

## Cystine Lactose Electrolyte Deficient (CLED) Agar CE (NCM2017)

### Intended Use

Cystine Lactose Electrolyte Deficient (CLED) Agar is used for the differentiation and enumeration of microorganisms in urine.

### Description

A medium for urine culture where the absence of electrolytes inhibits the swarming of *Proteus* spp. Cystine is added for the benefit of those organisms which have a specific cystine requirement. Differentiation of lactose and non-lactose fermenters is achieved using bromothymol blue as pH indicator. This medium supports the growth of *Streptococcus pyogenes* and most other fastidious organisms that do not require blood.

### Typical Formulation

Balanced Peptone No. 1	4.0 g/L
Beef Extract	3.0 g/L
Tryptone	4.0 g/L
Lactose	10.0 g/L
L-Cystine	0.128 g/L
Bromothymol Blue Indicator	0.02 g/L
Agar No. 1	15.0 g/L

pH: 7.3 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

### Precaution

Refer to SDS

### Preparation

1. Disperse 36 grams in one liter of deionized water.
2. Soak for 10 minutes, swirl to mix and sterilize by autoclaving for 15 minutes at 121°C.
3. Cool to 45-50°C and mix before pouring into Petri dishes and then dry the agar surface.

### Test Procedure

For a complete discussion on collection and processing of urine cultures refer to appropriate references.

### Quality Control Specifications

**Dehydrated Appearance:** Powder is homogeneous, free flowing, and light beige.

**Prepared Appearance:** Prepared medium is clear and blue-green.

# Technical Specification Sheet



**Expected Cultural Response:** Cultural response after incubation at 37±1°C for 18 – 24 hours.

<u>MICROORGANISM</u>	<u>ATCC</u>	<u>APPROX. INOCULUM (CFU)</u>	<u>EXPECTED RESULTS</u>	
			<u>Growth</u>	<u>Reaction</u>
<i>Escherichia coli</i>	25922	50-200	≥70%	Yellow colonies
<i>Enterococcus faecalis</i>	29212	50-200	≥70%	Yellow colonies
<i>Proteus mirabilis</i>	29906	4 Quad Streak	Growth	Blue-green colonies; Swarming inhibited
<i>Salmonella typhimurium</i>	14028	4 Quad Streak	Growth	Blue-green colonies
<i>Staphylococcus aureus</i>	25923	50-200	>70%	Yellow colonies

## **Results**

Refer to appropriate references for results.

## **Expiration**

Refer to expiration date stamped on container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

## **Limitation of the Procedure**

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

## **Storage**

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

## **References**

1. Mackey, J.P. and Sandys, G.H. (1966). Diagnosis of urinary infections. Brit.Med.J. 1: 1173.
2. Guttman, D and Naylor, G.R.E. (1967). Dip-slide: an aid to quantitative urine culture in general practice. Brit.Med. J. 3: 343-345.

