Modified Listeria Oxford Agar Base

Intended Use
Modified Listeria Oxford Agar Base is recommended for the selective isolation and cultivation of Listeria monocytogenes from foodstuffs, clinical samples etc.

Summary
Listeria monocytogenes is the only species of the genus Listeria that is important as a human pathogen. *Listeria seeligeri, Listeria welshimeri* and *Listeria ivanovii* have been related with animal diseases. In any case, all the species are pathogenic between the ovine and bovine cattle. Positive diagnosis of Listeriosis can be obtained only by the isolation and cultivation of the responsible bacteria from blood or CSF samples of the affected organisms. Listeria Oxford Medium Base is based on the formulation described by Curtis et al for isolation of *L. monocytogenes* from clinical and food specimens.

Principle
Peptone special serves as the source of essential nutrients to the organisms. Corn starch serves to neutralize the toxic metabolites formed. L. monocytogenes hydrolyzes Esculin to form 6,7-dihydroxycoumarin which reacts with ferric ions to form a black precipitate in the medium surrounding the colonies. Lithium chloride, colistin, and Moxalactam are selective agents which inhibit the growth of background organisms, such as Gram-positive cocci and Gram-negative bacilli.

Formula*

Ingredients	**g/L**
Peptone Special	23.0
Corn Starch	1.0
Sodium Chloride	5.0
Aesculin	1.0
Iron (III) Ammonium citrate	0.5
Lithium chloride	12.0
Agar	10.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label.

Type of specimen
Food samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 52.50 g of the powder in 1000 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool to 45°C-50°C and aseptically add the rehydrated contents of 1 vial of Modified Listeria Oxford Selective Supplement (204131490005).
5. Mix well before pouring into sterile petridishes.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Dark amber coloured, clear to slightly opalescent gel with blue cast forms in petridishes.
Cultural Response: Cultural characteristics observed with added Modified Listeria Oxford Selective Supplement (204131490005) after an incubation of 24-48 hours at 30°C.

Organisms (ATCC)	Growth	Esculin Hydrolysis
Listeria monocytogenes strain Li 23 (19114)	Good	+
Listeria monocytogenes serotype 4b (19115)	Good	+
Listeria monocytogenes (19117)	Good	+
Listeria grayi (19120)	Good	+
Listeria ivanovii subsp. *ivanovii serovar 5* (19119)	Good	+
Listeria seeligeri (35967)	Good	+
Listeria innocua (33090)	Good	+
Staphylococcus aureus subsp. aureus (25923)	Partial Inhibition	-
Enterococcus faecalis (29212)	Inhibited	-
Bacillus spizizenii (6633)	Inhibited	-
Proteus mirabilis (25933)	Inhibited	-

Key : + = Blackening of the medium around the colony
- = No change

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Vanderzant C., Splittstoesser D.F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.
2. Asai, 1968, Univ. of Tokyo, Japan and Univ. Park Press, Baltimore, MD.
3. Manual of Microbiology Methods, 1957, Society of American Bacteriophages, 1992, 18th ed., American Type Culture Collection, Rockville, MD.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201131480100	Dehydrated Culture Media	100 g
201131480500	Dehydrated Culture Media	500 g