

## Specification

Selective medium for the detection and enumeration (MPN) of enterobacteria, in water and foodstuffs according to ISO standards.

## Presentation

20 Tubes/Durham tube  
Tube 16 x 113 mm  
with: 9 ± 0.2 ml

### Packaging Details

16x113 mm glass tubes, ink labelled, with Durham 's tube and metal-Non injectable cap. - 20 tubes per box.

### Shelf Life

12 months

### Storage

8-25 °C

## Composition

Composition (g/l):

Peptone from casein.....	20.0
Lactose.....	5.0
Bile Salts No. 3.....	1.5
Sodium chloride.....	5.0
Dipotassium hydrogen phosphate.....	4.0
Potassium dihydrogen phosphate.....	1.5

## Description /Technique

### Description:

EC Broth is a buffered medium containing lactose. It is part of a range of selective broths for Enterobacteriaceae. Its efficiency or selectivity is based on bile salts' inhibitory effect on other microorganisms.

### Technique:

This broth may be used for routine testing of water and food, either alone or by using the Most Probable Number method of enumeration.

The type of sample will determine how precise the results are. If the incubation is at 35-37°C for 48 hours, gas formation may be interpreted as presumptive evidence of coliform bacteria.

Later confirmation will have to be done using any of the classical methods.

Should the incubation take place at 44,5°C, gas formation could be interpreted as a confirmation of the presence of *Escherichia coli*. Nevertheless, it must be taken into account that the validity of this test is highly limited by technical variations. A maximum incubation time of 24 hours in a water bath with very precise temperature regulation, is therefore recommended.

When using samples greater than 10 mL, the medium must be reconstituted at a concentration equivalent to that specified on the directions, taking into account the added sample volume.

It is possible that air bubbles are generated in the Durham tube during the transport. If air bubbles are present in the Durham tube prior to inoculation, the tube should be inverted until the air is released from the Durham tube. Failure to remove air bubbles prior to inoculation may result in reading the result as a false-positive reaction in gas production.

## Quality control

### Physical/Chemical control

Color : Straw-coloured yellow

pH: 6.9 ± 0.2 at 25°C

### Microbiological control

Prepare Tubes - Inoculate with 100±20 CFU for Growth Promotion or 10<sup>4</sup>-10<sup>6</sup> CFU (selectivity).

Microbiological control according to ISO 11133:2014/A1:2018.

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

Aerobiosis. Incubation at 44 °C ± 1. Reading at 24-48 h ± 2 h.

### Microorganism

*Escherichia coli* ATCC® 25922, WDCM 00013

*Escherichia coli* ATCC® 8739, WDCM 00012

*Ps. aeruginosa* ATCC® 27853, WDCM 00025

### Sterility Control

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

Check at 7 days after incubation in same conditions.

### Growth

Good - Gas Positive

Good - Gas Positive

Inhibited - poor

## Bibliography

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