

CHROMATIC MH

Chromogenic medium for the preliminary identification and susceptibility testing of bacteria directly from clinical and environmental specimens

TYPICAL FORMULA (g/L)

Meat Extract	2.0
Casamino Acids, Technical	17.5
Starch	1.5
Chromogenic Mix	0.5
Agar	20.0
Final pH 7.3 ± 0.1	

DESCRIPTION

CHROMATIC MH is a chromogenic medium for the presumptive identification and susceptibility testing of bacteria directly from clinical and environmental specimens.

CHROMATIC MH can be used with antibiotic disks for the susceptibility testing of bacteria according to the Kirby-Bauer method and also with Liofilchem® MIC Test Strip for the determination of the Minimum Inhibitory Concentration (MIC) of an antimicrobial agent from clinical specimens.

In the Intensive Care Unit the mortality rates associated with VAP (Ventilator-Associated Pneumonia), surgical site infections, intra-abdominal infections, indwelling catheter related infections, and sepsis are particularly high. Direct M.I.C. testing on csf, positive blood culture bottles and other specimens from critical patients and direct M.I.C. on bronchial aspirates and respiratory secretions from patients with VAP, can result in timely and essential information to guide antimicrobial therapy ultimately reducing patient mortality and morbidity.

The results of the preliminary identification and direct susceptibility testing provided by CHROMATIC MH should be considered and reported as "preliminary results".

PRINCIPLE

Casamino acids and meat extract are a source of amino acids, nitrogen, minerals, vitamins, and other factors which increases the growth of bacteria.

Starch acts as a protective substance against inhibitory molecules which can be present in the medium. Hydrolysis of starch during sterilization supplies a minor amount of glucose for energy. The chromogenic mix facilitates the identification of bacteria on the basis of the color and colony morphology. Agar is the solidifying agent.

PREPARATION

A Gram-stain may be performed on each clinical specimen and those specimens showing a significant number of bacteria should be tested with CHROMATIC MH. For environmental sampling the Gram-stain can be negated.

TECHNIQUE

Inoculate CHROMATIC MH medium with 10 µL of the specimen and with a swab spread homogeneously covering all the agar surface. If the specimen is very thick, it must be previously diluted 1:2 in a saline solution and shaken in a vortex before spreading.

Kirby-Bauer method

Position the antibiotic discs within 15 minutes of inoculating the CHROMATIC MH media, pressing the disks with sterile pliers ensuring full contact with the agar and incubate at 37±1°C for 18-24 hours.

Liofilchem® MIC Test Strip method

Apply the Liofilchem® MIC Test Strip to the agar surface with the code reading the correct way i.e. the MIC Test Strip is NOT upside down. Press the MIC Test Strip with sterile forceps ensuring that the whole length of the antibiotic gradient is in complete contact with the agar surface. Once applied, do not move the strip. Incubate plates in an inverted position at 37±1°C for 18-24 hours.

INTERPRETATION OF RESULTS

Presumptive Identification

At the end of incubation, observe the appearance of the colonies and interpret the results as indicated in table 1.

Table 1.

Microorganisms	Typical appearance of the colonies
<i>Escherichia coli</i>	Pink-Mauve
<i>Klebsiella pneumoniae</i>	Green-Blue
<i>Proteus mirabilis</i>	Brown
<i>Pseudomonas aeruginosa</i>	Yellowish-Green
<i>Staphylococcus aureus</i>	Cream
<i>Enterococcus faecalis</i>	Green-Turquoise

Susceptibility Testing with Kirby-Bauer method

Measure the inhibition zones and interpret according to EUCAST guidelines using appropriate NCTC and ATCC controls.

M.I.C. Determination with Liofilchem® MIC Test Strip method

Read the M.I.C. value for each relevant bacterium where the edge of the inhibition ellipse intersects the MIC Test Strip (intersection between two scale segments should be round up to the higher value). Interpret according to the current reference standards.

STORAGE

2-8°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

WARNING AND PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. 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

- Bouza, E., Burillo, A. and Muñoz, P. (2007) Role of the Microbiology Laboratory in the Diagnosis of Ventilator-Associated Pneumonia, in Nosocomial Pneumonia: Strategies for Management (ed J. Rello), John Wiley & Sons, Ltd, Chichester, UK.



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PRODUCT SPECIFICATION

NAME

CHROMATIC MH

PRESENTATION

Ready plates (90 mm) containing 22 ± 1 mL of medium

STORAGE

2-8°C

PACKAGING

Code	Content	Packaging
11618	20 plates	<ul style="list-style-type: none"> • 5 plates in thermically soldered film • 4 x 5 plates in cardboard box

pH OF THE MEDIUM

7.3 ± 0.1

USE

CHROMATIC MH is a chromogenic medium for preliminary identification and susceptibility testing of bacteria directly from clinical and environmental specimens

TECHNIQUE

Refer to product technical sheet

APPEARANCE OF THE MEDIUM

Appearance: slightly opalescent
Colour: amber











SHELF LIFE

120 days

QUALITY CONTROL

1. Control of general characteristics, label and print
2. Sterility control
 - 7 days at $20 \pm 2^\circ\text{C}$
 - 7 days at $35 \pm 2^\circ\text{C}$
3. Microbiological control
 - Plates are inoculated with the following microbial strains:
Escherichia coli ATCC 25922, *Klebsiella pneumoniae* ATCC 13883, *Proteus mirabilis* ATCC 25933, *Pseudomonas aeruginosa* ATCC 27853, *Staphylococcus aureus* ATCC 25923, *Enterococcus faecalis* ATCC 19433.
 - Inoculum for productivity: 10-100 UFC/mL
 - Incubation Conditions: 18-24 h at $35 \pm 2^\circ\text{C}$, in aerobiosis

TABLE OF SYMBOLS

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



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