

CM 20894 – L.MONO SELECTIVE AGAR BASE

INTENDED USE

For presumptive enumeration of *Listeria* species using membrane filtration technique.

PRODUCT SUMMARY AND EXPLANATION

The genus *Listeria* constitutes *Listeria monocytogenes*, *Listeria ivanovii*, *Listeria seeligeri*, *Listeria welshimerii*, *Listeria innocua*, *Listeria grayi*, *Listeria murrayi* and *Listeria denitrificans*. Among these, *L. monocytogenes* and *L. ivanovii* are associated with diseases in humans. The pathogenicity of *L. ivanovii* is uncertain. *L. monocytogenes* is found in a wide variety of habitats, including the normal microflora of healthy ruminants, gastrointestinal tract of asymptomatic humans and environmental sources including river water, sewage, soil, silage, fertilizers and decaying vegetation.

LM Selective Agar Base is recommended for the direct presumptive enumeration of *Listeria* species especially *Listeria monocytogenes* from meat, poultry, dairy products and environmental samples using membrane filtration technique.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Yeast extract	1.000
Sodium pyruvate	10.000
Liver extract	10.000
Sodium carbonate	1.000
Magnesium sulfate	7.400
Dextrose	1.000
Lithium chloride	5.000
Acriflavin	0.015
Agar	15.000

PRINCIPLE

This medium contains Casein enzymic hydrolysate and liver extract which supplies nitrogenous compounds, amino acids and long chain peptides. Yeast extract supplies vitamins especially vitamin B required by the organisms. Dextrose is the carbohydrate and energy sources. Sodium chloride maintains the osmotic equilibrium of the medium. Sodium pyruvate serves as an energy source and helps in the recovery of microorganisms. Sodium carbonate buffers the medium. Lithium chloride and Acriflavin are selective agents. Polymyxin B Sulphate, Nalidixic acid and Moxalactum sodium helps in inhibiting the accompanying microflora. Triphenyltetrazolium chloride is reduced by *Listeria* species resulting in pink to dark pink-orange coloured colonies.

INSTRUCTION FOR USE

Dissolve 60.42 grams in 950 ml 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. Aseptically add 50ml of concentrated Egg yolk emulsion and rehydrated contents of 1 vial of LM Selective Supplement.

Mix well and pour into sterile Petri plates.



Warning: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin, wash with plenty of water immediately.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Basal medium: Yellow coloured clear to slightly opalescent gel. After addition of Egg yolk emulsion: Yellow coloured opaque gel forms in Petri plates.
pH (at 25°C)	: 7.4 ± 0.1

INTERPRETATION

Cultural characteristics observed on membrane filter with added Egg Yolk emulsion and LM Selective Supplement after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colony characteristics	Incubation Temperature	Incubation Period
Escherichia coli	25922	$\geq 10^3$	Inhibited	0%	-	35-37°C	24-48 Hours
Listeria monocytogenes	19111	50-100	Luxuriant	$\geq 70\%$	Pink to dark pink-red	35-37°C	24-48 Hours
Listeria monocytogenes	19112	50-100	Luxuriant	$\geq 70\%$	Pink to dark pink-red	35-37°C	24-48 Hours
Listeria monocytogenes	19117	50-100	Luxuriant	$\geq 70\%$	Pink to dark pink-red	35-37°C	24-48 Hours
Listeria monocytogenes	19118	50-100	Luxuriant	$\geq 70\%$	Pink to dark pink-red	35-37°C	24-48 Hours
Staphylococcus aureus	25923	50-100	None-poor	0-10%	Pale to dark orange	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. Entis, P. and Lerner. 2000. Twenty-four hour direct presumptive enumeration of *Listeria monocytogenes* in food and environmental samples using ISO-GRID method with LM-137 Agar. J. Food Prot. 63:354- 363
2. Watkin J., Sleath K. P., J. Appl. Bacteriol., 50: 1-9, 1981.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative MedNet GmbH Barkstrasse 10, 48143 Münster, Germany	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

*For LabUse Only