

Specification

Sterile additive to complement the test of esculin hydrolysis.

Presentation

10 Freeze dried vials
Vial
with: 3 ± 0.1 g

Packaging Details

$22 \pm 0.25 \times 55 \pm 0.5$ mm glass vials, tag labelled, White plastic cap - 10 vials per box.

Shelf Life

49 months

Storage

2-25 °C

Composition

Compositon (g/vial)

Ferric Ammonium Citrate.....0.250

Note: Each vial is sufficient to supplement 500ml of medium Base: Fraser Both.

Reconstitute the original freeze-dried vial by adding

Sterile Distilled Water.....6 ml

Description /Technique

Description:

Listeria Fraser Broth Base (Cat. 1182) and Listeria Half Fraser Broth Base (Cat. 1183) are used for the rapid detection of Listeria from food and environmental samples. The antibiotics are already included in the formula so it is only necessary to add the Ferric Ammonium Citrate Supplement (Cat. 6050).

Listeria spp. may be present in small numbers and are often accompanied by considerably larger numbers of other microorganisms, therefore selective enrichment is necessary. Listeria Fraser broth is used in this selective enrichment of Listeria monocytogenes and other Listeria species in all food types, including milk and dairy products, and environmental samples. This formula is described according to the ISO 11290.

Enzymatic digest of casein, enzymatic digest of animal tissues and meat extract provide nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is the source of vitamins, particularly of the B-group. Potassium phosphates act as a buffer system. All Listeria species hydrolyze esculin, which reacts with ferric ions producing a blackening of the medium. The addition of ferric ammonium citrate improves the growth of Listeria monocytogenes. Lithium chloride inhibits the growth of enterococci that can hydrolyze the esculin.

Technique:

Aseptically reconstitute 1 vial with 6 ml of warm sterile distilled water. Mix gently until complete dissolution and add aseptically to 500 ml of Listeria Fraser Broth Base (Cat. 1182) or Listeria Half Fraser Broth Base (Cat. 1183), autoclaved and cooled to 50 °C. Mix well and distribute into sterile containers.

Instructions for use:

For clinical diagnosis, the type of sample is amniotic fluid.

- Inoculate the tubes of Fraser Broth.

- Incubate at 37 °C for 24±2 hours under aerobic conditions.

For other uses not covered by the CE marking:

Detection of Listeria monocytogenes and Listeria spp. according to ISO 11290:

- Primary enrichment: Weigh 25 g (or 25 ml) of the sample and add 225 ml of Listeria Half Fraser Broth (Cat. 1183). Homogenize and incubate at 30 °C for 25±1 hours.

- Secondary enrichment: Inoculate 0,1 ml of incubated Listeria Half Fraser Broth culture (regardless of its colour) into 10 ml of Listeria Fraser Broth Base (Cat. 1182) with the Ferric Ammonium Citrate Supplement (Cat. 6050) added. Incubate at 37 °C for 24±2 hours in aerobic conditions.

- Plating out and identification: From the primary enrichment culture inoculate the surface of the Agar Listeria according to Ottaviani and Agosti (Cat. 1345) and the other selective medium at the choice of the laboratory, to obtain well-separated colonies.

From the secondary enrichment culture, repeat the procedure, inoculate the surface of the Agar Listeria according to Ottaviani and Agosti and the other selective medium.

For Agar Listeria according to Ottaviani and Agosti incubate for a total of 48±2 h.

- Confirmation: Select the presumptive colonies and carry out the confirmation tests for L. monocytogenes or Listeria spp.

Quality control

Physical/Chemical control

Color : Yellowish-brown pH: at 25°C

Microbiological control

Reconstitute 1 vial as indicated in COMPOSITION; shake and dissolve completely

Add supplement to functionality - into Fraser Broth Base

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020

Aerobiosis. Incubation at 37 ± 1 °C, reading after 24/44 \pm 4 h

Microorganism

L. monocytogenes ATCC® 13932, WDCM 00021

Listeria monocytogenes ATCC® 35152

Sterility Control

100 ml TSB and 100 ml Thioglycollate.

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

Growth

Good. Black medium. Positive esculine

Good. Black medium. Positive esculine

Bibliography

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