

# Enterobacteriaceae Enrichment Broth acc. to MOSSEL

Medium proposed by MOSSEL et al. (1963, 1964) for the selective enrichment of all species of Enterobacteriaceae from foodstuffs and other materials.

This medium complies with ISO 21528-1 the specifications of the Eiprodukte-Verordnung (German Egg Product Regulations) (1975) and the European Pharmacopeia II.

## Mode of Action

The undesired, accompanying bacterial flora is almost completely inhibited by brilliant green and ox bile. Dextrose favours the growth of all Enterobacteriaceae. The strong buffering capacity of the culture medium prevents the formed acid from killing the culture.

## Typical Composition (g/litre)

Peptone from gelatine 10.0; D(+)-glucose 5.0; ox bile, dried 20.0; brilliant green 0.0135; di-sodium hydrogen phosphate-dihydrate 8.0; potassium dihydrogen phosphate 2.0.

## Preparation

Suspend 45 g/litre, dispense into test tubes and autoclave under mild conditions (5 min at 121 °C), or heat at 100 °C for 30 minutes in a waterbath or flowing steam.

pH: 7.2 ± 0.2 at 25 °C.

The prepared broth is clear and green.

## Experimental Procedure and Evaluation

Inoculate the broth with the sample material.

Incubation: 24-48 hours at 35 °C aerobically.

If the medium shows bacterial growth, transfer some of the resulting material to selective culture media.

## Literature

Bundesminister für Jugend, Familie und Gesundheit: Verordnung über die gesundheitlichen Anforderungen an Eiprodukte und deren Kennzeichnung (Eiprodukte-Verordnung) (1975).

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION: Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of Enterobacteriaceae - Part 1: Detection and Enumeration by MPN technique with pre-enrichment. International Standard ISO 21528-1 (2004)

European Pharmacopeia II. Chapitre VIII. 10.

MOSSEL, D.A.A., u. MARTIN, G.: Eine mit dem Salmonella-Nachweis kommensurable Untersuchung von Lebens- und Futtermitteln auf Enterobacteriaceae. - Arch. f. Lebensmittelhyg., 15; 169-171 (1964).

MOSSEL, D.A.A., MENGERINCK, W.J.H., a. SCHOLTS, H.H.: Use of a modified MacConkey agar medium for the selective growth and enumeration of all Enterobacteriaceae. - J. Bact., 84; 381 (1962).

MOSSEL, D.A.A., VISSER, M., a. CORNELISSEN, A.M.R.: The examination of foods for Enterobacteriaceae using a test of the type generally adapted for the detection of salmonellae. - J. Appl. Bact., 24; 444-452 (1963).

## Ordering Information

Product	Merck Cat. No.	Pack size
Enterobacteriaceae Enrichment Broth acc. to MOSSEL	1.05394.0500	500 g
Enterobacteriaceae Enrichment Broth acc. to MOSSEL	1.05394.5000	5 kg

## Quality control

Test strains	Growth
Escherichia coli ATCC 8739	good
Escherichia coli ATCC 11775	good
Shigella flexneri ATCC 12022	good
Salmonella typhimurium ATCC 14028	good
Proteus vulgaris ATCC 13315	fair / good
Yersinia enterocolitica ATCC 9610	fair / good
Staphylococcus aureus ATCC 6538	inhibited
Micrococcus luteus ATCC 10240	inhibited
Bacillus cereus ATCC 11778	inhibited