Technical Data Sheet

CE Bromothymol-Blue Lactose Cystine (Brolacin) Agar (C.L.E.D. Agar)

Ordering number: 1.01638.0500

Bromothymol-blue lactose cystine (Brolacin) agar is used for the enumeration, isolation and preliminary identification of microorganisms in urine.

Diagnosis of asymptomatic urinary tract infections depends on the detection of a significant bacteriuria, which is defined at the presence of at least 100.000 bacteria in 1 ml of morning urine.

IVD in vitro diagnosticum - For professional use only

Mode of Action

This culture medium promotes the growth of all microorganisms found in urine. It is also an excellent universal culture medium owing to its wide spectrum of nutrients, lack of inhibitors and the fact that it allows a certain degree or differentiation between the colonies. The presence of important contaminants such as diphtheroids, lactobacilli and micrococci is also clearly elicited, giving an indication of the degree of contamination.

Brolacin Agar contains lactose as a reactive compound which, when degraded to acid, causes bromothymol blue to change its color to yellow. Alkalinization produces a deep blue coloration. L-Cystine is added as a growth supplement for cystine-dependent *coliforms*. The lack of electrolytes suppresses the swarming of Proteus (Sandys 1960).

Initiation of antibiotic therapy, before collection of sample, low urine pH (less than 5) etc. may result in low bacterial count from infected patients.

Typical Composition

Peptones	7 g/l
Yeast Extract	2 g/l
Meat Extract	2 g/l
L-Cystine	0.128 g/l
Lactose	10 g/l
Bromothymol Blue	0.03 g/l
Agar-Agar	12 g/l

Preparation

Suspend 33 g/l. Autoclave (15 min at 121 °C). Pour plates.

The appearance of the plates is clear and bluish green to dark green.

The pH value at 25 °C is in the range of 7.1-7.5.

Specimen

e.g. Urine.

Clinical specimen collection, handling and processing. See general instructions of use.

Experimental Procedure and Evaluation

Inoculate by spreading a defined quantity (up to 1 ml) of the urine sample (dilute if necessary) or material to be tested on the surface of the plate.

Incubation: 24 h at 35 °C aerobically.

Appearance of Colonies	**Microorganisms**
Large, golden yellow, surrounding medium is yellow	*Escherichia coli,* lactose-positive *Citrobacter* and others
Large, golden yellow, usually mucoid, surrounding medium is yellow	*Enterobacter, Klebsiella* and others
Large, colorless, surrounding medium is blue	*Proteus, Serratia* and others
Large, brownish centre, surrounding medium is blue	*Pseudomonas*
Pale yellow, small, opaque	*Streptococci*
Deep yellow, very small, opaque	Staphylococci

Storage

The product can be used for sampling until the expiry date if stored upright, protected from light and properly sealed at +15 °C to +25 °C.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25° C.

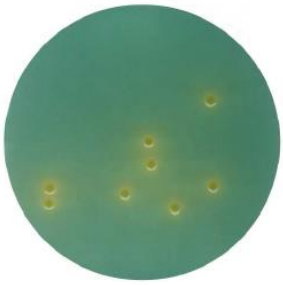
Disposal

Please mind the respective regulations for the disposal of used culture medium (e.g. autoclave for 20 min at 121 °C, disinfect, incinerate etc.).

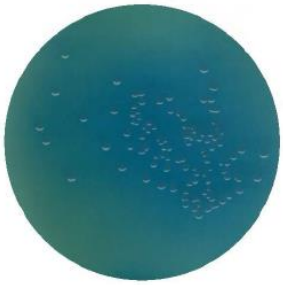
Quality Control

Control Strains	ATCC #	Incubation	Expected Results
Escherichia coli	11775	24 h at 35 °C	Recovery ≥ 70 %, yellow colonies
Salmonella typhimurium	13311	24 h at 35 °C	Recovery ≥ 70 %, yellow colonies
Shigella flexneri	29903	24 h at 35 °C	Recovery ≥ 70 %, blue colonies
Proteus mirabilis	29906	24 h at 35 °C	Recovery ≥ 70 %, blue colonies
Proteus vulgaris	8427	24 h at 35 °C	Recovery ≥ 70 %, blue colonies
Pseudomonas aeruginosa	27853	24 h at 35 °C	Recovery ≥ 70 %, blue colonies
Staphylococcus aureus	6538-P	24 h at 35 °C	Recovery ≥ 70 %, blue colonies

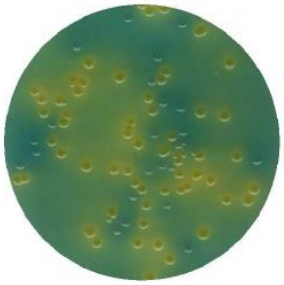
Please refer to the actual batch related Certificate of Analysis.



Lactose positive strain



Lactose negative strain
Escherichia coli



Mixed culture of lactose positive and lactose negative strains

Literature

MacFaddin, J. D. (1985). Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1, Williams & Wilkins, Baltimore, MD.

Mackey, J. P. and Sandys G.H. (1965). Laboratory diagnosis of infections of the urinary tract in general practice by means of a dip-inoculum transport medium. Br. Med. J. **2**: 1286-1288.

Mackey, J. P. and Sandys G.H. (1966). Diagnosis of urinary tract infections. Br. Med. J. **1**: 1173.

Sandys, G.H. (1960). A new method of preventing swarming of *Proteus sp*. with a description of a new medium suitable for use in routine laboratory practice. J. Med. Lab. Technol. **17**: 224-233.

Ordering Information

Product	Cat. No.	Pack size
Brolacin Agar (Bromothymol-blue Lactose Cystine Agar) (C.L.E.D. Agar)	1.01638.0500	500 g

Merck KGaA, 64271 Darmstadt, Germany
Fax: +49 (0) 61 51 / 72-60 80
mibio@merckgroup.com
www.merckmillipore.com/biomonitoring

Find contact information for your country at:
www.merckmillipore.com/offices
For Technical Service, please visit:
www.merckmillipore.com/techservice