

Technical Information

D.C.L.S. Agar

Product Code: DM 1160

Application: - D.C.L.S. Agar is used as a selective medium for the isolation of Shigella and Salmonella. Also useful for isolation of Vibrio cholerae.

Composition**

Ingredients	Gms / Litre
Proteose peptone	7.000
Beef extract	3.000
Lactose	5.000
Sucrose	5.000
Sodium citrate	10.000
Sodium thiosulphate	5.000
Sodium deoxycholate	2.500
Neutral red	0.030
Agar	12.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Salmonella infection causes salmonellosis, which ranges clinically from self-limited gastroenteritis (diarrhea, abdominal cramps and fever) to enteric fevers (including typhoid fever). Shigella species cause classical bacillary dysentery characterized by severe cramping, abdominal pain and diarrhea with blood and mucus.

D.C.L.S. Agar is a modification of Deoxycholate Citrate Agar of Leifson ⁽¹⁾ which is a slightly selective and differential medium. It has sucrose as an additional fermentable carbohydrate to differentiate lactose negative sucrose positive coliforms from Salmonella species. The addition of sucrose to this medium increases its usefulness because non-pathogenic sucrose fermenting organisms like Proteus, Enterobacter, Klebsiella form red colonies. D.C.L.S. Agar is a moderately selective culture medium which also supports the growth of Vibrio species responsible for gastroenteritis.

Methodology

Suspend 49.53 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 50°C and pour about 20 ml of medium into sterile Petri plates and allow to dry for about two hours with covers partially removed.

Quality Control

Physical Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Reddish orange coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.95% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH range 7.00-7.40**Cultural Response/ characteristics**

DM 1160: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Enterococcus faecalis ATCC 29212	>=10 ³	luxuriant	0%	
Escherichia coli ATCC 25922	50-100	none-poor	<=10%	red
Proteus vulgaris ATCC 13315	50-100	luxuriant	>=50%	red
Salmonella Typhimurium ATCC 14028	50-100	luxuriant	>=50%	colourless- slightly pink
Shigella flexneri ATCC 12022	50-100	fair-good	30-40%	colourless- slightly pink

Storage and Shelf Life**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.**Further Reading**

1. Leifson E., 1935, J. Pathol. Bacteriol., 40:58 1.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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