



**ALOA LISTERIA AGAR BASE (L. MONO DIFFERENTIAL AGAR BASE)
TM 1443**

INTENDED USE

For selective and differential isolation of *Listeria monocytogenes*

COMPOSITION

Ingredients	Gms\Ltr
Meat peptone	18.000
Agar	15.000
Yeast extract	10.000
Lithium chloride	10.000
Casein enzymatic hydrolysate	6.000
Sodium chloride	5.000
Disodium hydrogen phosphate anhydrous	2.500
Sodium pyruvate	2.000
Glucose	2.000
Magnesium glycerophosphate	1.000
Magnesium sulphate	0.500
Chromogenic substrate	0.050

PRODUCT SUMMARY AND EXPLANATION

Aloa Listeria Agar Base is based on the formulation of Ottaviani and Agosti used for isolation and cultivation of *Listeria monocytogenes* from foodstuffs and other materials. This formulation was adopted and integrated into the ISO Method 11290-2

Listeria monocytogenes is the most common pathogenic *Listeria* spp. and has been shown to be pathogenic to both man and animals. Some *Listeria ivanovii* strains also possess these enzymes and, although *Listeria ivanovii* are primarily pathogenic to animals, there are strains which have been shown to cause infection in humans.

PRINCIPLE

Meat peptone, casein enzymic hydrolysate, yeast extract and sodium pyruvate provide essential growth nutrients and nitrogenous substances. Glucose is the fermentable carbohydrate, sodium chloride maintains osmotic equilibrium and phosphate buffers the medium. Lithium chloride and added selective supplements (TS 227 and TS 228) inhibit accompanying microflora and allow the



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growth of *Listeria* species. *Listeria* species hydrolyse the chromogenic substrate which produces green coloured colonies. Differentiation of *Listeria monocytogenes* from other *Listeria* species is based on phosphatidylinositolspecific phospholipase C (PIPLC) activity. Phospholipase C enzyme hydrolyses the purified substrate (TS 229) added to the medium resulting in an opaque halo around *Listeria monocytogenes* colonies.

INSTRUCTION FOR USE

1. Dissolve 36.01gms in 460 ml distilled water.
2. Gently heat to boiling with gentle swirling and dissolve the medium completely.
3. Sterilize by autoclaving at 15psi (121°C) for 15 minutes.
4. Cool to 45 - 50°C.
5. Aseptically add sterile contents of 1 vial of L. mono Enrichment Supplement I (TS 229) and sterile rehydrated contents of L. mono Selective Supplement I (TS 227), L. mono Selective Supplement II (TS 228).
6. Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream to yellow colour, homogeneous free flowing powder

Appearance of prepared medium: Light amber colour, opalescent gel

pH (at 25°C): 7.2± 0.2

INTERPRETATION:

Cultural characteristics observed with added sterile L. mono Selective supplement I (TS 227), L. mono Selective Supplement II (TS 228) and L. mono Enrichment Supplement I (TS 229) after incubation at 35 - 37°C for 24 - 48 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Appearance of colony
<i>Listeria monocytogenes</i>	19112	50-100	Luxuriant	Green-blue, surrounded by an opaque halo
<i>Listeria monocytogenes</i>	19111	50-100	Luxuriant	Green-blue, surrounded by an opaque halo
<i>Listeria monocytogenes</i>	7644	50-100	Luxuriant	Green-blue, surrounded by an opaque halo
<i>Listeria innocua</i>	33090	50-100	Luxuriant	Green-blue, surrounded by an opaque halo
<i>Enterococcus faecalis</i>	29212	50-100	Inhibited	No change



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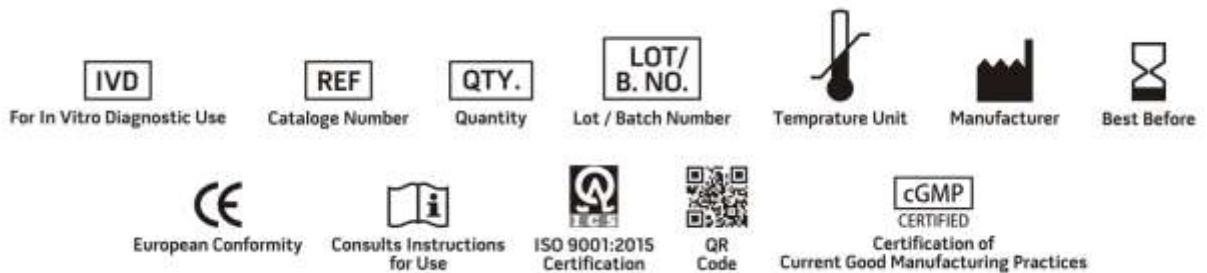
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STORAGE & STABILITY

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.

REFERENCE

1. F. Ottaviani, M. Ottaviani, M. Agosti, Esperienza su un agar selettivo e differenziale per *Listeria monocytogenes*, *Industrie Alimentari* 36, 1-3 (1997)
2. F. Ottaviani, M. Ottaviani, M. Agosti, Differential agar medium for *Listeria monocytogenes*, *Quinper Froid Symposium Proceedings*, p.6, A.D.R.I.A. Quinper, 16-18. June (1997).
3. Draft Amendment ISO 11290-2:1996/DAM
4. Cummins, A.J., Fielding, A.K. and McLauchlin, J. (1994) *Listeria ivanovii* infection in a patient with AIDS. *Journal of Infection* 28, p89-91



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