LICKSON®

CE

TECHNICAL SHEET

LISTERIA CHROMOGENIC AGAR

(ISO 11290-1/2)

IVD in Class A, EU Reg. 2017/746
For in vitro diagnostic use **IVD**

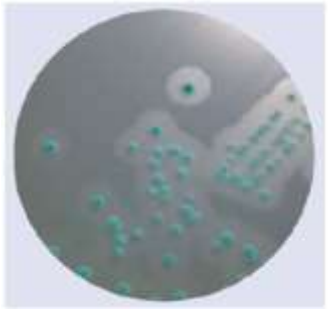
Chromogenic selective medium for detection and enumeration of Listeria monocytogenes, according to ISO 11290-1/2.

DESCRIPTION

Listeria Chromogenic Agar is a chromogenic medium used for the selective isolation, differentiation and enumeration of Listeria monocytogenes from food, animal feed, environmental samples, and other materials in areas of food production and food handling.

LISTERIA CHROMOGENIC AGAR
(ISO 11290-1):

SAMPLE
→
LISTERIA FRASER BROTH ½ CONC.
25 h ± 1 – 30°C ±1°C
→
LISTERIA CHROMOGENIC AGAR
44 h ± 4 – 37°C ± 1°C
→



Listeria monocytogenes

→
Listeria monocytogenes

→
CONFIRMATION TEST:
Blood agar (beta-hemolysis)
Carbohydrates (Xylose - ; Ramnose +)

PRINCIPLE

Enzymatic digest of animal tissues and enzymatic digest of casein provide amino acids, nitrogen, carbon, minerals, vitamins and other nutrients for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Sodium pyruvate and glucose are sources of energy. Phosphates act as buffer. Magnesium sulfate provides divalent cations and sulfate. Lithium chloride is a selective agent. 5- bromo-4-chloro-3-indolyl-β-D-glucopyranoside is the chromogenic substrate for the detection of the β-glucosidase enzyme. Agar is the solidifying agent. The substrate phosphatidylinositol is incorporated in the medium to detect the phospholipase activity; Nalidixic acid, Ceftazidime, Amphotericin B and Polymixyn B confer further selectivity.

COMPOSITION	g/L
Enzymatic Digest of Animal Tissues	18.0
Enzymatic Digest of Casein	6.0
Yeast Extract	10.0
Sodium Pyruvate	2.0
Glucose	2.0
Magnesium Glycerophosphate	1.0
Magnesium Sulfate, anhydrous	0.5
Sodium Chloride	5.0
Lithium Chloride	10.0
Disodium Hydrogen Phosphate, anhydrous	2.5
5-Bromo-4-Chloro-3-Indolyl-β-D-Glucopyranoside	0.05
Agar	13.5
Phosphatidylinositol	2
Polymixyn B	76.700 UI
Ceftazidime	0.02
Nalidixic acid	0.02
Amphotericin B	0.01

Final pH 7,2 ± 0,2 at 25°C

WARNING AND PRECAUTIONS

For in vitro diagnostic use.
Observe the precautions normally taken when handling laboratory reagents.
Prepared Medium: The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous.
Safety Data Sheet is available on request for professional users.
All wast must be disposed of according to local directives.

STORAGE AND STABILITY	
Prepared medium:	2-8°C

The product is stable until the expiration date indicated on the label under the recommended storage conditions.

PREPARATION

Prepared medium (bottles): Melt the content of the bottle in a water bath at 100°C until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

Prepared medium (plates): ready-to-use plates.

PROCEDURE

Detection method according to ISO 11290-1: Listeria Half Fraser Broth (1/2 CONC.) (REF. 64528; REF. 5056/100) and Listeria Fraser Broth (REF. 64526; REF. 5058/100) are used for the primary and secondary enrichments, respectively. Inoculate the surface of Listeria Chromogenic Agar from both enriched cultures to obtain well-isolated colonies.
Enumeration method according to ISO 11290-2: Use an appropriate diluent, e.g. Listeria Half Fraser Broth (1/2 CONC.), to prepare an 1 to 9 dilution of the test sample. Inoculate the surface of the medium directly with the initial suspension to obtain well-isolated colonies.

Incubate at 37 ± 1°C for 24 ± 2 h and for an additional 24 ± 2 h.

RESULTS

L. monocytogenes produce typical blue-green colonies surrounded by an opaque halo. Blue-green colonies with or without halo are considered presumptive Listeria spp.
For the enumeration method count all colonies presumed to be L. monocytogenes and/or Listeria spp. For confirmation, subculture onto appropriate non-selective agar, e.g. Blood Agar, Nutrient Agar, TSYEA. Then, carry out confirmation tests including a positive and negative control.

QUALITY CONTROL

Prepared medium: Slightly opalescent, light amber.

Typical response after incubation at 37±1°C for 44±4 hours:

MICROORGANISM	GROWTH
Listeria monocytogenes 4b WDCM 00021	Good Blue green colonies with opaque halo
Escherichia coli WDCM 00012	Inhibited
Listeria innocua WDCM 00017	Good Blue green colonies without opaque halo

REFERENCES

- Ottaviani, F., Ottaviani, M. and Agosti, M (1987) Quimper Froid Symposium Proceedings, P6 A.D.R.I.A Quimper (F) 16-18 June;
- NF EN I S O 1 1290-1:2017 Horizontal method for the detection and enumeration of Listeria monocytogenes Part 1: Detection Method;

PRESENTATION	Packaging	REF.
Prepared medium:		
LISTERIA CHROMOGENIC AGAR		
	6 x 100 mL Bottles	**63362**
	20 pcs (90 mm ready-to-use plates)	**2910502/20**

SYMBOLS

Read the instructions

Biological hazard

CE Mark (product complies with the requirements of Regulation (EU) 746/2017)

Temperature limitation

Use by

IVD **For in vitro diagnostic use**

Manufacturer