

# C.L.E.D. Medium

(Mackey and Sandys)

(Cystine Lactose Electrolyte Deficient-Single Indicator)

## BC2041

This is a medium designed for urine culture. The absence of electrolytes from the medium, together with the use of a strong, purified agar inhibits the swarming of *Proteus spp.* The medium has a single indicator system, using bromothymol blue to detect acid production. BioConnections C.L.E.D medium will support the growth of 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
Purified Agar	15.0

pH: 7.3 +/- 0.2

Appearance: Green/blue clear gel.

### Preparation

Suspend 36 grams of powder in 1 litre of deionised water. Allow to soak for 10 minutes, swirl to mix then sterilise by autoclaving for 15 minutes at 121°C. Cool to 47°C mix and distribute into petri dishes.

### Storage of Prepared Media

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

### Quality Control Organisms- Suggestions

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

### Directions for use:

Inoculate surface, either streaking for single colonies or spread evenly over entire surface for 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	(blue if non lactose fermenters)
<i>K. aerogenes</i>	3.0-4.0	CV.E.G.	Yellow	(mucoid)
<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 spp.</i>	2.0-3.0	CV.E.G.	Blue	(yellow if lactose +ve)
<i>Staph. Aureus</i>	1.0-1.5	CV.E.G.	Yellow	(blue if non-lactose fermenters)
Other <i>Staphylococcus</i>	0.5-1.5	CV.E.G.	Blue-white	(yellow if lactose fermenters)
Spp.				
<i>Enterococcus Spp.</i>	0.5	CV.E.G.	Yellow	

## **References**

Mackey, J.P. and Sandys. G.H. 1966. Diagnosis of urinary infections. *Brit.Med.J.* 1:1173.