Condalab

Reference: 6023 **Technical Data Sheet**

Product: **FECAL COLIFORMS SUPPLEMENT**

Specification

Supplement for the isolation of fecal coliforms.

Presentation

	Packaging Details	Shelf Life	Storage
10 Freeze dried vials Vial with: 6 ± 0.1 g	22±0.25 x 55±0.5 mm glass vials, tag labelled, White plastic cap - 10 vials per box.	49 months	2-8 ºC

Composition

Compositon (g/vial)
Rosólic acid.....0.05

Reconstitute the original freeze-dried vial
by adding
1% solution NaOH 0.2N.....5 ml

Note: Each vial is sufficient to supplement for 500 ml of Fecal Coliforms Agar Base (m-FC) or Fecal Coliforms Broth Base (m-FC)

Description /Technique

Description:
Fecal Coliforms Broth Base (m-FC) (Cat. 1121) and Fecal Coliforms Agar Base (m-FC) (Cat. 1127) are prepared according to the formula proposed by Geldreich, Clark and Bert, and they are used for the cultivation and enumeration of fecal coliform microorganisms. These mediums are suitable for the membrane filtration technique at a high temperature. Many standard procedures specify the use of Fecal Coliforms Media for testing water and foods.
Fecal coliforms are differentiated from other coliforms from environmental sources by their ability to grow at 44,5 ± 0,5 ºC.
Proteose and Tryptose provide nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is the source of vitamins, particularly of the B-group essential for bacterial growth. Lactose is the fermentable carbohydrate as a carbon and energy source. Bile salts inhibit growth of Gram-positive bacteria. Sodium chloride maintains the osmotic balance. Aniline Blue and Rosolic Acid are the differential indicators and suppress the growth of Gram-positive bacteria. Bacterilogical agar is the solidifying agent.

Preparation:
Aseptically reconstitute 1 vial with 5 ml of 1% solution of 0,2N NaOH. Mix gently until complete dissolution and aseptically add to 500 ml of Fecal Coliforms Agar Base (m-FC) (Cat. 1127) or Fecal Coliforms Broth Base (m-FC) (Cat. 1121), autoclaved and cooled to 50 ºC. Mix well and distribute into sterile containers.

Instructions for use:
Membrane filtration technique:
When supplement is added to Fecal Coliforms Broth Base (m-FC) (Cat. 1121):
- Place the membrane filter, which the sample has been filtered through, on the upper part of the saturated pad with the medium in the Petri dish. - Incubate the plates for 24 ± 2 hours, one batch as a control at 35 ± 2 ºC, and the rest at 44,5 ± 0,5 ºC.
- Observe coliforms and count the colonies.
When supplement is added to Fecal Coliforms Agar Base (m-FC) (Cat. 1127):
- Place the membrane filter, which the sample has been filtered through, in the upper part of the Petri dish with the solidified agar. - Incubate the plates for 24 ± 2 hours, one batch as control at 35 ± 2 ºC, and the rest at 44,5 ± 0,5 ºC.
- Observe the coliforms and count the colonies.
The differential indicator system (aniline blue and rosolic acid) gives a blue color to the colonies of fecal coliforms. The rest of enterobacteria will become red.

Quality control

Physical/Chemical control

Color : Red pH: at 25ºC

Microbiological control

Reconstitute 1 vial as indicated in COMPOSITION; shake and dissolve completely

Add 1 vial to 500 ml of medium base. DO NOT HEAT once supplemented.

Membrane Filtration /Practical range 100 ± 20 CFU. min. 50 CFU (productivity)./10^4-10^6 CFU (selectivity).

Aerobiosis. Incubation at 44 ºC ± 0,5. Reading at 24h ± 2h.

Aerobiosis. Incubation at 35 ± 2 ºC. Reading at 24 hours.

Microorganism	Growth
Shigella flexneri ATCC® 12022, WDCM 00126 (35ºC)	Good - Red colonies
Shigella flexneri ATCC® 12022, WDCM 00126 (44,5ºC)	Inhibited
Salmonella typhimurium ATCC® 14028, WDCM 00031 (35ºC)	Good - Red colonies
Salmonella typhimurium ATCC® 14028, WDCM 00031 (44,5ºC)	Inhibited
Enterococcus faecalis ATCC® 19433, WDCM 00009 (35ºC)	Inhibited
Enterococcus faecalis ATCC® 19433, WDCM 00009 (44,5ºC)	Inhibited
Escherichia coli ATCC® 25922, WDCM 00013 (35ºC)	Good (≥ 50%) Blue colonie
Escherichia coli ATCC® 25922, WDCM 00013 (44,5ºC)	Good (≥ 50%) Blue colonie

Sterility Control

Incubation 48 hours at 30-35 ºC and 48 hours at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

Bibliography

Geldreich, Clark and Kabler, 1963. USPHS, HEW. Personal Communication.

Geldreich, Clark, Huff and Bert, 1965. Journal of American Water Works Association, 57:208.