Neo Enrichment Broth Base

M1733

Neo Enrichment Broth Base is a selective enrichment broth for *Listeria* species from food samples.

Composition**

Ingredients	Gms / Litre
Peptone special	28.000
Carbohydrate mix	6.000
Salt mix	10.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 22 grams in 500 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Neo Enrichment Selective Supplement (FD249). Mix well and dispense in sterile test tubes.

Warning : Salt mix of this medium contains harmful substance. Avoid bodily contact and inhalation of vapours. On contact with skin, wash with plenty of water immediately.

Principle And Interpretation

Neo Enrichment Broth Base is a medium developed for the selective enrichment and isolation of *Listeria* species from food samples.

Recovery of *Listeria* species can be achieved in 24 hours using Neo Enrichment Broth. This allows the early detection of *Listeria* species as primary and secondary enrichment steps are avoided, which are time consuming. Neo Enrichment Broth Base therefore, is a single enrichment medium, which eliminates the need of secondary enrichment and the recovery levels of Listeria species at 24 hours are comparable to the ISO enrichment method (1).

This medium contains peptone special, mixture of salts and carbohydrates to give optimal recovery and growth of *Listeria* species from food samples after 24 hours. *Listeria monocytogenes* hydrolyses esculin (which is available in carbohydrate mix) to form esculetin and dextrose. Esculetin reacts with ammonium ferric citrate (which is available in salt mix) producing blackening. The medium is rendered selective by addition of selective supplement.

For the enrichment, 25 grams of food sample is added to 225 ml of Neo Enrichment Broth in a stomacher bag. Homogenize the material if required (1). Incubation is carried out at 30°C for 24 hrs and the sample is subcultured on suitable agar medium.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Yellow coloured clear to slightly opalescent solution having a bluish tinge

Reaction
Reaction of 4.4% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
M1733: Cultural characteristics observed with added Neo Enrichment Selective Supplement (FD249),after an incubation at 35-37°C for 24 hours

Organism	Inoculum (CFU)	Growth	Esculin hydrolysis

Cultural Response

Escherichia coli ATCC 25922	>=10^3	inhibited	
Listeria monocytogenes ATCC 19111	50-100	good-luxuriant	positive, reddish brown colouration of medium
Listeria monocytogenes ATCC 19112	50-100	good-luxuriant	positive, reddish brown colouration of medium
Listeria monocytogenes ATCC 19117	50-100	good-luxuriant	positive, reddish brown colouration of medium
Staphylococcus aureus ATCC 25923	>=10^3	inhibited	

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. ISO 11290 - 1 : Microbiology of food and animal feeding stuffs horizontal method for the detection and enumeration of Listeria monocytogenes, 1996.

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