

Technical Information

Listeria Enrichment Broth (Twin Pack)

Product Code: DM 1569

Application: Listeria Selective Agar is used for cultivation and selective isolation of *Listeria* species from clinical specimens.

Composition**

| Ingredients | Gms / Litre |
|--------------------------------------|-------------|
| Part A | - |
| Casein enzymic hydrolysate | 10.000 |
| Peptic digest of animal tissue | 10.000 |
| Dextrose | 1.000 |
| Sodium chloride | 5.000 |
| Thiaminium dichloride | 0.005 |
| Acridine hydrochloride (Trypaflavin) | 0.010 |
| Part B | - |
| Potassium thiocyanate | 37.500 |
| Final pH (at 25°C) | 7.4±0.2 |

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Listeria Enrichment Broth was proposed by Feindt ⁽¹⁾ for the cultivation and isolation of *Listeria* species from clinical and non-clinical specimens. Obiger and Schonberg ⁽²⁾ reported the importance of this media to grow *Listeria* from mix-infected specimens.

Casein enzymic hydrolysate, peptic digest of animal tissue provides essential nutrients. Thiaminium dichloride is the vitamin B source added to improve the growth of *Listeria*. Thiocyanate inhibits gram-negative bacteria ^(3, 4).

Listeria Enrichment Broth can be further improved by adding Colimycin alongwith Nalidixic acid ⁽⁵⁾. The mix infected specimen is added directly to Listeria Enrichment Broth.

Methodology

Suspend 26 grams of Part A and 37.5 grams of Part B in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder White to cream homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of medium (3.9% w/v Part A + 3.75% w/v Part B) at 25°C. pH : 7.4±0.2

pH Range

7.20-7.60

Cultural Response/Characteristics

DM 1569 :Cultural characteristics observed in presence of 10% Carbon dioxide (CO₂) after an incubation at 35-37°C for 48 hours.



Dehydrated Culture Media
Bases / Media Supplements

| Organism | Inoculum (CFU) | Growth |
|--|----------------|-----------|
| <i>Enterococcus faecalis</i> ATCC 29212 | 50-100 | luxuriant |
| <i>Escherichia coli</i> ATCC 25922 | $\geq 10^3$ | luxuriant |
| <i>Listeria innocua</i> ATCC 33090 | 50-100 | luxuriant |
| <i>Listeria ivanovii</i> ATCC 19119 | 50-100 | luxuriant |
| <i>Listeria monocytogenes</i> ATCC 19112 | 50-100 | luxuriant |
| <i>Listeria monocytogenes</i> ATCC 19118 | 50-100 | luxuriant |

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8^o in sealable plastic bags for 2-5 days.

Further Reading

1. Feindt E., 1972, Inaug. Diss., Würzburg.
2. Obiger G. and Schonberg A., 1973, Fleischwirtschaft, 10:1450.
3. Lebnert C., 1964, Arch. Exp. Vet. Med., 18:891 and 1247.
4. Beerens H. and Tahon-Castel M.M., 1966, Ann. Inst. Pasteur, 111:90.
5. Grey M.L. et al, 1948, J. Bact., 55:471.

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use.

The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate

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