

BacterLab Division



Issue date: 02/01/2025

Version: 01.2025



CHROMOGENIC AGAR MEDIUM

BacterChrom™ MH Orientation Agar

Ready-to-use chromogenic medium on 90mm plates for differentiating and testing antibiotic susceptibility (antibiotic susceptibility testing) on the same plate.

Code: 01020



1. INTENDED USE

BacterChrom™ MH Orientation Agar is a chromogenic Mueller Hinton medium designed for dual purposes: routine detection of common urinary tract infections (UTIs) and rapid antimicrobial susceptibility testing. The medium is particularly suitable for critical cases such as ventilator-associated pneumonia (VAP) in ICU patients, where timely results can significantly impact patient outcomes by aiding early therapeutic decisions. The packaging with semi-permeable Cellophane film helps balance the humidity of the environment during storage.

2. PRINCIPLES

BacterChrom™ MH Orientation Agar combines the properties of chromogenic and Mueller Hinton media, offering dual functionalities for microbial growth and differentiation. Chromogenic substrates in the medium enable specific enzymes to produce characteristic colony colors, facilitating easy identification. The selective components ensure high specificity by suppressing non-target organisms, supporting both identification and antimicrobial susceptibility testing.

3. TYPICAL COMPOSITION

For 1 liter of medium

Agar	17,0 g
Peptone and growth factors	21,0 g
Chromogenic mix	1,4 g
Supplement (S)	4,0 mL

pH of the ready-to-use medium at 25°C: $7,1 \pm 0,2$

4. PREPARATION

The environmental plates are ready-to-use, no preparation required.

5. INSTRUCTIONS FOR USE

- Allow to warm to room temperature before inoculation, dry the plates in an incubator with the covers partially removed.
- Spread a bacterial suspension according to classical procedure. Alternatively perform a direct spreading of the sample on the plate allowing a confluent growth
- Incubate in aerobic conditions at 35 – 37°C for 18 – 24 hours (in some cases a first reading can be done as soon as 8 hours after incubation).

6. RESULTS

Qualitative reading and interpretation of the plates:

Microorganism	Typical colony appearance
Gram (-)	
<i>E. coli</i>	Dark pink to reddish
<i>Klebsiella, Enterobacter, Citrobacter, Serratia</i>	Metallic blue (+/- reddish halo)
<i>Proteus, Morganella, Providencia</i>	Brown halo
<i>Proteus vulgaris</i>	Blue with brown halo
<i>Pseudomonas</i>	Translucent (+/- natural pigmentation cream to green)
<i>Acinetobacter</i>	Cream
<i>Stenotrophomonas</i>	Colourless
Gram (+)	
<i>Enterococcus</i>	Turquoise blue
<i>S. aureus</i>	Golden, opaque, small
<i>S. saprophyticus</i>	Pink, opaque, small
<i>Streptococcus</i> Group B	Light blue

7. QUALITY CONTROL

BacterLab ensures the quality of each product batch by testing with ATCC reference strains.

Reference strains	Incubation conditions	Expected results
<i>E. coli</i> ATCC 35218	Incubate for 18 – 24 hours at 35 – 37 °C	Reddish colonies
<i>K. pneumoniae</i> NCTC 13442		Metallic blue colonies
<i>E. faecalis</i> ATCC 29212		Blue colonies
<i>S. aureus</i> ATCC 25923		Golden yellow colonies
<i>S. saprophyticus</i> ATCC 15305		Pink colonies

8. STORAGE AND TRANSPORT CONDITIONS

- Storage: 2 – 8°C.
- Transportation: Ambient temperature.

9. PACKAGING

- Packaging: 10 plates/box or as per customer request.

10. SHELF LIFE

- Expiration Date: 03 months from the manufacturing date.

11. BIBLIOGRAPHY

- CHROMagar, 2021. *CHROMagar™ Technical Data Sheet: NT-EXT-035 V4.1*. Available at: <https://www.chromagar.com/wp-content/uploads/2021/11/NT-EXT-035-V4.1.pdf>