Condalab

Reference: 6042 **Technical Data Sheet**

Product: **ESBL SUPPLEMENT**

CE IVD

Specification

Chromogenic medium for overnight detection of Gram negative bacteria producing Extended Spectrum Beta-Lactamase.

Presentation

	Packaging Details	Shelf Life	Storage
10 Freeze dried vials Vial with: 6 ± 0.1 g	22±0.25 x 55±0.5 mm glass vials, tag labelled, White plastic cap - 10 vials per box.	49 months	2-8 ºC

Composition

Compositon (g/vial)

Antibiotic mix.....0.036

Note: Each vial is sufficient to supplement 500 ml of ESBL Chromogenic medium

Reconstitute the original freeze-dried vial by adding
Sterile Distilled Water.....5 ml

Description /Technique

Description:

ESBL (Extended Spectrum ß-Lactamases)(Cat. 2062) is a Chromogenic medium for the detection of gram-negative bacteria producing Extended Spectrum Beta-Lactamase.
ESBL (Extended Spectrum ß-Lactamases) are enzymes capable of hydrolyzing penicillins, broad-spectrum cephalosporins and monobactams, ESBLs are often located on plasmids that are transferable from strain to strain and between bacterial species. ESBL-producing Enterobacteriae were first identified in Germany in 1983, and now they are widely recognized as clinically relevant causes of infections in community. During the 1990s were mostly found in Klebsiella species. However *E. coli* ESBL-producing has also been widely detected and both have a significant importance in hospital acquired infections. Community-acquired urinary tract infection (CA-UTI) is the most common infection caused by extended-spectrum ß-lactamase (ESBL)-producing Enterobacteriaceae and it is a big concern in management of patients and hospital costs. The development and spread of ESBL among Gram-negative bacteria and possible horizontal transfer calls for concern, especially in view of treatment failure, high treatment cost, and consequent discomfort to patients. The early detection of ESBL-producing bacteria carriers is essential to minimize their impact and spread.
Peptones and growth factors provide nitrogen, vitamins, minerals and aminoacids essential for growth. Chromogenic mixture allows the identification of ESBL producing microorganisms. The supplement inhibits the growth of all the non ESBL-producing bacteria.
Characteristics of the ESBL colonies:
- *E. coli*: pink colonies.
- *Enterobacter aerogenes*: dark blue colonies.
- *Klebsiella pneumoniae*: dark blue colonies.

Technique:

Aseptically reconstitute 1 vial with 5 ml of sterile distilled water. Mix gently until complete dissolution and aseptically add to 500 ml of ESBL Chromogenic Agar (Cat. 2062) autoclaved and cooled to 50 ºC. Mix well and distribute into sterile containers.

Instructions for use:

For clinical diagnosis, the type of sample is urine, rectal sample and pulmonary aspiration.
- Inoculate on the surface making parallel striae with the handle or swab.
- Incubate in aerobic conditions at 35 ± 2 ºC for 18-24 hours.
- Reading and interpretation of results.

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Quality control

Physical/Chemical control

Color : White-yellowish pH: at 25ºC

Microbiological control

Reconstitute 1 vial as indicated in COMPOSITION; shake and dissolve completely

Add 1 vial to 500 ml of medium base. DO NOT HEAT once supplemented.

Distribute the complete medium, cooled to 50 ºC, into 90 mm plates

Aerobiosis. Incubation at 35 ± 2 ºC, reading after 18-24 hours.

Microorganism	Growth
Klebsiella pneumoniae ATCC® 13883, WDCM 00097	Inhibited
Enterococcus faecalis ATCC® 19433	Partial Inhibition - light blue colonies
Escherichia coli ATCC® 25922, WDCM 00013	Inhibited
Stph. aureus ATCC® 25923, WDCM 00034	Inhibited
Proteus mirabilis ATCC® 29906	Inhibited

Sterility Control

Incubation 48 hours at 30-35 ºC and 48 hours at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

Bibliography

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