CHROMATIC DETECTION/ESBL

Chromogenic media for enumeration and identification of microorganisms and for detection of ESBL-producing bacteria directly from clinical specimens.

CHROMATIC DETECTION TYPICAL FORMULA (g/l)	
Peptone	14.0
Yeast Extract	3.0
Tryptone	6.0
Sodium Chloride	5.0
Chromogenic Mix	13.0
Agar	15.0
Final pH 7.3 ± 0.2	

CHROMATIC ESBL TYPICAL FORMULA (g/l)	
Peptone Mix	30.0
Selective Mix	10.0
Chromogenic Mix	1.0
Agar	15.0
Final pH 7.2 ± 0.2	

DESCRIPTION

CHROMATIC DETECTION/ESBL is a ready-to-use plate consisting of two confluent chromogenic media that may be inoculated simultaneously.
CHROMATIC DETECTION is a chromogenic medium for enumeration and identification of microorganisms directly from clinical specimens allowing also to carry out the direct indole test for *Escherichia coli* confirmation.
CHROMATIC ESBL is a medium for the detection of Extended Spectrum β-Lactamase-producing bacteria directly from clinical specimens permitting an early detection in order to limit the spread of these pathogens.

PRINCIPLE

Peptone, tryptone, yeast extract and peptone mix are sources of amino acids and vitamins. Sodium chloride maintains the osmotic balance of the medium. The chromogenic mix allows the identification of microorganisms on the basis of the color and morphology of the colonies. The selective mix inhibits most of the ESBL-not producing bacteria including those carrying AMPc type resistance. Agar is the solidifying agent.

TECHNIQUE

Inoculate the two media simultaneously by streaking the specimen onto the agar surface using a sterile loop or swab.
Incubate at 36+/-1°C for 18-24 hours.

INTERPRETATION OF RESULTS

Observe the growth and color of the colonies and interpret the results as indicated in table 1.

Table 1.

	CHROMATIC DETECTION		CHROMATIC ESBL		
Microorganisms	**Growth**	**Typical appearance of the colonies**	**Growth**	**Typical appearance of the colonies**	**ESBL phenotype**
Escherichia coli	Good	Pink-red	Good*	Pink-red	Positive
Klebsiella pneumoniae	Good	Green-blue-violet	Good*	Green-blue-violet	Positive
Enterobacter cloacae	Good	Green-blue	Good*	Green-blue	Positive
Pseudomonas aeruginosa	Good	Yellowish	Good*	Yellowish	Positive
Proteus mirabilis	Good	Brown	Inhibited	---	Negative
Staphylococcus aureus	Good	Cream	Inhibited	---	Negative
Enterococcus faecalis	Good	Green-Turquoise	Inhibited	---	Negative

*On CHROMATIC ESBL only ESBL-producing microorganisms can grow.
Final identification must be performed by biochemical and/or serological tests.

STORAGE AND TRANSPORT CONDITIONS

2-8°C away from light, until the expiry date on the label. However, our stability studies have shown that the transport at 18-25°C for 4 days, or at 35-39°C for 48 hours, does not alter in any way the performance of the product. Eliminate if signs of deterioration or contamination are evident.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for *In vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

- J. Merlino, S. Siarakas, G.J. Robertson, G.R. Funnel, T. Gottlieb, and R. Bradbury. Evaluation of Colorex Orientation for differentiation and presumptive identification of Gram-negative bacilli and Enterococcus species. J. Clin. Microbiol. 1996, 34: 1788-1793.
- Z. Samra, et al. Evaluation of use of a new chromogenic Agar in detection of urinary tract pathogens. J. Clin. Microbiol. 1998, 36: 990-994.
- Podschun R, Ullman U (1998). Klebsiella spp as Nosocomial Pathogens: Epidiemology, Taxonomy, Typing Methods, and Pathogenicity Factors. Clinical Microbiology Reviews 11 (4): 589–603.
- Geiss H.K. (1990) Comparison of two test kits for rapid identification of Escherichia coli by a beta-glucuronidase assay. European Journal of Clinical Microbiology & Infections Diseases; 9 (2):151-152.

LIOFILCHEM® S.r.l.
Via Scozia, Zona Ind.le - 64026, Roseto degli Abruzzi (TE) - ITALY
Tel +39 0858930745 Fax +39 0858930330 Website: www.liofilchem.net E-mail: liofilchem@liofilchem.net

CE IVD

PRODUCT SPECIFICATION

NAME
CHROMATIC DETECTION/ESBL

PRESENTATION
Ready-to-use plates (90 mm) with two media

STORAGE
2-8°C

PACKAGING

Ref.	Content	Packaging
18011	20 plates	• 10 plates in thermally soldered film • 2 x 10 plates in cardboard box
18011*	100 plates	• 10 plates in thermally soldered film • 10 piles (10 x 10 plates) in cardboard box

USE
CHROMATIC DETECTION/ESBL consists of two chromogenic media for enumeration and identification of microorganisms and for detection of ESBL-producing bacteria directly from clinical specimens

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIA
CHROMATIC DETECTION
Appearance: clear
Colour: amber

CHROMATIC ESBL
Appearance: slightly opalescent
Colour: amber

SHELFLIFE
4 months

QUALITY CONTROL
1. Control of general characteristics, label and print
2. Sterility control
   7 days at 22 ± 1°C, in aerobiosis
   7 days at 36 ± 1°C, in aerobiosis
3. Microbiological control
   Inoculum for productivity: 10-100 CFU/ml
   Inoculum for selectivity: 10^4-10^5 CFU/ml
   Inoculum for specificity: ≤10^4 CFU/ml
   Incubation Conditions: 18-24 h at 35 ± 2°C, in aerobiosis

Microorganism		Growth on CHROMATIC DETECTION	Colonies color	Growth on CHROMATIC ESBL
Escherichia coli	DSM 22311	Good	Pink-red	Good
Escherichia coli	DSM 22364	Good	Pink-red	Good
Escherichia coli	ATCC® 25922	Good	Pink-red	Inhibited
Klebsiella pneumoniae	ATCC® 13883	Good	Green-blue-violet	Inhibited
Proteus mirabilis	ATCC® 25933	Good	Brown	Inhibited
Pseudomonas aeruginosa	ATCC® 27853	Good	Yellowish	Inhibited
Staphylococcus aureus	ATCC® 25923	Good	Cream	Inhibited
Enterococcus faecalis	ATCC® 19433	Good	Green-Turquoise	Inhibited

TABLE OF SYMBOLS

LOT Batch code	IVD *In vitro* Diagnostic Medical Device	Manufacturer	Use by	Fragile, handle with care
REF Catalogue number	Temperature limitation	Contains sufficient for <n> tests	Caution, consult accompanying documents	Do not reuse

LIOFILCHEM® S.r.l.
Via Scozia, Zona Ind.le - 64026, Roseto degli Abruzzi (TE) - ITALY
Tel +39 0858930745 Fax +39 0858930330 Website: www.liofilchem.net E-mail: liofilchem@liofilchem.net

CE IVD