



ECD Agar

M1357

ECD Agar is recommended for the selective detection of coliforms, especially *Escherichia coli* in water, food, and other material and in membrane filter technique.

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
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 53.0 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50° C. Pour into sterile Petri plates.

Principle And Interpretation

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

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 5.3% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M1357: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response <i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	≥50%

<i>Enterobacter aerogenes</i> ATCC 13048	50-100	good-luxuriant	>=50%
<i>Salmonella Typhi</i> ATCC 6539	50-100	good-luxuriant	>=50%
<i>Staphylococcus aureus</i> ATCC 25923	>=10 ³	inhibited	0%

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 8°C. Use before expiry date on the label.

Reference

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

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