

**C.L.E.D AGAR W/ ANDRADE INDICATOR****TM 054**

For culturing of pathogens causing urinary infections

Composition

Ingredients	Gms/Ltr.
Agar	15.00
Lactose	10.00
Peptone	4.00
Tryptone	4.00
Beef extract	3.00
L - Cystine	0.128
Andrade indicator	0.10
Bromo thymol blue	0.02

* Dehydrated powder, hygroscopic in nature, store, in a dry place in tightly- sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 36.25gms in 1000ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15psi (121°C) for 15 minutes. Cool to 45 - 50°C and dispense into sterile Petri plates.

Appearance: Greenish blue colour, clear to slightly opalescent gel

pH: 7.5 ± 0.2

Principle

C.L.E.D AGAR WITH ANDRADE INDICATOR is used for culturing of pathogens causing urinary infections. It improves colony detection and microorganism identification or it enhances the appearance of the colony and aids in the identification of microorganisms by the addition of the Andrade indicator. Andrade indicator is acid fuchsin in 1N sodium hydroxide. It is based on Lactose fermentation in which end product is lactic acid which lowers the pH of the medium. Mixed culture is predominant in urine sample and test such as coagulase, oxidase, catalase and agglutination with specific sera, can be performed on primary isolates from the medium. Beef extract, Peptone and Tryptone provide the nitrogen, vitamins and amino acids in CLED Agar. L-Cystine is added as a growth supplement for Cystine-dependent coliforms. Lactose acts as a fermentable sugar. Organisms capable of fermenting lactose will lower the pH and change the color of the medium from green to yellow. Bromo thymol blue is used as a pH indicator. Agar is used as a solidifying agent. Inoculate and incubate at 35 ± 2°C for no longer than 24 hours, if lactose-fermenters predominate, the whole medium may turn pink, masking the presence of non-lactose fermenters.

Interpretation

Cultural characteristics observed after inoculating ($10^3 - 10^4$ CFU/ml), on incubation at 35 ± 2°C for 18 - 24 hours.



PRODUCT DATA SHEET

Microorganisms	ATCC	* Inoculum (CFU/ml)	Growth	Appearance of colony
<i>Escherichia coli</i>	25922	10 ³ - 10 ⁴	Fair to excellent	Bright pink, semi-translucent colonies
<i>Staphylococcus aureus</i>	25923	10 ³ - 10 ⁴	Fair to excellent	Small, golden yellow, Lactose fermenting
<i>Proteus vulgaris</i>	29905	10 ³ - 10 ⁴	Fair to excellent	Blue-green, translucent colonies, suppressed swarming
<i>Enterobacter aerogenes</i>	13048	10 ³ - 10 ⁴	Good	Greyish green, mucoid colonies

References

1. Bevis, T. D. J. Med. Lab. Technol, 26-38-41. 1968. Mackey, J. R. and Sandys, G.H. (1965).
2. Furniss A.L., Lee J.V. and Donovan T.J. *P.H.L.S. Monograph series, London, H.M.S.O., 11.* (1978).