OXALIS Diagnostics Pvt. Ltd.

Technical Data

Deoxycholate Citrate Agar. 100 g / 500 g

Used for isolation of enteric pathogens particularly *Salmonella* and *Shigella* species.

Product Presentation:

Cat No.	Product description	Pack Size
11040010100	Deoxycholate Citrate Agar	100 Gram
11040010500	Deoxycholate Citrate Agar	500 Gram

Principle

Deoxycholate Citrate Agar is a modification of Deoxycholate Agar formulated by Leifson, which demonstrates improved recovery of intestinal pathogens from specimens containing normal intestinal flora by using citrates and sodium deoxycholate in specified amounts as inhibitors of Gram-positive bacteria. In comparison, Deoxycholate Citrate Agar has increased concentrations of sodium citrate and sodium deoxycholate for reliably isolating many Salmonella and Shigella species while inhibiting coliforms and many Proteus species. This medium is used for the isolation and maximum recovery of intestinal pathogens belonging to Salmonella and Shigella groups from foods. The selectivity of this medium permits the use of fairly heavy inocula without danger of overgrowth of Shigella and Salmonella by other microflora. Deoxycholate Citrate Agar is recommended by APHA for the examination of foods and in the IP for use in Microbial Limit Test.

Meat Infusion is a source of carbon and nitrogen and is preferred because the inhibition of coliforms produced is greater than when an extract or simple peptone is used. Proteose peptone provides carbon, nitrogen, vitamins and minerals. Lactose is the fermentable carbohydrate. Sodium citrate and sodium deoxycholate inhibit gram-positive bacteria, coliforms and *Proteus* species. Ferric ammonium citrate aids in the detection of H2S-producing bacteria. Neutral red is a pH indicator.

Composition

Ingredients	Grams / Litre
Sodium Citrate	20.00
Proteose Peptone	10.00
Meat Infusion from 330 g.	9.50
Lactose	10.00
Sodium Deoxycholate	5.00
Ferric Ammonium Citrate	2.00
Neutral red	0.02
Agar	13.50

Final pH (at 25°C) 7.5±0.2

*Formula adjusted, standardized to suit performance parameters

Type of specimen

Clinical- faeces, Food and dairy samples, Pharmaceutical samples, Water and Waste water samples.

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Specimen Collection and Handling

Ensure that all samples are properly labeled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

- ✓ Suspend 70.02 g of powder in 1000 mL distilled water.
- ✓ Mix thoroughly.
- ✓ Boil to dissolve the medium completely.
- ✓ **Do Not Autoclave.**
- ✓ Cool immediately in a water bath at 45°C-50°C and pour into sterile petriplates or as desired.

Storage and Stability

- ✓ Store Dehydrated culture media in cool, dry place at 10°C-30°C away from direct light.
- ✓ Store prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Quality Control

Dehydrated Appearance: Light pink coloured homogeneous, free flowing powder
Prepared Appearance: Reddish orange coloured, slightly opalescent gel forms in petridishes

Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30°C-35°C for 18 to 24 hours.

Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30°C-35°C for 18 hours. Indicative Properties: The test results observed are within the specified temperature and time, inoculating ≤ 100 cfu of appropriate microorganism.

Inhibitory Properties: No growth of the test microorganism occurs for the specified temperature and not less than the longest period of the time specified, inoculating >100 cfu of the appropriate microorganism at 30°C-35°C for ≥ 24 hours. Interpretation of Results

Cultural Response :

Organism	Type Culture	Growth	Colour of colonies / H2S	Incubation Temperature	Incubation Period
Salmonella enterica subsp. *enterica* serovar *Typhimurium*	ATCC 14028	Good	Colourless/+	30°C -35°C	18 Hours
Shigella flexneri	ATCC 12022	Good	Colourless/+	30°C -35°C	18 Hours

Inhibitory:

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Organism	Type Culture	Growth	Incubation Temperature	Incubation Period
Enterococcus faecalis	ATCC 29212	Inhibited	30°C -35°C	48 Hours
Escherichia coli	ATCC 25922	Partial Inhibition	30°C -35°C	48 Hours

✓ Examination of plates or slants for growth after completion of incubation period.

Warranty

✓ This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Disposal

Disposal of infectious material and material that comes in to contact with clinical sample must be decontaminated and dispose of by autoclaving or incineration or established laboratory procedures.
User must be ensure safe disposal of used or unusable preperation of the products.

Reference

1. Speck M. (Ed.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., APHA, Washington, D.C.

2. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978,

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