



## 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%

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<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 <sup>3</sup>	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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### Disclaimer :

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