

**D.C.L.S. Agar****M160**

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

**Directions**

Suspend 49.53 grams in 1000 ml distilled water. Heat to boiling 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.

**Principle And Interpretation**

*Salmonella* infection leads to 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). It is a slightly selective and differential medium, which incorporates 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.

**Quality Control****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

**Cultural Response**

M160: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

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

**Reference**

1. Leifson E., 1935, J. Pathol. Bacteriol., 40:581.

**Storage and Shelf Life**

Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.