CHROMagar™ MH Orientation

Instructions For Use
For Research Use Only (RUO).
Not for use in diagnostic procedures.

ENGLISH

Instructions For Use

REFERENCES

Pack Size			Ordering References		Base (B)		Supplement (S)
5000 mL	250 Tests of 20 mL	=	MH482	=	MH482(B) Weight: 197 g	+	MH482(S) Volume: 20 mL
25 L	1250 Tests of 20 mL	=	MH483-25	=	MH483-25(B) Weight: 985 g		5 x MH482(S) Volume: 5 x 20 mL

MEDIUM PURPOSE

Chromogenic Mueller Hinton medium

CHROMagar™ MH Orientation combines the advantages of traditional Mueller Hinton and chromogenic media. Not only could it be used in routine laboratory for common Urine Tract Infections (UTI) but also in specific cases where rapid procedure for antimicrobial susceptibility testing is required. Testing samples from ICU (Intensive Care Unit) patients with Ventilated Associated Pneumonia (VAP) is a good example where CHROMagar™ MH Orientation benefits would help saving lives and reduce healthcare costs.

COMPOSITION

The product is composed of a powder base (B) and a supplement (S).

Product =	Base (B)	Supplement (S)
Total g/L	39.4 g/L	4.0 mL/L
Composition g/L	Agar 17.0 Peptone and growth factors 21.0 Chromogenic mix 1.4	Growth factors mix
Aspect	Powder Form	Liquid Form
STORAGE	15-30 °C	
FINAL MEDIA pH	7.1 +/- 0.2	

Need some Technical Documents?

Available for download on www.CHROMagar.com

- Certificate of Analysis (CoA) --> One per Lot
- Material Safety Data Sheet (MSDS)

PREPARATION **(Calculation for 1 L)**

Step 1
Preparation of the mix

- Disperse slowly 39.4 g of powder base in 1 L of purified water.
- Add 4 mL of supplement (S) into slurry.
- Stir until agar is well thickened.
- Heat and bring to boil (100 °C) while swirling or stirring regularly.

Advice 1: For the 100 °C heating step, mixture may also be brought to a boil in a microwave oven: after initial boiling, remove from oven, stir gently, then return to oven for short repeated bursts of heating until complete fusion of the agar grains has taken place (large bubbles replacing foam).

- AUTOCLAVE at 121 °C during 15 min.

Step 2
Pouring

- Cool in a water bath to 45-50 °C, swirling or stirring gently.
- Pour into sterile Petri dishes.
- Let it solidify and dry.

Storage

- Store in the dark before use.
- Prepared media plates can be kept for one day at room temperature.
- Plates can be stored for up to 2 months under refrigeration (2/8 °C) if properly prepared and protected from light and dehydration.

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SPECIMEN COLLECTION AND HANDLING

CHROMagar™ MH Orientation can be used with the following specimens: respiratory samples and urine.

Sampling and transport equipment must be used in accordance with the recommendations of their suppliers for the conservation of strains.

MATERIAL REQUIRED BUT NOT PROVIDED

Standard microbiological laboratory material for culture media preparation, control, streaking, incubation and waste disposal.

INOCULATION

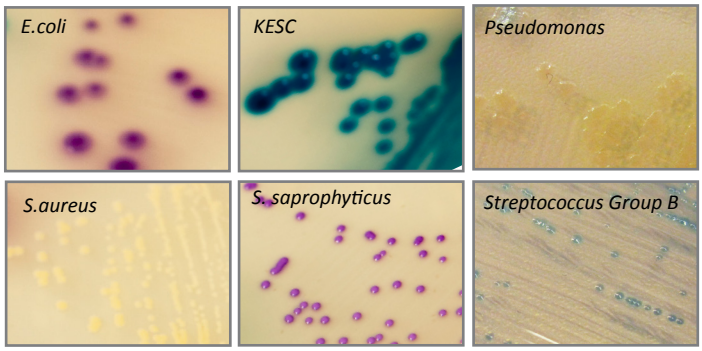
Spread a bacterial suspension according to classical procedure. Alternatively perform a direct spreading of the sample on the plate allowing a confluent growth.

- If the agar plate has been refrigerated, allow to warm to room temperature before inoculation.
- 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).

