

ALOA Agar (Agar Listeria)



Medium used for the isolation and identification of *Listeria monocytogenes*.

*Equally use with MFDS (MB-A1620K) and Color O.A. Listeria Agar (MB-C1620).

• CONTENTS (Liter)

Enzymatic Digest of Animal Tissues	18.0 g
Enzymatic Digest of Casein	6.0 g
Sodium Pyruvate	2.0 g
Glucose	2.0 g
Magnesium Glycerophosphate	1.0 g
Magnesium Sulfate (Anhydrous)	0.5 g
Sodium Chloride	5.0 g
Yeast Extract	10.0 g
Lithium Chloride	10.0 g
Disodium Hydrogen Phosphate (Anhydrous)	2.5 g
5-Bromo-4-Chloro-3-Indolyl- β -D-Glucopyranoside	0.05 g
Agar	15.0 g
Final pH = 7.2 \pm 0.2 at 25°C	

• PROCEDURE

Suspend 72.05 G of powder in 942 mL of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Aseptically add 2 vials of O.A. Listeria Agar supplement (MB-O0774). And add 2 vials of Phosphatidyl Inositol supplement (MB-P0775) or Lecithin Solution (MB-L3072) to observe phospholipase reaction. Mix well. Pour into petri dishes.

O.A. Listeria Agar supplement

1 vial contents (each vial is sufficient for 500 mL of medium)

Polymyxin B	38,350 IU
Ceftazidime	0.01 g
Nalidixic Acid	0.01 g
Cycloheximide	0.025 g

Phosphatidyl Inositol supplement

1 vial contents (each vial is sufficient for 500 mL of medium)

L- α -phosphatidylinositol	1.0 g
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Lecithin Solution

1 vial contents (each vial is sufficient for 500 mL of medium)

Lecithin Solution	25 mL
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• INTERPRETATION

ALOA Agar (Agar Listeria) is a medium used for the isolation and identification of *Listeria monocytogenes*. Enzymatic digest of animal tissues, enzymatic digest of casein and yeast extract provide nitrogenous compounds, vitamins and minerals. Sodium pyruvate and magnesium glycerophosphate increase the recovery of stress cells. Glucose is the fermentable carbohydrate. Magnesium sulfate (anhydrous) provides necessary ions for the metabolism of organisms. Sodium chloride maintains the osmotic balance. Lithium chloride, polymyxin B, ceftazidime, nalidixic acid and cycloheximide are the selective agents. Disodium hydrogen phosphate (anhydrous) is the buffering agent. Agar is the solidifying agent. *Listeria* hydrolyzes chromogenic substrates that result in *Listeria* spp. producing green-blue colonies. *Listeria monocytogenes* and *Listeria ivanovii* are identified by their ability to produce the phospholipase C enzymes, PI-PLC and PC-PLC. Phosphatidyl Inositol supplement is added to differentiate PI-PLC activity; Lecithin Solution is added to identify PC-PLC activity. Supplements are hydrolyzed by phospholipase C enzymes and produce opaque halo around the colonies.

• TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at $36 \pm 1^\circ\text{C}$ for 24 - 48 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige

Prepared medium

Appearance: opaque

Color: light amber

Incubation conditions: $36 \pm 1^\circ\text{C}$ / 24 - 48 hours

Microorganism	ATCC	Growth	Characteristics
<i>Listeria monocytogenes</i>	15313	good	green-blue with opaque halo
<i>Listeria innocua</i>	33090	good	green-blue
<i>Enterococcus faecalis</i>	29212	inhibited	-
<i>Escherichia coli</i>	25922	inhibited	-
<i>Pseudomonas aeruginosa</i>	27853	inhibited	-

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at $2 - 8^\circ\text{C}$.

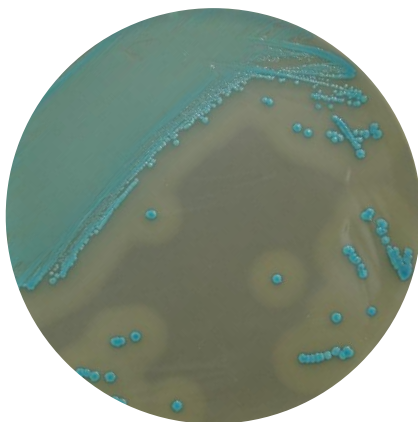
• REFERENCES

1. Artault, S., Bind, J.L., Delaval, Y., Dureuil, N., Gillard, N., (2000) AFNOR Validation of the ALOA method for the detection of *Listeria monocytogenes* in foodstuffs. Colloque de la Societe Francaise de Microbiologie, Paris 19-20 Octobre, 2000.
2. ISO 11290 1/2 (Draft, May 2002) Microbiology of food and animal feeding stuffs – Horizontal method for detection and enumeration of *Listeria monocytogenes*.
3. Ottaviani, F., Ottaviani, M., Agosti, M., (1997) Esperienze su un agar selettivo e differenziale per *Listeria monocytogenes*. Industrie alimentari, XXXVI, luglio-agosto, 888.
4. Refer to the MFDS.

• PACKAGE

Cat. No : MB-A1620 ALOA Agar (Agar <i>Listeria</i>)	500 G
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• MICROBIAL CULTURE IMAGES



Added Phosphatidyl Inositol supplement (MB-P0775)
Listeria monocytogenes ATCC 15313

Incubation conditions : $36 \pm 1^{\circ}\text{C}$ / 24 - 48 hours