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Product Information

90035 DCLS Agar No. 2 (Desoxycholate Citrate Lactose Sucrose Agar No. 2)

D.C.L.S. Agar is used as a selective medium for the isolation of *Shigella* and *Salmonella*. Also useful for isolation of *Vibrio cholera*. The addition of fermentable carbohydrate increases the usefulness of the medium because non-pathogenic sucrose-fermenting organisms may be recognised by their red colonies, e.g. some *Proteus*, *Serratia*, *Enterobacter* species.

Composition:

Ingredients	Grams/Litre
Proteose peptone	7.0
Beef extract	3.0
Sodium citrate	10.0
Saccharose	5.0
Lactose	5.0
Sodium thiosulfate	5.0
Sodium deoxycholate	2.5
Neutral red	0.03
Agar	12.0
Final pH 7.2 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance: Light pink coloured, homogeneous, free flowing powder.
Colour and Clarity: Reddish orange colourled, opalescent gel forms in petri plate.

Directions:
Suspend 49.5 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 standard petri plates and allow to dry for about two hours with covers partially removed.

Principle and Interpretation:
D.C.L.S. Agar is a modified formulation from Desoxycholate Citrate Agar of Leifson. The Addition increased the value of the medium by excluding non-pathogenic sucrose fermenting organisms like *Proteus*, *Serratia*, *Enterobacter* and *Klebsiella* species. It is a moderately selective medium and supports also the growth of *Vibrio* species.
Proteose peptone and beef extract provide essential growth nutrients like amino acids and other nitrogenous compounds. Saccharose and lactose are the fermentable sugars and neutral red is used to detect the fermentation activities. The nonfermentors show nearly colourless colonies. *Shigella sonnei* may appear as translucent, pink colony. Sodium citrate and sodium thiosulfate inhibits coliforms and sodium deoxycholate gram-positive bacteria in the samples. Agar is the solidifying agents.
D.C.L.S. Agar may be inoculated directly from the specimen or inoculated after enrichment in Selenite Broth or Tetrathionate Broth. The suspect Salmonella and Shigella are further identified on Triple Sugar Iron Agar.

Cultural characteristics after 18-48 hours at 35°C

Organisms (ATCC)	Growth	Colour of Colony
Salmonella serotype Typhimurium (14028)	+++	Colourless to slightly pink
Proteus vulgaris (13315)	+++	red
Shigella flexneri (12022)	+	Colourless to slightly pink
Escherichia coli (25922)	-/+	red
Enterococcus faecalis (29212)	-	-

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References:

1. E. Leifson, J. Pathol. Bacteriol., 40, 581 (1935)