

Product Information

LISTERIA IDENTIFICATION AGAR BASE (PALCAM)

Product Number **L 4285**

Product Description

Listeria Identification Agar Base (PALCAM) with added supplement is recommended for the selective isolation and identification of the *Listeria* species. Listeria Identification Agar is also known as Polymyxin Acriflavine Lithium -chloride Ceftazidime Esculin Mannitol (PALCAM) Agar is recommended for the isolation of *Listeria monocytogenes* from foods. PALCAM medium is highly selective. PALCAM medium is a differential diagnostic medium utilizing two indicator systems, esculin ferric citrate mannitol and phenol red. *Listeria monocytogenes* hydrolyzes esculin to form esculetin and dextrose. Esculetin reacts with ferric citrate and forms a brown -black complex. *Listeria monocytogenes* does not ferment mannitol, but contaminants such as *Enterococci* and *Staphylococci* ferment mannitol and this is indicated by a color change from red to yellow.

Components

Item	g/L
Peptic Digest of Animal Tissue	23.00
Starch	1.00
Sodium Chloride	5.00
Mannitol	10.00
Ammonium Ferric Citrate	0.50
Esculin	0.80
Dextrose	0.50
Lithium Chloride	15.00
Phenol Red	0.08
Agar	13.00

Final pH (at 25 °C) 7.0 ± 0.2

Precautions and Disclaimer

For laboratory use only. Not for drug, household or other uses.

Preparation Instructions

Suspend 69 grams of Listeria Identification Agar (PALCAM) in 1000 mls of distilled water. Heat to boiling to dissolve the medium completely.

Sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 minutes. Cool to 50 °C and aseptically add the rehydrated contents of 2 vials of (L4660) Listeria Selective

Supplement (PALCAM) to the medium. Mix well and pour into sterile petri plates.

Note: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapors. If in contact with the skin, wash with plenty of water immediately.

Storage

Store the dehydrated medium at 24 °C and the prepared medium at 2-8 °C.

Product Profile

Appearance	Light pink colored, homogeneous, free flowing powder.
Gelling	Firm.

Color and Clarity	Red colored, clear to slightly opalescent gel forms in petri plates.
-------------------	--

Cultural Response	Cultural characteristics are observed after 48 hours at 35 °C in microaerophilic conditions
-------------------	---

Organisms (ATCC)	Growth	Colony
<i>Listeria monocytogenes</i> (19118)	luxuriant	grey-green with a black center and a black halo
<i>Staphylococcus aureus</i> (25923)	none-poor	Yellow colonies with a yellow halo
<i>Enterococcus faecalis</i> (29212)	none-poor	Grey colonies with a brownish green halo

References

1. Van Netten, P. et al., (1989). Int. J. Food. Microbiol. 8, 4, 299.
2. Van Netten, P., et al., (1991). Lett. Appl. Microbiol. 12, 20.
3. American Type Culture Collection, Manassas, Va., U.S.A.

L4285 6/99

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.