

## Cled agar with Bromothymol Blue

REF.	Pack size
1402 001	100 gm
1402 002	500 gm

### Intended Use

Recommended for isolation, enumeration and identification of urinary pathogens on the basis of lactose fermentation.

### Background

CLED Agar is an abbreviation for Cystine Lactose-Electrolyte-Deficient Agar. Sandys developed an electrolyte-deficient medium that prevented *Proteus* sp. from swarming. This medium is recommended for use in urinary bacteriology, promoting the growth of all urinary pathogens. C.L.E.D. Medium is also recommended for dip stick procedures and as dip inoculum transport medium for urine specimens. The color of the medium differs from that of the standard medium at various pH levels.

### Principle

Peptone, Pancreatic digest of Casein and Gelatin provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential growth nutrients. Lactose is the fermentable sugar. L-cystine supports the growth of dwarf coliform colony. Bromo thymol blue is the pH indicator which turns yellow at acidic pH.

Components	gm/Liter
Beef Extract	3.0
Pancreatic digest of Casein	4.0
Pancreatic digest of Gelatin	4.0
Bromothymol Blue	0.02
L-Cysteine	0.128
Agar	15.0
Lactose	10.0

Final pH (at 25°C) 7.3 ± 0.2

### Preparation, Storage and Stability

Store the dehydrated medium at 10-30°C and use before the expiry date on the label. Store the prepared medium at 2-8°C. After the desired amount of medium is taken out, replace the cap tightly to protect from hydration.

### Procedure

- Suspend 36.15 g of the powder in 1 L distilled water and mix well.
- Heat with frequent agitation to dissolve the powder completely.
- Sterilize by autoclaving at 121°C for 15 minutes.
- Cool to 45-50°C and pour into sterile petri plates.

SYMBOLS IN PRODUCT LABELLING			
	Authorised Representative		Temperature Limitation
	For in-vitro diagnostic use		Use by/Expiration Date
	Batch Code/Lot number		CAUTION. Consult instructions for use
	Catalogue Number		Manufactured by
	Consult instructions for use		

### Quality Control

#### Appearance

1-Dehydrated Appearance : Yellow coloured, homogeneous, free flowing powder.

2- Prepared Appearance : Green coloured, slightly opalescent gel.

3- Cultural Response : Cultural characteristics after 18-24 hours at 30-35°C (As per pharmacopeia or 35± 2°C for clinical specimens)

Organisms (ATCC)	Growth	Colour of the Colony
<i>Escherichia coli</i>	Good	Yellow opaque colonies
<i>Staphylococcus aureus</i>	Good	Yellow
Enterococci	Good	Yellow or Green
<i>Proteus vulgaris</i>	Good	Blue
<i>Klebsiella pneumoniae</i>	Good	Yellow to whitish blue

### Interpretation of the results

- Count the number of colonies on the dipstick. Multiply by dilution factor to convert the count to CFU per ml of the sample.
- Contaminant bacteria usually appear in low numbers, which vary in colony morphology

### Precautions

- Factors that may cause urine counts from infected patients to be low include: rapid rate of urine flow, prior initiation of antimicrobial therapy, a urine pH of less than 5 and a specific gravity of less than 1.003.

2-Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

### Bibliography

- Sandys, 1960, J. Med. Lab. Tech.
- Mackey and Sandys. 1965. Br. Med. J.
- Mackey and Sandys. 1966. Br. Med. J.
- Baron, E. J., L. R. Peterson, and S. M. Finegold. 1994. Bailey & Scott's diagnostic microbiology, 9th ed. Mosby-Year Book, Inc., St. Louis, MO.
- Isenberg, H. D. (ed.). 1992. Clinical microbiology procedures handbook. American Society for Microbiology, Washington, D.C.
- Murray, P. R., E. J. Baron, M. A. Pfaller, F. C. Tenover



**Egyptian Co for Biotechnology - Spectrum Diagnostics (S.A.E)**  
 Obour city industrial area. block 20008 piece 19 A. Cairo. Egypt.  
 Tel: +202 4489 2248 - Fax: +202 4489 2247  
 www.spectrum-diagnostics.com  
 E-mail: info@spectrum-diagnostics.com

IFUFBC03 Rev.(4), 12/7/2023



**MDSS GmbH**  
 Schiffgraben 41  
 30175 Hannover, Germany



