

# CHROMagar™ MRSA

## Instructions For Use

For Research Use Only (RUO)

**CHROMagar™ MRSA**  
**Product code MR502**

**NT-EXT-094**

Version 2.0

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**ENGLISH**

**CHROMagar™ MRSA**  
**Product code MR533-10Kg**

**NT-EXT-107**

Version 1.0

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**ENGLISH**

## REFERENCES

Σ Pack Size	Ordering References	Base (B)	Supplement (S)
5000 mL 250 Tests of 20 mL	MR502	MR502 Weight: 412.5 g	SU620

## MEDIUM PURPOSE

Chromogenic medium for the isolation and differentiation of Methicillin Resistant *Staphylococcus aureus* (MRSA) including low level MRSA.

The major issue with this pathogen is its resistance to a large panel of antibiotics, among them beta-lactam antibiotics, limiting the therapeutic options for clinicians.

## COMPOSITION

The product is composed of a powder base and 1 supplement.

Product	Base	Supplement
Total g/L	82.5 g/L	
Composition g/L	Agar 15.0 Peptones and yeast extract 40.0 Salts 25.0 Chromogenic mix 2.5	
Aspect	Powder Form	Freeze dried vial
STORAGE	15-30 °C	2-8 °C
FINAL MEDIA pH	6.9 +/- 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 the base  
CHROMagar™  
MRSA base (B)

- Disperse slowly 82.5 g of powder base in 1 L of purified water.
  - Stir until agar is well thickened.
  - Autoclave at 110 °C during 5 min.
- DO NOT AUTOCLAVE AT 121 °C. DO NOT HEAT LONGER THAN 5 MIN.
- Cool in a water bath to 45-50 °C.
  - Swirl or stir gently to homogenize.

### Step 2

Preparation of the  
Supplement (S)

- For reconstitution, aseptically rehydrate CHROMagar™ MRSA supplement ref SU620 with 20.0 mL of sterile water.
- Mix slowly.
- Add 1 mL of CHROMagar™ MRSA supplement to the prepared CHROMagar™ MRSA medium

### Step 3

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 one month under refrigeration (2/8 °C) if properly prepared and protected from light and dehydration.
- Advice 2: If not fully used, rehydrated CHROMagar™ MRSA supplement can be stored one week at 2-8 °C or up to 2 months at -20 °C.

# CHROMagar™ MRSA

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

ENGLISH

Instructions For Use

## SPECIMEN COLLECTION AND HANDLING

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

This medium can be also used in environmental and veterinary fields with the following specimens: pets, livestock, poultry, clinical and other materials.

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

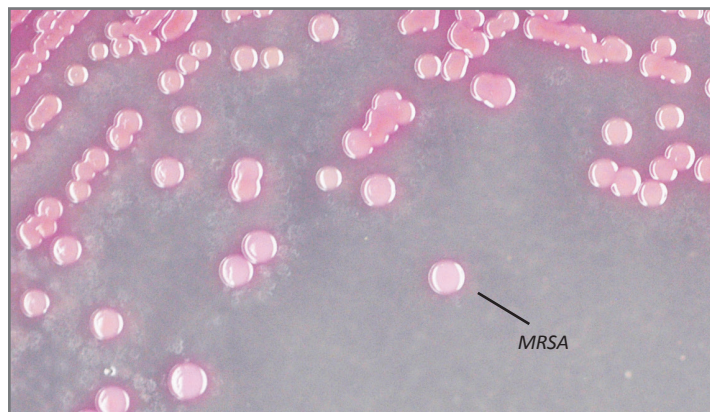
Related samples can be processed by direct streaking on the plate, as well as prior appropriate enrichment step.

- 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

Microorganism	Typical colony appearance
MRSA	→ pink to mauve
MSSA	→ inhibited
Other bacteria	→ inhibited, colourless, blue

### Typical colony appearance



The pictures shown are not contractual.

## PERFORMANCE

In the following study, 831 nasal swabs were tested after 24 h incubation at 37 °C in aerobic conditions.

	CHROMagar™ MRSA	Reference Method (TSA + Blood)
Sensibility	95.6 % *	83.2 %
Specificity	100 % *	--

\* Data obtained from the study «Evaluation of a new chromogenic medium for isolation and presumptive identification of Methicillin Resistant *S. aureus* from human clinical specimens» J. Loulergue et al. European Journal of Clinical Microbiology and Infectious Diseases. 2006

## LIMITATIONS AND COMPLEMENTARY TESTS

- Definite identification as MRSA requires, in addition, a final identification as *S. aureus*.

## 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
MR <i>S. aureus</i> ATCC® 33592	→ mauve
MS <i>S. aureus</i> ATCC® 25923	→ inhibited
<i>E. faecalis</i> ATCC® 29212	→ inhibited
<i>E. coli</i> ATCC® 25922	→ inhibited
<i>C. albicans</i> ATCC® 10231	→ 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 shows 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](http://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

-  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-094 USA V2.0 / 17-Jul-2020

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ATCC® is a registered trademark of the American Type Culture Collection

### REFERENCES

Pack Size	Ordering References	Base (A)	Liquid B	Mix C	Supplement SU
10 KG 6200 Tests of 20 mL	<b>MR533-10KG</b>	= MR533-10Kg	+ MR513-125(B)	+ MR513-125(C)	+ SU625-BA

### MEDIUM PURPOSE

Chromogenic medium for the isolation and differentiation of Methicillin Resistant *Staphylococcus aureus* (MRSA) including low level MRSA.

