
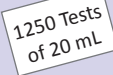


REFERENCES

Pack Size	Ordering References	Base (B)	Supplement (S1)	Supplement (S2)
5000 mL = 	SC172	SC172(B) Weight: 212.5 g	SC172(S1) Volume: 10 mL	SC172(S2) Weight: 1.25 g
25 L = 	SC173-25	SC173-25(B) Weight: 1062.5 g	SC173-25(S1) Volume: 50 mL	SC173-25(S2) Weight: 6.25 g

MEDIUM PURPOSE

Chromogenic medium for detection and isolation of Carbapenemase-producing Enterobacteriaceae (CPE)

CDC: «Carbapenem-resistant Enterobacteriaceae (CRE) are usually resistant to all β-lactam agents as well as most other classes of antimicrobial agents. The treatment options for patients infected with CRE are very limited. Healthcare-associated outbreaks of CRE have been reported. Patients colonized with CRE are thought to be a source of transmission in the healthcare setting. Identifying patients who are colonized with CRE and placing these patients in isolation precautions may be an important step in preventing transmission».

COMPOSITION

The product is composed of a powder base (B) and 2 supplements (S1 + S2).

Product	=	Base (B)	+	Supplement (S1)	+	Supplement (S2)
Total		42.5 g/L		2 mL/L		0.25 g/L
Composition		Agar 15.0 Peptones 20.0 Salt 5.0 Chromogenic and selective mix 0.8 Growth factors 1.7		Growth factors mix		Selective mix 0.25
Aspect		Powder Form		Liquid Form		Powder Form
STORAGE		15-30 °C		15-30 °C		2-8 °C
FINAL MEDIA pH		7.2 +/- 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 Base + S1

- Disperse slowly 42.5 g of powder base in 1 L of purified water.
- Add 2 mL of CHROMagar™ mSuperCARBA™ supplement S1 into slurry.
- Stir until the agar is well thickened.
- Heat and bring to boiling (100 °C) while swirling or stirring regularly. DO NOT HEAT TO MORE THAN 100 °C. DO NOT AUTOCLAVE AT 121 °C.

Warning 1: If using an autoclave, do so without pressure.

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).

- Cool in a water bath to 45-50 °C, swirling or stirring gently to homogenize.

Step 2

Preparation of S2

- In a transparent vessel, add 250 mg of CHROMagar™ mSuperCARBA™ supplement S2 in 2 mL of purified water.
- Swirl well until complete dissolution.
- Filter to sterilize at 0.45 µm.

Final Media HELPING CALCULATION

1 L	250 mg in 2 mL
5 L	1.25 g in 10 mL
25 L	6.25 g in 50 mL

Step 3

Base + S1 + S2

- Add the 2 mL of the supplement solution (S2) to the melted base (Step1) at 45-50 °C.
- Swirl or stir gently to homogenize.

Step 4

Pouring

- 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 1 month under refrigeration (2/8 °C) if properly prepared and protected from light and dehydration.

SPECIMEN COLLECTION AND HANDLING

CHROMagar™ mSuperCARBA™ can be used with the following specimens: perineal, rectal specimens, stools and urine.

This medium can be also used in food industry with the following specimens: livestock and poultry.

Use of transport devices approved for collection of such specimens is recommended.

MATERIAL REQUIRED BUT NOT PROVIDED

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

INOCULATION

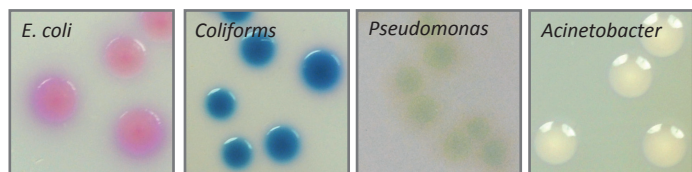
Related samples can be processed by direct streaking on the plate.

- 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

Microorganism	Typical colony appearance
CPE <i>E. coli</i>	→ dark pink to reddish
CPE Coliforms	→ metallic blue
CPO <i>Pseudomonas</i>	→ translucent, +/- natural pigmentation cream to green
CPO <i>Acinetobacter</i>	→ cream
Other Gram (-) CPO	→ colourless, natural pigmentation
Non-CPE <i>E. coli</i> /Coliforms	→ inhibited
Other Gram (-) non-CPO	→ inhibited
Gram (+) bacteria	→ inhibited

Typical colony appearance



The pictures shown are not contractual.

PERFORMANCE

In the following study, 211 rectal swabs were tested at 24 h incubation at 35 °C.

	CHROMagar™ mSuperCARBA™
Sensitivity	100 % *
Specificity	100 % *

* Data obtained from the study «CHROMagar™ mSuperCARBA: performance in carbapenem-resistant Enterobacteriaceae isolates characterized at molecular level and routine surveillance rectal swabs specimens» R. Canton et al. 2016 Diagnostic Microbiology & Infectious Disease Volume 87.

LIMITATIONS AND COMPLEMENTARY TESTS

- Species final identification may require additional testing such as biochemical tests.
- CPE characterization can be done using methods based on the detection of the acidification resulting from imipenem hydrolysis or by susceptibility testing methods, directly from CHROMagar™ mSuperCARBA™.
- Some strains with multidrug resistance or with a decrease in membrane permeability may grow.
- Some strains showing a low level of carbapenem resistance may have an irregular to poor growth.
- Rarely, some VRE may growth in blue small colonies.

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. coli</i> IMP NCTC 13476	→ dark pink to reddish
<i>K. pneumoniae</i> ATCC® BAA 1705	→ metallic blue
<i>K. pneumoniae</i> KPC NCTC 13438	→ metallic blue
<i>E. faecalis</i> ATCC® 29212	→ inhibited
<i>K. pneumoniae</i> ESBL ATCC® 700603	→ mostly inhibited

WARNINGS AND PRECAUTIONS

- For Research Use Only (RUO). Not for use in diagnostic procedures.
- 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.
- For a good microbial detection, collection and transport of specimen should be well handled and adapted to the particular specimen according to good laboratory practices.
- 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 show any evidence of contamination or any sign of deterioration.
- Do not use the product if the packaging is damaged.
- Any change or modification in the 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.
- Reading and interpretation should be performed using isolated colonies.

- Some precipitates 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 Safety Data Sheet (SDS) is available on www.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

-  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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