TM 1806 – L.MONO CONFIRMATORY AGAR BASE

INTENDED USE

For selective and differential isolation of *Listeria monocytogenes* from clinical & food samples.

PRODUCT SUMMARY AND EXPLANATION

Listeria monocytogenes is a gram-positive foodborne human pathogen responsible for serious infections in pregnant women that may ultimately result in abortion, stillbirth, birth of a child with neonatal listeriosis and meningitis or primary bacteremia in adults and juveniles. The pathogenicity of *Listeria ivanovii* for humans is uncertain. Since *L. monocytogenes* and *L.innocua* have similar biochemical properties, they cannot be differentiated on traditional media (PALCAM, Oxford). L. mono Confirmatory Agar Base is a modification of the formulation of Ottoviani and Agosti for the selective and differential isolation of *Listeria monocytogenes*.

COMPOSITION

Ingredients	Gms / Ltr
Special peptone	30.000
Yeast extract	6.000
Sodium chloride	5.000
Lithium chloride	10.000
Disodium hydrogen phosphate anhydrous	2.500
B.C. indicator	8.600
alpha-Methyl D-mannoside	3.000
Agar	12.000

PRINCIPLE

This medium consists of Special peptone and yeast extract which serve as nitrogen sources and provide essential nutrients required for the growth of Listeria. α- Methyl-D-mannoside is the fermentable carbohydrate. Lithium chloride and added selective supplements inhibit accompanying microflora and thus enhance the selectivity of the medium for *Listeria* species. Sodium chloride maintains the osmotic equilibrium and disodium hydrogen phosphate buffers the medium. Differentiation of *L. monocytogenes* from other *Listeria* species is based on phosphatidylinositol-specific phospholipase C (PIPLC) activity and fermentation of α- Methyl D-mannoside. Phospholipase C enzyme is an important virulence factor and is specific to only *L. monocytogenes* and *L.ivanovii* . Phospholipase C enzyme produced by *L.monocytogenes* and *L.ivanovii* hydrolyses the purified substrate added to the medium and results in the formation of an opaque halo around the colonies.

INSTRUCTION FOR USE

- Dissolve 38.5 grams in 470 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes. Cool to 45-50°C.
- Aseptically add sterile rehydrated contents of 1 vial of L.Mono Selective Supplement I (TS 227) and 1 vial of L.Mono Selective Supplement II (TS 228). For enrichment, add sterile contents of 1 vial of L.Mono Enrichment Supplement II (TS 229).
- Mix well and pour into sterile Petri plates.
  Warning: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapors. On contact with skin, immediately wash with plenty of water.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Beige to purple homogeneous free flowing powder.
Appearance of prepared medium : Purple coloured, opalescent gel forms in Petri plates.
pH (at 25°C) : 7.2 ± 0.2

INTERPRETATION

Cultural characteristics observed with added supplements, L.Mono Selective supplementI , L.Mono Selective Supplement II and L.Mono Enrichment Supplement II, after incubation.

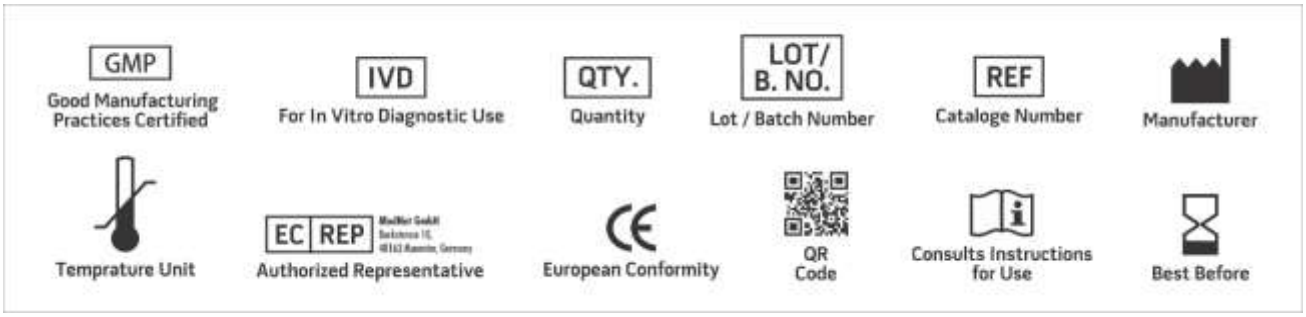
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	PIPLC Activity	Incubation Temperature	Incubation Period
Candida albicans	10231	>=10^3	Inhibited	0%	-		35-37 °C	24 - 48 Hours
Enterococcus faecalis	29212	>=10^3	Inhibited	0%	-		35-37 °C	24 - 48 Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	-		35-37 °C	24 - 48 Hours
Listeria innocua	33090	50-100	Luxuriant	>=70%	Yellow	Negative	35-37 °C	24 - 48 Hours
Listeria grayi	19120	50-100	Luxuriant	>=70%	Yellow	Negative	35-37 °C	24 - 48 Hours
Listeria ivanovii	19119	50-100	Luxuriant	>=70%	Light purple	Positive, opaque halo around the colony exhibiting phosphatidylinositol specific phospholipase activity	35-37 °C	24 - 48 Hours
Listeria monocytogenes	19112	50-100	Luxuriant	>=70%	Yellow	Positive, opaque halo around the colony exhibiting phosphatidylinositol specific phospholipase activity	35-37 °C	24 - 48 Hours
Listeria seeligeri	35967	50-100	Luxuriant	>=70%	Light purple	Negative	35-37 °C	24 - 48 Hours
Listeria welshimeri	43549	50-100	Luxuriant	>=70%	Yellow	Negative	35-37 °C	24 - 48 Hours
Pseudomonas aeruginosa	27853	>=10^3	Inhibited	0%	-	-	35-37 °C	24 - 48 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 10-25°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. Ottaviani F., Ottaviani M., and Agosti M. (1997 a), Industrie Alimentari 36, 1-3.
2. Ottaviani F., Ottaviani M., and Agosti M. (1997 b), Quimper Froid Symposium Proceedings p.6, A.D.R.I.A. Quimper, France, 16-18 June 1997.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019