The major issue with this pathogen is its resistance to a large panel of antibiotics, among them beta-lactam antibiotics, limiting the therapeutic options for clinicians.

### COMPOSITION

The product is composed of a powder base (A) and 3 supplement (B + C + SU).

Product	=	Base (A)	+	Liquid B	+	Mix C	+	Supplement SU
Total g/L		80.4 g/L		2 g/L		0.25 g/L		2.6 mg/L
Composition g/L		Agar 15.0 Peptones and yeast extract 40.0 Salts 25.0 Chromogenic mix 0.4		Growth factors 2.0		Selective and chromogenic mix		Selective mix
Aspect		Powder Form		Liquid Form		Powder Form		Powder Form
STORAGE		<b>15-30 °C</b>		<b>15-30 °C</b>		<b>2-8 °C</b>		<b>2-8 °C</b>

### FINAL MEDIA pH

6.9 +/- 0.2

### PREPARATION (Calculation for 1 L)

<b>Step 1</b> Preparation of CHROMagar™ MRSA base (A) + Liquid B	<ul style="list-style-type: none"> <li>Disperse slowly 80.4 g of CHROMagar™ MRSA <b>Base A</b> powder in 1 L of purified water.</li> <li>Add 2 g of CHROMagar™ MRSA <b>Liquid B</b> to it, into slurry.</li> <li>Stir until agar is well thickened.</li> <li>Autoclave (Base A + Liquid B) at 121 °C during 15 min.</li> <li>Cool to 45/50 °C keeping stirring.</li> </ul>	<b>Final Media</b> <b>HELPING CALCULATION</b> 5 L Base 402 g / Liquid B : 10 g 10 L Base 804 g / Liquid B : 20 g 25L Base 2010 g / Liquid B : 50 g
<b>Step 2</b> Preparation of CHROMagar™ MRSA Mix C	<ul style="list-style-type: none"> <li>In a transparent vessel, add 250 mg of Mix C powder to 10 mL of purified water.</li> <li>Place under agitation with a magnetic stirring until Mix C is solubilized. (for 10 mL --&gt; 30 min of stirring)</li> <li>Filter sterilise at 0.45 µm.</li> <li>And aseptically add into slurry (Base A + Liquid B) cooled to 45/50 °C while mixing.</li> </ul>	<b>Final Media</b> <b>HELPING CALCULATION</b> 5 L Mix C : 1.25 g in 50 mL 10 L Mix C : 2.5 g in 100 mL 25L Mix C : 6.25 g in 250 mL
<b>Step 3</b> Preparation of CHROMagar™ MRSA Supplement	<ul style="list-style-type: none"> <li>For reconstitution make a stock solution of CHROMagar™ MRSA supplement ref SU625-BA at 2 mg/mL (add 20 mg of SU625-BA powder to 10 mL of purified water). Homogenize and filter sterilise at 0.45 µm.</li> <li>Add 1.3 mL into melted (Base A + Liquid B + Mix C) cooled to 45/50 °C.</li> </ul>	<b>Final Media</b> <b>HELPING CALCULATION</b> 5 L Add 6.5 mL into melted base 10 L Add 13 mL into melted base 25L Add 32.5 mL into melted base
<b>Step 4</b> Pouring	<ul style="list-style-type: none"> <li>Swirl or stir gently to homogenize. Pour into sterile Petri dishes.</li> <li>Let it solidify and dry.</li> </ul>	
<b>Storage</b>	<ul style="list-style-type: none"> <li>Store in the dark before use.</li> <li>Prepared media plates can be kept for one day at room temperature.</li> <li>Plates can be stored for up to 2 weeks under refrigeration (2/8 °C) if properly prepared and protected from light and dehydration.</li> </ul>	

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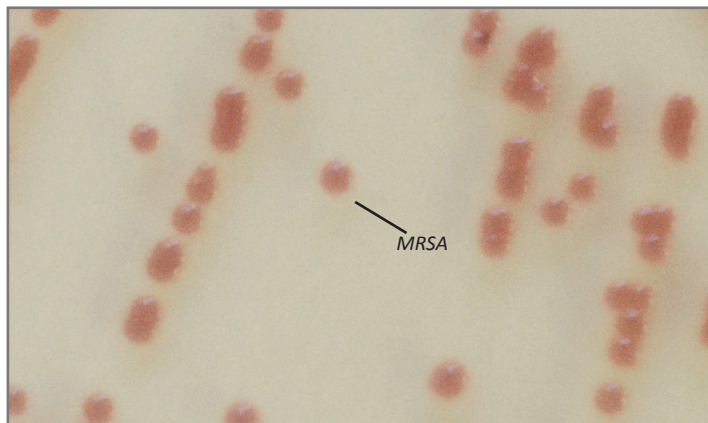
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**CHROMagar™**  
The Chromogenic Media Pioneer

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