified/distilled water.

Heat to boiling 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 Moxalactam Supplement.

Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder	: Cream to light yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed with added Moxalactum Supplement, after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Escherichia coli	25922	$\geq 10^3$	Inhibited	0%	35-37 °C	24 - 48 Hours
Listeria monocytogenes serovar 1	19111	50-100	Good-luxuriant	$\geq 50\%$	35-37 °C	24 - 48 Hours
Listeria monocytogenes	19112	50-100	Good-luxuriant	$\geq 50\%$	35-37 °C	24 - 48 Hours
Listeria monocytogenes	19117	50-100	Good-luxuriant	$\geq 50\%$	35-37 °C	24 - 48 Hours
Pseudomonas aeruginosa	27853	$\geq 10^3$	Inhibited	0%	35-37 °C	24 - 48 Hours
Staphylococcus aureus subsp. aureus	25923	$\geq 10^3$	Inhibited	0%	35-37 °C	24 - 48 Hours

PACKAGING:

In pack size of 100 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

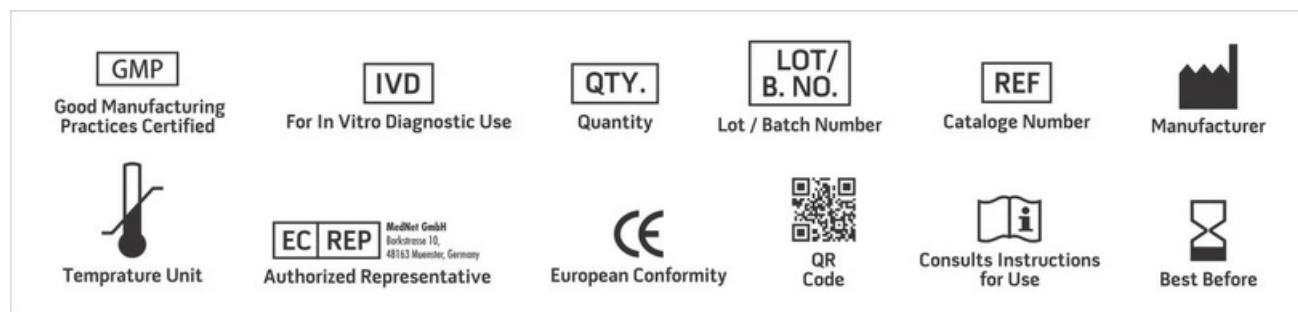
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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

*For LabUse Only

