



Reference: 06-112LYO1

Scharlau Microbiology - Technical Data

Product: **Ferric Ammonium Citrate Supplement**

Specification

Sterile additive to complement the test of esculin hydrolysis.

Presentation

10 Freeze dried vials
Vial
with: 3 ± 0.1 g

Packaging Details

23x60 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:

This supplement is used in selective media in order to detect the hydrolization of esculin, typical, for example, of *Listeria spp.* For this reason this supplement is added to Listeria enrichment broth base in order to obtain Fraser broth or Half Fraser broth. This medium is also supplemented with specific antibiotics.

In the complete medium any darkness of the medium can be taken as presumptive presence of *Listeria* , because in the same time the growth of enterococci, which are also able to hydrolyze esculin, is suppressed by the inclusion of lithium chloride and the companion flora is inhibited by Nalidixic acid and Acriflavine hydrochloride .

Technique:

Collect, dilute and prepare samples and volumes as required according to specifications, directives, official standard regulations and/or expected results..

Reconstitute the vial with 5ml of sterile diluent in aseptic conditions and add it to 500 ml of sterilized Listeria Enrichment Broth base cooled to 50°C, add also the selective agent in order to inhibit the companion flora.

Pour the complete medium into tubes and inoculate.

Incubate the tubes in aerobic atmosphere at $35 \pm 2^\circ\text{C}$ for 24-48h.

Incubation times longer than those mentioned above or different incubation temperatures may be required depending on the sample or the specifications

After incubation, inoculate the positive cultures / dark tubes, by streaking on any secondary recommended culture medium to confirm Listeria isolation

The presumptive presence of *Listeria spp.* must be confirmed by further microbiological and biochemical tests.



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Quality control

Physical/Chemical control

Color : Yellowish-brown

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

L. monocytogenes ATCC® 35152, WDCM 00109

Growth

Good. Black medium. Positive esculine

Good. Black medium. Positive esculine

Sterility control

Add 5 ml of the sample to:

100 ml TSB and 100 ml Thioqlycollate.

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

Bibliography

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- McCLAIN, D. & W.H. LEE (1988) Development of a USDA-FSIS method for isolation of *Listeria monocytogenes* from raw meat and poultry. J.AOAC 71:660-664.
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