CM 20536 – D.C.L.S. AGAR, HAJNA

INTENDED USE

For isolation of gram negative enteric bacilli.

PRODUCT SUMMARY AND EXPLANATION

Salmonella infection leads tosalmonellosis,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. Deoxycholate Citrate Lactose Sucrose (DCLS) Agar was originally formulated by Leifson and further modified by Hajna and Damon. It is a moderately selective medium for the isolation of gram-negative enteric bacilli from faecal specimens. This medium supports the growth of Salmonella, Shigella species and aerobic Vibrio like Vibrio comma, while coliforms and Proteus are inhibited. Salmonella Pullorum and Salmonella Gallinarum grow well on this medium.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Tryptone	5.000
Yeast extract	3.000
Beef extract	3.000
Saccharose (Sucrose)	7.500
Lactose	7.500
Sodium citrate	10.000
Sodium thiosulphate	5.000
Sodium chloride	5.000
Sodium deoxycholate	2.500
Bromo cresol purple	0.020
Agar	20.000

PRINCIPLE

The medium consists of Beef extract, Peptone, Tryptone and yeast extract, which provide essential nitrogenous and other nutrients for the growth of the organisms. Sucrose and lactose are the fermentable carbohydrates. These two sugars in the medium permit the formation of yellow colonies by the organisms that rapidly ferment either sucrose or lactose or both, e.g. Proteus vulgaris and typical coliforms. This facilitates better selection of members of the genera Shigella and Salmonella which form nearly colourless colonies. The citrate and deoxycholate in the medium suppresses the growth of coliforms and gram-positive organisms respectively. Bromo cresol purple is the pH indicator.

INSTRUCTION FOR USE

Dissolve 73.52 gramsin 1000 ml purified/distilled water.
Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE.

- Cool to 45-50°C and pour into sterile petri plates.

QUALITY CONTROL SPECIFICATIONS

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

INTERPRETATION

Culturalcharacteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	>=50%	Yellow with bile precipitate	35-37°C	18-48 Hours
Proteus mirabilis	25933	50-100	Good-luxuriant	>=50%	Colourless with bluish tinge	35-37°C	18-48 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	>=50%	Colourless with bluish tinge	35-37°C	18-48 Hours
Shigella flexneri	12022	50-100	Luxuriant	>=50%	Colourless with bluish tinge	35-37°C	18-48 Hours
Staphylococcus aureus subsp. aureus	25923	>=10^4	Inhibited	0%	-	35-37°C	18-48 Hours

PACKAGING:

Inpacksizeof100 gm and 500 gm bottles.

STORAGE

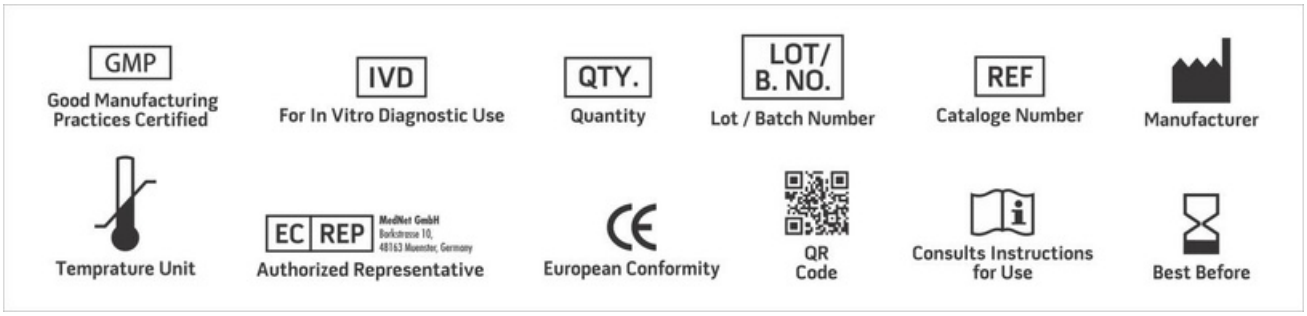
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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

Afteruse,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.
4. Hajna and Damon, 1956, Appl. Microbiol., 4:341.



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

*For LabUse Only