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

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 .

|  |  |
| --- | --- |
| REF: V.1/DCLS01.100 100 Gram  REF: V.1/DCLS01.500 500 Gram | REF: V.1/DCLS01.250 250 Gram |

## CLINICAL SIGNIFICANCE

## 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.

## METHOD PRINCIPLE

## 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.

## MEDIA COMPOSITION

|  |  |
| --- | --- |
| Item | Formula per liter  of medium |
| * Proteose peptone * Beef extract * Lactose * Sucrose * Sodium citrate * Sodium thiosulphate * Sodium deoxycholate * Neutral red * Agar | 7.000 gm  3.000 gm  5.000 gm 5.000 gm  10.00 gm  5.000 gm  2.500 gm  0.030 gm  12.00 gm |

Final pH at 7.2 + 0.2 at 25 °C

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

* Wearing personnel protective equipment (overall, gloves, glasses,).
* Do not pipette by mouth.
* In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
* Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the D.C.L.S. Agar material safety data sheet.

## STORAGE AND STABILITY

**Lab.Vie** D.C.L.S. Agar should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

## PREPARATION

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.

Deterioration

The color of **Lab.Vie** D.C.L.S. Agar is Light yellow to pink homogeneous free flowing powder. Prepared Reddish orange coloured, clear to slightly opalescent gel forms in Petri plates. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

## EQUIPMENT REQUIRED NOT PROVIDED

* Sterile cups
* Sterile petri-dishes
* Incubator

## SPECIMEN

Clinical samples: Sputum.

## PERFORMANCE CHARACTERISTICS

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

|  |  |  |
| --- | --- | --- |
| Oranism | Growth |  |
| Colony Characteristic |
| Enterococcus faecalis ATCC 29212 | Inhibited | - |
| Escherichia coli ATCC 25922 | None - poor | Red |
| Proteus vulgaris ATCC 13315 | luxuriant | Red |
| Salmonella Typhimurium ATCC 14028 | luxuriant | Colourless - slightly pink |
| Shigella flexneri ATCC 12022 | Fair - good | Colourless - slightly pink |

## QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **Lab.Vie** technical support.

## REFERENCES

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

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