

CHROMagar™ Orientation

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

ENGLISH

Instructions For Use

Chromogenic medium for the isolation and differentiation of urinary tract pathogens.

REFERENCES

Σ Pack Size		Ordering References	
5000 mL	250 Tests of 20 mL =	RT412	Weight: 165 g
25 L	1250 Tests of 20 mL =	RT413-25	Weight: 825 g
10 Kg	15150 Tests of 20 mL =	RT413-10Kg	Weight: 10 Kg

INTENDED USE

CHROMagar™ Orientation is a non-selective chromogenic culture medium intended for use in the qualitative direct detection, differentiation and presumptive identification of uropathogens to aid in the diagnosis of urine tract infections. The test is performed with urine samples. Results can be interpreted after 18-24 h of aerobic incubation at 35-37 °C.

Concomitant cultures are necessary to recover organisms for further microbiological testing or epidemiological typing. A lack of growth or the absence of colonies on CHROMagar™ Orientation does not preclude the presence of bacteria. CHROMagar™ Orientation is not intended to diagnose infection nor to guide nor monitor treatment for infections.

CHROMagar™ Orientation can also be used with veterinary samples.

COMPOSITION

The product is composed of a single powder base.

Product	=	Base
Total g/L		33.0 g/L
Composition g/L		Agar 15.0 Peptone and yeast extract 17.0 Chromogenic mix 1.0
Aspect		Powder Form
STORAGE		15-30 °C
FINAL MEDIA pH		7.0 +/- 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 33 g of powder base in 1 L of purified water.
- Stir until agar is well thickened.

Advice 1 (optional): For enhanced growth, add 0.5 g of Tween 80 to the previous preparation mix.

- Heat and bring to boil (100 °C) while swirling or stirring regularly.

Advice 2: 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, dehydration and microbial contamination.

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SPECIMEN COLLECTION AND HANDLING

CHROMagar™ Orientation can be used with the following specimens:

- In clinical field : urine
- In veterinary field : veterinary samples.

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

Related samples can be processed by direct streaking on the plate, as well as prior appropriate enrichment step.

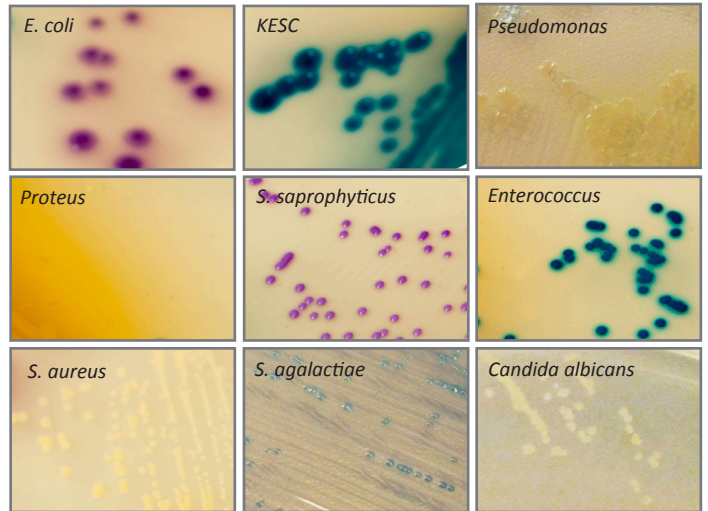
- If the agar plate has been refrigerated, allow to warm to room temperature before inoculation.
- Streak sample onto plate.
- Incubate in aerobic conditions at 35-37 °C for 18-24 hours.

INTERPRETATION

Semi quantitative reading and interpretation of the Petri dishes.

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>S. agalactiae</i>	→ light blue
<i>Enterococcus</i>	→ turquoise blue
<i>S. aureus</i>	→ golden, opaque, small
<i>S. epidermidis</i>	→ cream, pinpoint colonies
<i>S. saprophyticus</i>	→ pink, opaque, small
Yeasts	
<i>Candida albicans</i>	→ cream, pinpoint colonies

Typical colony appearance



The pictures shown are not contractual.

PERFORMANCE

	Analytical data *	Clinical data **
Sensitivity	100 %	100 %
Specificity	98 % For <i>E. coli</i> 99.3 %	-

* Data obtained after 16-24 h incubation at 35-37 °C in aerobic conditions with 1478 isolates were tested, being 74 enterococcal isolates and 1404 Gram-negative bacilli in the study «Evaluation of CHROMagar Orientation for Differentiation and Presumptive Identification of Gram-Negative Bacilli and Enterococcus Species». Merlino *et al.* 1996. *J. Clin. Microbiol.*

** Data obtained after 24 h incubation at 35 ± 2 °C in aerobic conditions with 900 urine samples in the study «Evaluation of Use of a New Chromogenic Agar in Detection of Urinary Tract Pathogens». Samra *et al.* 1998. *J. Clin. Microbiol.*

LIMITATIONS AND COMPLEMENTARY TESTS

- Most of *Serratia plymurtica* will grow mauve.
- Some *S. saprophyticus* strains can grow in cream-colored colonies.
- Final identification may require additional testing such as biochemical or immunological test:

Colonies	Suggested tests	Possible identification
Red	Indole Test: The medium allows indole test for confirmation of <i>E. coli</i>	Indole (+) --> <i>E. coli</i>
brown halo	TDA test (with FeCl ₃ Test) for confirmation of <i>Proteus</i> .	(+) --> <i>Proteus vulgaris</i> (blue colony center, <i>Morganella, Providencia</i>) (-) --> <i>Proteus mirabilis</i>
Turquoise blue, small gram stain + cocci appearance	PYR test (or serological test or hemolysis)	PYR (+) --> <i>Enterococcus</i> PYR (-) --> <i>Streptococcus B</i>

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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
<i>E. faecalis</i> ATCC® 29212	→ turquoise blue
<i>E. coli</i> ATCC® 25922	→ reddish
<i>S. aureus</i> ATCC® 12600	→ golden yellow
<i>S. epidermidis</i> ATCC® 12228	→ colourless
<i>S. saprophyticus</i> ATCC® 15305	→ pink
<i>K. pneumoniae</i> ATCC® 13883	→ metallic blue

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.
- Some precipitate may be observed in the agar but these do not affect the performance of the product.
- 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: www.chromagar.com/product/chromagar-orientation

IFU/LABEL INDEX

-  REF 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

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