

**C.L.E.D. Agar**

Medical laboratories media for the isolation, enumeration, and identification of urinary pathogens on the basis of lactose fermentation, while controlling the swarming of Proteus spp.

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| REF: V.1/CE1.100.0100 REF: V.1/CE1.250.0500  | 100 Gram 250 Gram  |  | REF: V.1/CE1.500.0500  | 500 Gram  |

# **CLINICAL SIGNIFICANCE**

CLED Agar is a non-selective differential plating medium for the growth and enumeration of urinary tract microorganisms. Omitting sodium chloride inhibits the Proteus swarming and supports the growth of the vast majority of bacteria causing urinary tract infections, and is used to differentiate and identify them. The presence of bacterial contaminants like Diphtheroids, Lactobacilli and other microbes indicate the degree of care taken with the handling of the urine specimen.

# **METHOD PRINCIPLE**

Extract and peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Lactose is the fermentable carbohydrate providing carbon and energy. L-Cysteine is added as a growth supplement for cysteine dependent coliforms. Differentiation of lactose fermenters and lactose non fermenters is achieved using Bromothymol blue as a pH indicator. Organisms that ferment lactose will lower the pH and change the color of the medium from green to yellow. Bacteriological agar is the solidifying agent.

 **MEDIA COMPOSITION**

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| Ingredient  | Concentration (g/l)  |
| Lactose  | 10  |
| Casein peptone  | 4  |
| Gelatin peptone  | 4  |
| Beef extract  | 3  |
| L-Cystine  | 0.128  |
| Bromothymol blue  | 0.02  |
| Agar  | 15.000  |

***Final pH 7.3 ± 0.2 at 25°C.***

# **PRECAUTIONS AND WARNINGS**

Reagent to be handled by entitled and professionally educated person. Do not ingest or inhale as reagent contains sodium azide which is classified as dangerous substance for environment.

Good Laboratories practices using appropriate precautions should be followed in:

* Wearing personnel protective equipment (overall, gloves, glasses).
* Do not pipette by mouth.
* In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
* Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point. S57: use appropriate container to avoid environmental contamination.

 S61: avoid release in environment.

 For further information, refer to the C.L.E.D. Agar material safety data sheet.

# **STORAGE AND STABILITY**

Lab.Vie. C.L.E.D. Agar should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

**Deterioration**

Lab.Vie. C.L.E.D. Agar medium is cream to yellow homogeneous free flowing powder. Prepared medium is hydrated medium is Blue/green colored gel. If there are any physical changes, discard the medium.

Media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations

# **SPECIMEN COLLECTION AND PRESERVATION**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

**TYPE OF SPECIMEN**

Clinical samples

# **EQUIPMENT REQUIRED NOT PROVIDED**

* Sterile cups
* Sterile petri-dishes
* Incubator
* Autoclave

# **PROCEDURE**

1. Suspend 36.0 grams in 1000 ml purified / distilled water.
2. Adjust pH to pH 7.3 ± 0.2 at 25°C.
3. Heat to boiling to dissolve the medium completely.
4. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 minutes.
5. Mix well and pour into sterile Petri plates.

# **PERFORMANCE CHARACTERISTICS**

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

# **QUALITY CONTROL**

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact Lab.Vie.. Technical support.

#  **RESULTS AND INTERPRETATION**

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| Organisms  | Growth  | Colony color  |
| Enterococcus faecalis ATCC 29212  | Luxuriant  | slight yellowish or greenish  |
| Escherichia coli ATCC 25922  | Luxuriant  | yellow, opaque, centre slightly deeper yellow  |
| Klebsiella pneumoniae ATCC 13883  | Luxuriant  | yellow to whitish blue  |
| Proteus vulgaris ATCC 13315  | Luxuriant  | blue  |
| Salmonella Typhi ATCC 6539  | Luxuriant  | bluish  |
| Staphylococcus aureus subsp. aureus ATCC 25923  | Luxuriant  | Deep yellow  |

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|  | SYMBOLS IN PRODUCT LABELLING  |
|  IVD  | For in-vitro diagnostic use Batch Code/Lot number Catalogue Number  Temperature Limitation Expiration Date Manufactured by  |  Number of <n> test in the pack  Caution  Do not use if package is damaged   Consult Instruction for use   |
| LOT  |
| REF  |
|      |

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 **Ismailia – Free zone, Ismailia – Egypt IFU-S-02, Rev. 03 - December 201**9

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