

# CHROMagar™ Serratia

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

ENGLISH

Instructions For Use

Chromogenic medium for detection of *Serratia marcescens*

## REFERENCES

Σ Pack Size	Ordering References	Base (B)	Supplement (S)
5000 mL = 250 Tests of 20 mL	SM302	SM302(B) Weight: 212.5 g	SM302(S) Volume: 10 mL

## INTENDED USE

CHROMagar™ Serratia is a selective and differential chromogenic culture medium, intended for use in the qualitative direct detection of colonization with *Serratia marcescens* to aid in the prevention and control of *Serratia marcescens* in intensive care unit (ICU), notably neo-natal. The test is performed with rectal swabs, throat swabs, wound swabs and stools from patients to screen for *Serratia* colonization. It can also be used in hygiene monitoring in the clinical environment with surface sampling. Results can be interpreted after 18-24 h of aerobic incubation at 35-37 °C.

CHROMagar™ Serratia is not intended to diagnose *Serratia* infection nor to guide nor monitor treatment for infections. A lack of growth or the absence of colonies on CHROMagar™ Serratia does not preclude the presence of *Serratia*. Further identification, susceptibility testing, and epidemiological typing is needed on suspect colonies.

## COMPOSITION

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

Product	=	Base (B)	+	Supplement (S)
Total		42.5 g/L		2 mL/L
Composition		Agar 15.0 Peptones 20.0 Salt 5.0 Growth factors 1.7 Chromogenic and selective mix 0.8		Growth factors
Aspect		Powder Form		Liquid Form
STORAGE		15-30 °C		15-30 °C
FINAL MEDIA pH		7.1 +/- 0.2		

Need some  
Technical Documents?

Available  
for download on  
[www.CHROMagar.com](http://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 + Supplement

- Disperse slowly 42.5 g of powder base in 1 L of purified water.
- Add 2 mL of CHROMagar™ Serratia supplement 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

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.

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## SPECIMEN COLLECTION AND HANDLING

CHROMagar™ Serratia can be used with the following specimens: Rectal swabs, throat swabs, wound swabs and stools.

Surface samples for hygiene monitoring in the clinical environment.

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

## MATERIAL REQUIRED BUT NOT PROVIDED

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

## INOCULATION

Related samples are inoculated by direct streaking on the plate.

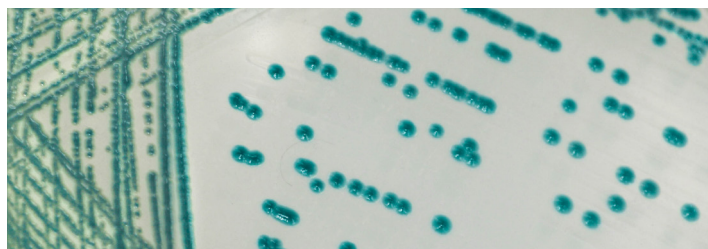
- If the agar plate has been refrigerated, allow to warm to room temperature before inoculation.
- Streak sample onto plate.
- Incubate in aerobic conditions at 35-37 °C for 18-24 hours.

## INTERPRETATION

Qualitative reading and interpretation of the petri dishes

Microorganism	Typical colony appearance
<i>Serratia marcescens</i>	→ Green-blue to metallic blue
<i>E. coli</i>	→ Dark pink to reddish
<i>Pseudomonas</i>	→ Colourless +/- natural pigmentation
<i>Morganella</i>	→ Brown halo
Yeasts, Gram (+) bacteria and other Gram (-) bacteria	→ Inhibited

### Typical colony appearance



Picture shown is not contractual.

## PERFORMANCE

	Analytical data *	Clinical data** CHROMagar™ Serratia
Sensitivity	100 %	97 %
Specificity	97 %	100 %

\* Data obtained after 20 h incubation at 37 °C in aerobic conditions in the study «Validation of Colorex™ (CHROMagar™) Serratia agar on WASP™/WASPLab™ in screening for *Serratia marcescens* in neonatal intensive care units using the ESwab™». Gaskin *et al.* Poster ECCMID 2020.

\*\* Data obtained after 24 h incubation at 37 °C in aerobic conditions with 96 epidemiological samples (46 rectal swabs and 50 from environmental surfaces, sink and drains) in the study «Evaluation of CHROMagar™ Serratia agar, a new chromogenic medium for the detection and isolation of *Serratia marcescens*». Pérez Viso *et al.*, 2021. *Eur. J. Clin. Microbiol. Infect. Dis.*

## LIMITATIONS AND COMPLEMENTARY TESTS

- With an incubation temperature less than or equal to 35 °C, rare *Serratia marcescens* strains can be colored by their natural red pigmentation.
- The final identification must be confirmed by biochemical tests or by mass spectrophotometry (eg 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
<i>Serratia marcescens</i> ATCC 13880	→ Metallic blue
<i>Pseudomonas</i> ATCC 27853	→ Colourless to yellow
<i>S. aureus</i> ATCC 43300	→ Inhibited
<i>E. faecalis</i> ATCC 29212	→ Inhibited
<i>E. coli</i> ATCC 25922	→ 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.
- 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 conversation, 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 Safety Data Sheet (SDS) is available on [www.chromagar.com](http://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](mailto: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](mailto: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

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