

Technical Information

ECD Agar

Product Code: DM 2357

Application: - ECD Agar is used 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

Principle & 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 (R1008) 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 supply essential nutrients especially nitrogenous sources for the coliforms. Bile salts selectively prevent the gram-positive organisms. Sodium chloride helps to maintain the osmotic balance while phosphate salts buffer the medium.

Methodology

Suspend 53.0 grams of dehydrated media in 1000 ml distilled water. Mix thoroughly & 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.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity

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 Range

7.00-7.40

Cultural Response

DM2357: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.



Dehydrated Culture Media
Bases / Media Supplements

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

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

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
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