

TM 082 – D.C.L.S. AGAR

INTENDED USE

For selective isolation and detection of *Salmonella* and *Shigella* species from faecal samples.

PRODUCT SUMMARY AND EXPLANATION

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 causes 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. 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.

COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	7.000
Meat extract B	3.000
Lactose	5.000
Saccharose (Sucrose)	5.000
Sodium citrate	10.000
Sodium thiosulphate	5.000
Sodium deoxycholate	2.500
Neutral red	0.030
Agar	12.000

PRINCIPLE

The medium consists of Proteose peptone, Meat extract B which provide essential nutrients and minerals to the medium. Lactose helps in differentiating enteric bacilli, as lactose fermenters produce red colonies while lactose non-fermenters produce colourless colonies. Coliform bacteria, if present form pink colonies on this medium. The degradation of lactose causes acidification of the medium surrounding the relevant colonies and the pH indicator neutral red changes its colour to red.

INSTRUCTION FOR USE

- Dissolve 49.53 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE.
- Cool to 45-50°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 SPECIFICATIONS

Appearance of Powder : Light yellow to pink homogeneous free flowing powder.
Appearance of prepared medium : Reddish orange coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
<i>Enterococcus faecalis</i>	29212	≥10 ⁴	Inhibited	0%	-	35-37°C	18-48 Hours
<i>Escherichia coli</i>	25922	50-100	None to Poor	0-10%	Red	35-37°C	18-48 Hours
<i>Proteus vulgaris</i>	13315	50-100	Luxuriant	≥50%	Red	35-37°C	18-48 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	≥50%	Colourless slightly pink	35-37°C	18-48 Hours
<i>Shigella flexneri</i>	12022	50-100	Fair-good	30-40%	Colourless slightly pink	35-37°C	18-48 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 10 - 25°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.













DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.



REFERENCES

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Leifson E., 1935, J. Pathol. Bacteriol., 40:581.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MediMet GmbH Buckstrasse 10 48163 Münster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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