

C.L.E.D. (Bevis modification)

(Cystine Lactose Electrolyte Deficient – Double Indicator)

BC2006

A modification of Mackey and Sandys original medium which uses a double indicator to improve the differentiation of lactose and non lactose fermenting coliforms, staphylococci and streptococci. The swarming of *Proteus* spp. is inhibited. BioConnections C.L.E.D. will grow most fastidious organisms which do not require blood.

Formula - grams per litre

Balanced Peptone	4.0
Beef Extract	3.0
Tryptone	4.0
Lactose	10.0
L-Cystine	0.128
Bromothymol blue indicator	0.02
Andrade's indicator	0.08
Purified Agar	15.0

pH: 7.5 +/- 0.2

Appearance: Green/blue, clear gel.

Preparation

Suspend 36 grams of powder in 1 litre of deionised water. Sterilise by autoclaving for 15 minutes at 121°C. Cool to 47°C, mix by swirling and pour plates.

Quality Control Organisms - Suggestions

<i>E. coli</i>	ATCC 11775	
<i>S. aureus</i>	ATCC 25923	

Storage of Prepared Medium

Plates should be stored at 4-8°C in the dark. Plates should be used within 1 week.

Directions for use

Inoculate surface, either streaking for single colonies or spread evenly over entire surface colony counts. Incubate plates at 37°C for 24 hours aerobically.

Growth Characteristics

Organism	Colony Size (mm)	Shape & surface	Colour	Other
<i>E.coli</i>	2.0-3.0	CV.E.G.	Yellow/Orange	(Blue if non-lactose fermenter)
<i>K. aerogenes</i>	3.0-4.0	CV.E.G.	Yellow/ Orange	mucoïd
<i>Proteus spp.</i>	2.0-3.0	CV.E.G.	Blue	
<i>Ps. Aeruginosa</i>	1.0-4.0	F.CR.D.	Blue	(Green pigment & odour)
<i>Shigella spp.</i>	1.5-2.5	CV.E.G.	Blue	
<i>Salmonella sp.</i>	2.0-3.0	CV.E.G.	Blue	(Yellow-orange if lactose +ve)
<i>S. aureus</i>	1.0-1.5	CV.E.G.	Yellow/ Orange	(Blue if non-lactose fermenter)
Other Staphylococcus	0.5-1.5	CV.E.G.	Yellow if lactose fermenting	
<i>Enterococcus spp.</i>	0.5	CV.E.G.	Yellow/ Orange	

References

Bevis, T.D. 1968. A modified electrolyte-deficient culture medium, *J. Med. Lab. Tech.*, 25: 38-41.

Mackey, J.P. and Sandys, G.H. 1966. Diagnosis of urinary infections, *Brit.Med. J.*, I: 1173.

Sandys, G.H. 1960. A new medium for preventing swarming of *Proteus* spp. with a description of a new medium suitable for use in routine laboratory practice. *J. med. Lab. Tech.*, 17: 224-233.