

Faecal coliforms agar (m-FC agar)
 DEHYDRATED MEDIUM

Art. 84644.0500

Intended use

Solid, selective and differential medium for coliform enumeration by membrane filter technique.

Formula * - Composition in g/L

Tryptose.....	10.00
Yeast extract.....	3.00
Proteose peptone.....	5.00
Bile salts # 3.....	1.50
Sodium chloride.....	5.00
Lactose.....	12.50
Aniline blue.....	0.10
Agar.....	13.50

Final pH 7.4 ±0.2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Instructions for preparation

Suspend 50.7 g of powder in 1 l of purified water and heat to boiling. Add 10 ml of Rosolic Acid Solution 1% (Art. 355070ZF). DO NOT AUTOCLAVE. Mix and pour into Petri plates. Do not overheat.

Principle of the method and general information

FC Agar and Broth are formulated according to Geldreich et al., to detect the faecal coliforms in polluted water. The bile salts included in these media make these media selective for enterobacteria, and also selective for coliforms due to the high temperature of incubation: 44.5°C±0.5°C.

Freshly prepared medium has a red-garnet colour. Faecal coliform colonies are greenish-blue, and the medium also turns to this colour. In case of other bacteria, when they grow, show pinkish colonies, and then the medium turns to fluorescent red.

Instruction for use

Essentially, the technique consists of filtering the test sample to be examined through a membrane filter of suitable porosity (0.22-0.45 µm), assisting the filtration by pressure or suction, so that the microorganisms are retained on the membrane. Remove the membrane carefully and aseptically and take it to the culture medium. Put the membrane over the agar, if using the solid medium, or over the impregnated pad if using the liquid version. Cover the Petri plates and incubate them at 36±2°C for 18- 24 hours. After incubation, proceed with the counting of coliforms. Should a total E.coli selectivity be desired, incubate at 44.5°C± 0,5.

Quality control
Incubation temperature: 36°C ± 2,0

Incubation time: 18-24 h

Inoculum: Practical range 100±20 CFU. Min. 50 CFU (Productivity). MF Method. according to ISO 11133:2014

Microorganism
Growth
Remarks

<i>Enterococcus faecalis</i> ATCC® 29212	Total Inhibition	Selectivity
<i>Escherichia coli</i> ATCC® 25922	Productivity > 0.50	Blue colonies
<i>Escherichia coli</i> ATCC® 8739	Productivity > 0.50	Blue colonies
<i>Salmonella typhimurium</i> ATCC® 14028	Good	Red colonies (w. Rosolic Ac.)

References

- GELDREICH, E.E., H.F. CLARK, C.B. HUFF y L.C. BEST, (1965). Fecal-coliform-organism medium for the membrane filter technique. J. Am. Water Works Association (J.A.W.W.A.), 57:208-214.
- APHA-AWWA-WEF (1995) Standard Methods for the examination of water and wastewater. 19th ed. APHA. Washington.
- CLESCERI, L.S., A.E. GREENBERG y A.D. EATON., (1998). Standard Methods for the examination of Water and Wastewater. 20th ed. APHA . Washington.

Storage conditions

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).

Ordering information

84644.0500 Faecal coliforms agar (m-FC agar) Bulk of 500 g.

Note: For supplements see the section - Instructions for preparation.