Condalab

Reference: 6040 **Technical Data Sheet**

Product: **LISTERIA CHROMOGENIC SELECTIVE SUPPLEMENT**

Specification

Selective supplement for isolation and confirmation of *Listeria monocytogenes* formulated according to ISO 11290-1and 2:1996 Amd 2004.

Presentation

	Packaging Details	Shelf Life	Storage
10 Freeze dried vials with: 3 ± 0.1 g	23x60 mm glass vials, tag labelled, plastic cap - 10 vials per box.	49 months	2-25 ºC

Composition

Compositon (g/vial)

Polymyxin B.....38350 IU
Cycloheximide.....0.025
Ceftazidime.....0.010
Nalidixic acid..... 0.010

Note: Each vial is sufficient to supplement 470 ml of Listeria Agar Base according to Ottavani and Agosti

Reconstitute the original freeze-dried vial by adding 1 vial with Sterile distilled water..... 6 ml

Description /Technique

Description:

Completed with all its supplements the Agar Listeria Ottaviani & Agosti is a selective and differential medium for the detection of *Listeria* species and the presumptive identification of *Listeria monocytogenes*.

The selectivity is achieved by the high concentration of lithium chloride and the mixture of antimicrobics. The differential activity is due to the chromogenic substrate to detect the β-glucosidase enzyme that is present in all *Listeria* species.

The specific identification is obtained by the L-α-phosphatidylinositol, that acts as substratre for a phospholipase C present only in *Listeria monocytogenes* and some strains of *Listeria ivanovii*.

The combination of both substrates allows the differentiation *L. monocytogenes,* which grow in produces colonies blue-green in colour and surrounded by an opaque zone, from the other *Listeria* species, which blue-green colonies but without any halo. This differentiation is evident after incubating the plates for 24 ± 2 hours at 37 ºC.

Sometimes, especially with highly contaminated samples, it is possible that some colonies, white in colour, are not *Listeria* growth. In this case an enrichment step is recommended prior to plate inoculation.

Observations: Most *Listeria ivanovii* also produce an opaque halo around the colonies after 48 h of incubation. This presumptive evidence must be confirmed by performing the biochemical or serological identification tests (Rhamnose / Xylose sugar fermentation, hemolysis tests, CAMP test, etc.) or any test confirming the species without hesitation.

Technique:

Add 1 botlle supplement Ottaviani & Agosti (L-alpha-phosphatidylinositol) and 1 vial supplemet Ottaviani & Agosti for complete 500 ml medium.

Homogenize by mixing and distribute in Petri dishes. The solidified cool medium appears homogeneously turbid.

There are many standardised methodologies (ISO, FDA-BAM, AOAC, AFNOR, etc.). The technician must follow the protocol validated in his laboratory.

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Quality control

Physical/Chemical control

Color : White pH: at 25ºC

Microbiological control

Spiral Spreading: Practical range 100 ± 20 CFU. min. 50 CFU (productivity) / 10^4-10^6 CFU (selectivity).
Microbiological control according to ISO 11133:2014/A1:2018.
Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 37 ºC ± 1, reading after 44 ± 4h

Microorganism	Growth
Escherichia coli ATCC® 25922, WDCM 00013	Inhibited
Enterococcus faecalis ATCC® 29212, WDCM 00087	Inhibited
L. monocytogenes ATCC® 13932, WDCM 00021	Good - Blue colonies with white halo
Listeria innocua ATCC® 33090, WDCM 00017	Good - Blue colonies without white halo
Listeria monocytogenes ATCC® 35152	Good - Blue colonies with white halo

Sterility Control

Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

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