



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 Cefotaxime 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 Nettern, P., et al., (1991). Lett. Appl. Microbiol. 12, 20.
3. American Type Culture Collection, Manassas, Va., U.S.A.

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