

CLED Medium is used in isolating and enumerating bacteria from urine.

Approximate Formula:

Ingredients	gm/liter
Pancreatic digest of gelatin	4.0
Pancreatic digest of casein	4.0
Beef extract	3.0
Lactose	10.0
L-Cystine	0.0128
Bromothymol blue	0.02
Agar	15.0
Final pH 7.3±0.2 at 25 °C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 36.2g in 1 litre of distilled water. Heat with frequent agitation until the medium is dissolved completely. Sterilize in an autoclave at 121°C for 15 min.

Principle and Interpretation:

CLED Medium is used in isolating and enumerating bacteria from urine. Pancreatic digest of gelatin, Pancreatic digest of casein and Beef extract provide nitrogen sources, growth factors and vitamins for the growth of microorganisms. L-Cystine can promote the growth of bacteria. Bromothymol blue is a pH indicator. Agar is the solidified reagent.

Bacteria that can decompose lactose produce acid, and the colonies will show yellow on CLED Medium; while those can't decompose lactose show blue or blue-green.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of blue-green transparent gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

CLED Medium must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 35 ± 2°C for 18-24 hours.

Microorganism	Strains Number	Growth	Remarks
<i>Escherichia coli</i>	ATCC 25922	luxuriant	Yellow colonies
<i>Staphylococcus Aureus</i>	ATCC 25923	luxuriant	Deep yellow colonies
<i>Proteus vulgaris</i>	ATCC 13315	luxuriant	Blue colonies with inhibited swarming
<i>Enterococcus faecalis</i>	ATCC 29212	luxuriant	Yellow colonies

References:

- Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and cCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone.
- Merlino et al, 1995, Abstr. Austr. Microbiol. 16(4):17-3.
- GB4789.28-2013 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.