

71882 mEC Broth with Novobiocin (EC Broth (Modified) with Novobiocin; Modified EC Broth with Novobiocin; Meat E. coli Broth with Novobiocin) NutriSelect® Plus

For the selective enrichment of enterohemorrhagic *E. coli* (EHEC) in foods. The medium is used for the isolation and identification of *E. coli* O157:H7 from meat acc. the USDA-FSIS method.

Composition:

Ingredients	Grams/Litre
Peptone	20.0
Sodium chloride	5.0
Bile salts No.3	1.12
Lactose	5.0
Di-potassium hydrogen phosphate	4.0
Potassium dihydrogen phosphate	1.5
Novobiocin	0.02

Final pH 6.9 +/- 0.2 at 25°C

Store granulated media below 30°C in tightly closed container and the prepared medium at 2- 8°C.

Appearance(color): Faint yellow & Faint beige & Faint brown, free flowing powder

Color and Clarity: Light amber clear

Directions:

Suspend 36.7 g in 1 litre of distilled water. Autoclave at 121°C for 15 minutes.

Principle and Interpretation:

EC Broth is a selective medium for the differentiation of faecal coliforms and the confirmatory test for *Escherichia coli* from food and environmental samples (3,4). Using MPN technique, this broth can also be used for the enumeration of presumptive *E. coli* in milk and milk products(2)

EC Medium was originally developed by Hajna and Perry (1) for improved detection of coliforms. The medium has been shown to be a reliable medium producing dependable results in 24 to 48 hours (2).

Peptone serves as a rich source of nitrogen, vitamins and amino acids. Lactose provides the carbon source for lactose fermenting microorganisms. The addition of bile salts mixture inhibits the growth of gram positive bacteria particularly bacilli and faecal streptococci. Sodium chloride maintains the osmotic balance of the medium. Potassium salts act as a buffer. The addition of novobiocin inhibits the growth of gram positive bacteria.

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours with added Novobiocin supplement.

Organisms (ATCC/WDCM)	Inoculum (CFU)	Growth
<i>Escherichia coli</i> O157:H7	50-100	+++
<i>Escherichia coli</i> (25922/-)	50-100	+++
<i>Enterococcus faecalis</i> (29212/-)	≥10 ³	-
<i>Staphylococcus aureus</i> (25923/-)	≥10 ³	-
<i>Bacillus subtilis</i> (6633/-)	≥10 ³	-



References:

1. Hajna A.A., a. Perry C.A., 1943, Am. J. Pbl. Hlth. 33:550-556.
2. Perry, C. A. and Hajna, A. A. (1944) Amer. J. Pub. Hlth. 34, 735-738.
3. International Organisation for Standardisation: Milk and Milk Products - Enumeration of presumptive Escherichia coli. Part 1. Most probable number technique ISO 11866-1 : 1997.
4. American Public Health Association (1998) Standard Methods for the Examination of Water and Wastewater. 20th Edn. APHA Inc. Washington DC.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

The vibrant M, Millipore, and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. Detailed information on trademarks is available via publicly accessible resources.
© 2018 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.

