TM 1229 -LISTERIA OXFORD MEDIUM BASE (ISO 11290-1)

INTENDED USE

For isolation of *Listeria* species from pathological samples.

PRODUCT SUMMARY AND EXPLANATION

Listeria oxford medium base is based on the formulation described by Curtis et al. and is recommended for the isolation of *L.monocytogenes* from clinical and food specimens. *Listeria monocytogenes* is the only species of the genus *Listeria* that is important as a human pathogen and its isolation can help in better diagnosis of listeriosis. This medium is also recommended by the ISO Committee for the isolation of *Listeria* species from pathological samples.

COMPOSITION

Ingredients	Gms / Ltr
Peptone, special	23.000
Lithium chloride	15.000
Agar	10.000
Sodium chloride	5.0000
Corn starch	1.000
Esculin	1.000
Ferric ammonium citrate	0.500

PRINCIPLE

Medium contains Peptone special which serves as the source of essential nutrients to the organisms. Corn starch serves to neutralize the toxic metabolites formed. Lithium chloride and the antibiotics inhibit gram-negative bacteria and most gram-positive organisms but certain strains of Staphylococci may grow as esculin negative colonies. Cycloheximide is used to reduce fungal contamination; cefotetan and phosphomycin are inhibitors of bacterial overgrowth. Acriflavin, colistin sulphate and lithium chloride inhibit bacteria other than *Listeria* species. Alternatively, moxalactam (TS 121) can be added which inhibits both gram-positive and gram-negative bacteria. *L. monocytogenes* hydrolyzes esculin to esculetin and dextrose. Esculetin reacts with ferric ions and produces black zones around the colonies.

INSTRUCTION FOR USE

- Dissolve 27.75 grams in 500ml distilled water.
- Gently heat to boiling with gentle swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool to 45-50°C.
- Aseptically add rehydrated contents 1 vial of Oxford Listeria Supplement (TS 120) or 1 vial of Listeria Moxalactam Supplement (TS 121).
- Mix well and pour into sterile petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Light yellow to dark yellow, homogeneous free flowing powder
Appearance of Prepared medium	:	Dark amber coloured, clear to slightly opalescent gel with a blue cast
pH (at 25°C)	:	7.0± 0.2

INTERPRETATION

Cultural characteristics observed after incubation with addition of Oxford Listeria Supplement (TS 120) or 1 vial of Listeria Moxalactam Supplement (TS 121).

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Esculin hydrolysis	Incubation Temp.	Incubation Period
Listeria monocytogenes	19111	50-100	Luxuriant	>=50%	Positive reaction, blackening of medium around colony	35-37°C	24-48 Hours
Listeria monocytogenes	19112	50-100	Luxuriant	>=50%	Positive reaction, blackening of medium around colony	35-37°C	24-48 Hours
Listeria monocytogenes	19117	50-100	Luxuriant	>=50%	Positive reaction, blackening of medium around colony	35-37°C	24-48 Hours
Staphylococcus aureus	25923	50-100	Good	40-50%	Negative reaction	35-37°C	24-48 Hours
Escherichia coli	25922	≥1000	Inhibited	0%	-	35-37°C	24-48 Hours
Enterococcus faecalis	29212	≥1000	Inhibited	0%	-	35-37°C	24-48 Hours

PACKAGING

In 100& 500 gm packaging size.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 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.

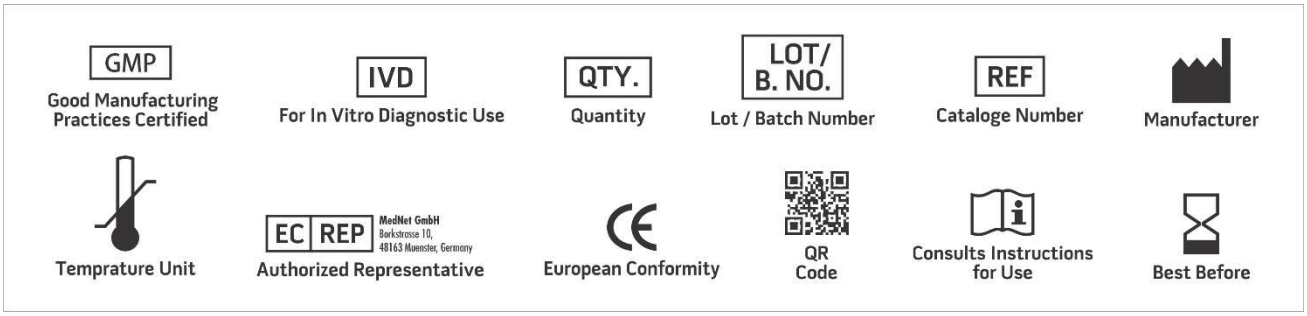
Product Deterioration: Do not use, if powder show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Curtis G. D. W., Mitchell R. G, King A. F., Griffin E. J., 1989, Lett. Appl. Microbiol.,8:95.
2. Van Netten P., Peroles I., Van de Mosdik A., Curtis G. D. W., Mossel D. A. A, 1988, Int. J. Food Microbiol., 6:187.
3. Fernandez G. J. F., Dominguez R. L., Vazzuez B. J. A., Rodriguez F.E. F., Briones D. V., Blanco L. J. L., Suarez F. G., 1986, Can. J. Microbiol., 32:149.
4. Hayes P. S, Feeley J. L, Groves L. M, Ajello G. W. and Fleming D. W, 1986, Appl. Environ. Microbiol., 51:438.



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

***For Lab Use Only**

Revision: 9th July 2020