Deoxycholate Citrate Agar w/o Sucrose

M222

Intended Use:

Recommended for differentiation and identification of enteric pathogens.

Composition**

Ingredients	g/ L
Biopeptone	7.000
HM extract	3.000
Sodium deoxycholate	2.500
Sodium citrate	10.500
Lactose	5.000
Sodium thiosulphate	5.000
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 45.03 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE.** Avoid excessive or prolonged heating during reconstitution. **AVOID OVERHEATING.** Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Deoxycholate Citrate Agar without Sucrose is used for differentiation and identification of members of *Enterobacteriaecae*. Leifson (1) developed Deoxycholate Agar as a differential medium containing pure chemicals. Deoxycholate Citrate Agar without Sucrose contains biopeptone and HM extract, which supply essential nutrients for the support of bacterial growth. Citrate and deoxycholate act as inhibitors. Sodium deoxycholate and sodium citratee inhibit gram-positive organisms. Lactose helps in differentiating enteric bacilli as lactose fermenters produce red coloured colonies while lactose non-fermenters form colourless colonies.

Citrate and iron (Fe) combination has a strong hydrolyzing effect on agar when the medium is heated, producing a soft and unelastic agar. If autoclaved the agar becomes soft and almost impossible to streak (2).

Type of specimen

Clinical- faeces, urine, etc; Food samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Further serological and biochemical identification is required for confirmation of species.
2. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

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 4.5% w/v aqueous solution at 25°C. pH : 7.2±0.2
pH
7.00-7.40
Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C fo r 18 - 24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Bacillus subtilis subsp. spizizenii ATCC 6633 (00003*)	>=10^4	inhibited	0%	
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	>=50%	pink with bile precipitate
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	good-luxuriant	>=50%	pink
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	>=50%	colourless
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited	0%	

Key : (*) Corresponding WDCM numbers.
(#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in 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.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Leifson, 1935 J. Path. Bacteriol, 40:581.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. 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.
4. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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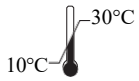
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
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www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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