Product Specification

24 Listeria Enrichment Broth (LEB) Complete

Intended Use

24 Listeria Enrichment Broth (LEB) Complete is a dehydrated culture medium intended for the preparation of 24 Listeria Enrichment Broth. Upon reconstitution, sterilization, and aseptic addition of 24 LEB Selective Supplement, the prepared medium is used for the rapid, 24-hour selective enrichment of *Listeria monocytogenes* and other *Listeria* spp. from food and environmental samples, prior to isolation on selective agar media.

Principle

Peptone provides nitrogen, vitamins, minerals, and amino acids essential for microbial growth. Yeast extract supplies B-group vitamins essential for bacterial proliferation. Lithium chloride acts as a selective inhibitor, suppressing the growth of competing Gram-negative and Gram-positive background flora other than Listeria. Ferric ammonium citrate supplies iron ions to support bacterial metabolic activity and growth. Sodium chloride supplies essential electrolytes for solute transport and maintains osmotic balance. 24 LEB Selective Supplement, added aseptically before use, supplies polymyxin B and quinolone antimicrobials, which together inhibit competing Gram-negative and Gram-positive flora to achieve selective enrichment of Listeria spp.

Storage and Shipping

Recommended storage conditions: Store in a dry place, and avoid direct sunlight. Tighten the cap immediately after use.
Recommended storage and shipping temperature: 10 ˚C to 30 ˚C

Production Standards

The formulation of the basic medium is prepared according to the recommendations of the current European, United States, and China Pharmacopoeia.

Precautions

1. Unused containers should be sealed and stored in a cool, dry, and dark place to prevent drying and bacterial contamination.
2. Prior to use, carefully check the container and expiration date. Do not use the product if there is damage, contamination, or if it is past the expiration date.
3. When handling the product, use appropriate protective equipment and clothing. Ensure the working area is well-ventilated. Minimize prolonged or repeated exposure.
4. Avoid contact with eyes. Ensure no eating, drinking, or smoking in areas where this product is used or stored.
5. Ensure the container is tightly sealed after use.

Quality Control

The following were incubated at 37 ± 2°C for 24 ± 2 hours. The results are as follows:

Test Strain	Expected Results
Listeria monocytogenes ATCC 19115	Good growth
Escherichia coli ATCC 25922	No growth
Enterococcus faecalis ATCC 29212	No growth

Product Content

Product Content	Cat No.	Size
24 Listeria Enrichment Broth (LEB) Complete	101118	500 g
	102118	5 kg
	104118	20 kg

Composition

Peptone	23.4 g
Yeast extract	5.0 g
Lithium chloride	10.0 g
Ferric ammonium citrate	0.1 g
Sodium chloride	5.0 g
Final pH (at 25°C)	7.4 ± 0.2

Remark: Approximate Formula Per Liter

Packaging

- 500 g/bottle;
- 5 kg/drum
- 20 kg/drum

Shelf Life

Three (3) years from date of manufacture

Directions for Preparation

1. Suspend 43.5 g of the powder in 1 L of distilled or deionized water. Mix well and dissolve by heating with frequent agitation.
2. Sterilize by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of 2 vials of **24 LEB Selective Supplement [Cat. No. S0021]**. Mix well and dispense into sterile containers.

Procedure

Inoculate the supplemented medium with the sample or enrichment culture and incubate at 37 ± 1 °C for 24 hours.

Disposal

Please adhere to the respective regulations for the disposal of used culture medium (e.g., autoclave for 20 minutes at 121 °C).

Ordering Information

24 Listeria Enrichment Broth (LEB) Complete

Cat No.	Size
101118	500 g
102118	5 kg
104118	20 kg

*Supplement (to be purchased separately):

Cat No.	Supplement
S0021	24 LEB Selective Supplement, 5mL/vial, 5vials/box

References

1. Farber J.M., Peterkin P.I. *Listeria monocytogenes*, a food-borne pathogen. Microbiol Rev. 1991;55(3):476–511.
2. Bremer, P.J., and Osborne C.M. 1995. Thermal-death times of *Listeria monocytogenes* in green shell mussels prepared for hot smoking. J. Food Prot. 58:604-608.
3. Patel, J.R., Hwang, C.A., Beuchat L.R., Doyle M.P., and Brackett R.E. 1995. Comparison of oxygen scavengers for their ability to enhance resuscitation of heat-injured *Listeria monocytogenes*. J. Food Prot. 58:244-250.

Specially manufactured for:

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