PRE-IDENTIFICATION INTERPRETATION

Microorganism	Typical colony appearance
Gram (-)	
E. coli	→ dark pink to reddish
Klebsiella, Enterobacter, Citrobacter, Serratia	→ metallic blue (+/- reddish halo)
Proteus, Morganella, Providencia	→ brown halo
Proteus vulgaris	→ blue with brown halo
Pseudomonas	→ translucent (+/- natural pigmentation cream to green)
Acinetobacter	→ cream
Stenotrophomonas	→ colourless
Gram (+)	
Enterococcus	→ turquoise blue
S. aureus	→ golden, opaque, small
S. saprophyticus	→ pink, opaque, small
Streptococcus Group B	→ light blue

Typical colony appearance



The pictures shown are not contractual.

PERFORMANCE

In the following study, 272 samples (respiratory samples) were tested, being positive 143 after 18-24 h incubation at 35 °C in an aerobic atmosphere.

	CHROMagar™ MH Orientation	Reference Method (MicroScan, microdilution, CLSI guidelines)
Concordance with standard procedure	94.8 % *	-

* Data obtained from the study «Evaluation of direct E-test on lower respiratory tract samples using a chromogenic agar medium: a rapid procedure for antimicrobial susceptibility testing» E. Cercenado *et al.* ECCMID, 2009

LIMITATIONS AND COMPLEMENTARY TESTS

- Do not supplement with blood as it will affect the chromogenic coloration.
- The final identification must be confirmed by biochemical tests (ex: hydrolysis of Hippurate, CAMP test), immunological tests (ex: latex agglutination) or by mass spectrophotometry (ex: Maldi-Tof). They can be done directly from the suspicious colonies observed on the medium.

QUALITY CONTROL

Please perform Quality Control according to the use of the medium and the local QC regulations and norms.
Good preparation of the medium can be tested, isolating the following ATCC strains:

Microorganism	Typical colony appearance
E. coli ATCC® 25922	→ reddish
K. pneumoniae ATCC® 13883	→ metallic blue
E. faecalis ATCC® 29212	→ turquoise blue
S. aureus ATCC® 12600	→ golden yellow
S. saprophyticus ATCC® 15305	→ pink

WARNINGS AND PRECAUTIONS

- For Research Use Only.
- This laboratory product should be used only by trained personnel (healthcare professional, etc). Wear appropriate protective clothing, gloves and eye/face protection and handle appropriately with procedures and good laboratory practices.
- Use of the medium may be difficult for people who have problems recognising colours.
- Culture media should not be used as manufacturing material or components.
- Do not ingest or inhale the product.
- Do not use the product after the expiry date.
- Do not use the product if it shows any evidence of contamination or any sign of deterioration (compacted powder, color change, ...).
- Do not use the product if the packaging is damaged.
- Any change or modification in the production procedure may affect the results.
- Any change or modification of the required storage temperature may affect the performance of the product.

• Unappropriate storage may affect the shelf life of the product.
• Recap the bottles/vials tightly after each preparation and keep them in a low humidity environment, protected from moisture and light.
• Do not use the culture medium poured into a petri dish after a first use.
• After opening the bottles and with an appropriate conservation, open bottles can be used under the same conditions until each product's expiry date.
• Reading and interpretation should be performed using isolated colonies.
• Interpretation of the test results should be made taking into consideration colonial and microscopic morphology and if necessary, the results of any other tests performed.
• Laboratory, chemical or biohazardous wastes must be handled and discarded in accordance with all local and national regulations.
• For hazard and precaution recommendations related to some chemical components in this medium, please refer to the pictogram(s) mentioned on the labels. The Material Safety Data Sheet (MSDS) is available on www.chromagar.com
• Any incident or complaint related to the environment must be declared to the manufacturer at the following email address: chromagar@chromagar.com
• Any serious incident occurring in connection with the environment must be declared to the competent authorities and to the manufacturer at the following email address: chromagar@chromagar.com

DISPOSAL OF WASTE

After use, all plates and any other contaminated materials must be sterilized or disposed of by appropriate internal procedures and in accordance with local legislations. Plates can be destroyed by autoclaving at 121 °C for at least 20 minutes.

LITERATURE REFERENCES

Please refer to our website page «Publications» for scientific publications about this particular product.
Web link: http://www.chromagar.com/publication.php

IFU/LABEL INDEX

Catalogue reference


Consult instructions for use


Quantity of powder sufficient for X liters of media


Expiry date


Required storage temperature


Store away from humidity


Protect from light


Manufacturer

NT-EXT-108 USA V2.0 / 14-Aug-2025

CHROMagar
The Chromogenic Media Pioneer

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