



ECD Medium (without Membrane Filter)

MF009

For detection and enumeration of *E.coli* and coliforms.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	20.000
Yeast extract	5.000
Bile salts	1.500
Sodium chloride	5.000
Disodium hydrogen phosphate	5.000
Potassium dihydrogen phosphate	1.500

**Formula adjusted, standardized to suit performance parameters

Directions

The test sample should be filtered through a sterile membrane filter having pore size of 0.22µ / 0.45µ. Rehydrate the nutrient pad with 2.0-2.5 ml sterile distilled / purified water. After filtration, remove the membrane filter aseptically using sterile forceps. Place the membrane filter on rehydrated nutrient pad. Incubate the inoculated nutrient. Interpret the results qualitatively by observing the presence or absence of growth and quantitatively by counting the number of colonies on the surface of the membrane filter and calculating CFU/ml.

Principle And Interpretation

Field of Application: Water, food, waste water, etc. DriFilter Membrane Nutrient Pad Medium are ready to use sterile culture media in the form of a 50 mm biological inert absorbent pads impregnated with standard culture medium, then dried and sterilized in 55 mm petri plate. They eliminate the need of laborious media preparation and autoclaving procedures. The nutrient pads are to be just rewetted with sterile distilled water and are ready to use. Use of nutrient pads allows larger sample volumes to be tested at a time. Interpretation of results is directly by counting the CFUs and also quantifies the microbial load present in the sample. ECD Agar is used for detection of coliforms, especially, *Escherichia coli* in water, food and other samples using membrane filter technique (1). The water sample is filtered through filter membranes, which are then placed on ECD Agar and incubated overnight. Lay a drop of Kovacs Indole Reagent (R008) on the colonies. Indole positive colonies form a red zone around the colony. Indole positive colonies are enumerated as *E. coli*. The medium has casein enzymic hydrolysate and yeast extract which provide essential nutrients especially nitrogenous sources for the coliforms. Bile salts selectively inhibit gram-positive organisms. Sodium chloride maintains the osmotic balance while phosphate salts buffer the medium.

Quality Control

Appearance

Dry filter membrane pad of 50mm diameter

Colour

Pale coloured nutrient pad

Sterility test

Passes release criteria

Cultural response

Cultural characteristics observed after incubation at 35-37°C for 18-24 hours

Organism	Growth	Colour of colony
<i>S. serotype Typhi</i> ATCC 6539	Luxuriant	Colourless
<i>Staphylococcus aureus</i> ATCC 25923	Inhibited	-
<i>Escherichia coli</i> ATCC 25922	Luxuriant	Colourless
<i>Enterobacter aerogenes</i> ATCC 13048	Luxuriant	Colourless

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1. Schweizerisches Lebensmittelbuch, 5th Ed., Chapter 56A.



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