

## REFERENCES

Pack Size	Ordering References	Weight
5000 mL <small>250 Tests of 20 mL</small>	SA132	174.5 g
25 L <small>1250 Tests of 20 mL</small>	SA133-25	872.5 g

## MEDIUM PURPOSE

Chromogenic medium for detection and isolation of *Salmonella* species, including *S. typhi* and *S. paratyphi* in clinical specimens. Infections caused by *Salmonella* spp, including *Salmonella typhi*, remain a major worldwide health problem:

- In the US, *Salmonella* has an incidence rate of 16.47 cases per 100,000 (CDC estimation, 2010).
- In Europe, it is reported as the first cause of food outbreaks (EFSA/ECDC 2011 report, 2009 figures).
- In developing countries, *Salmonella* Typhi and paratyphi are commonly encountered with an estimated annual incidence of about 17 million cases (2007 EFSA report).

Moreover, according to a recent WHO report, *Salmonella* infections are responsible for 2 million deaths per year from diarrhea. *Salmonella* is the second most reported zoonotic infection in humans (EFSA/ECDC 2011 report, 2009 figures).

## COMPOSITION

The product is composed of one single powder medium.

Product	=	Pack
Total g/L		34.9 g/L
Composition g/L		Agar 15.0 Peptone and yeast extract 7.0 Chromogenic and selective mix 12.9
Aspect		Powder Form
STORAGE		2/30 °C
FINAL MEDIA pH		7.6 +/- 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

- Disperse slowly 34.9 g of powder in 1 L of purified water.
- Stir until agar is well thickened.
- Heat and bring to boil (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 are replacing foam).

**Advice 2:** In case of product samples containing a high load of *Pseudomonas* and/or *Aeromonas*, Cefsulodin can be added at 5 mg/L.

### Step 2

Pouring

- Cool down in a water bath to 45-50 °C.
- Swirl or stir gently to homogenize.
- Pour medium 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.

# CHROMagar™ Salmonella

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

## SPECIMEN COLLECTION AND HANDLING

CHROMagar™ Salmonella can be used with the following specimens: blood and stools.

This medium can be also used in environmental and veterinary fields with the following specimens: processed and recreational water, pets, 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

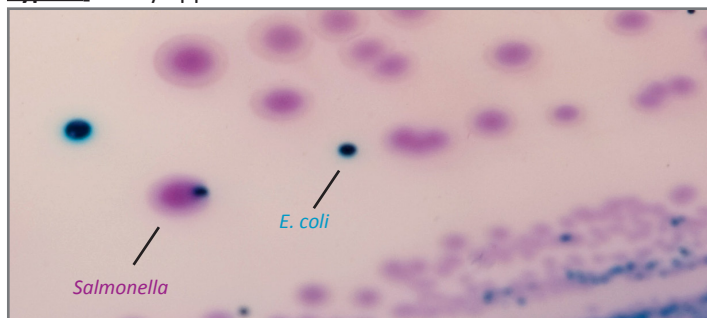
Related samples can be processed by direct streaking on the plate, as well as prior appropriate enrichment step.

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

## INTERPRETATION

Microorganism	Typical colony appearance
<i>Salmonella</i> including <i>S. typhi</i>	→ mauve
<i>E. coli</i> , coliforms etc.	→ blue
Some <i>Proteus</i> , etc.	→ colourless
Gram positive bacteria	→ inhibited
<i>Pseudomonas</i> , <i>Aeromonas</i>	→ mostly inhibited

### Typical colony appearance



The pictures shown are not contractual.

## PERFORMANCE

In the following study, 508 stool samples were tested and read after 18-24 h incubation at 37 °C in aerobic conditions.

	CHROMagar™ Salmonella	Reference Method (Hektoen Agar)
Sensibility	95 % *	80 %
Specificity	88,9 % *	78,5 %

For better performance, samples can be put in Muller-Kauffmann broth at 41 °C overnight.

\* Data obtained from the study «Comparison of CHROMagar™ Salmonella medium and Hektoen Enteric Agar for isolation and Salmonellae from stool samples» Olivier Gaillot et Al. Journal of Clinical Microbiology 1998.

## LIMITATIONS AND COMPLEMENTARY TESTS

- *Pseudomonas* may have similar mauve colony aspect and can be eliminated by an oxydase test.
- Many *Salmonella typhi* can be detected after 24-48 h incubation as mauve variable size colonies.
- Lactose plus *Salmonella* would grow in metallic blue.
- Final identification must be done by biochemistry and serology (e.g. Latex agglutination test from Microgen), and can be performed directly from the plates on suspected 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>S. enteritidis</i> ATCC® 13076	→ mauve
<i>S. typhimurium</i> ATCC® 13311	→ mauve
<i>E. coli</i> ATCC® 25922	→ metallic blue, small
<i>C. freundii</i> ATCC® 8090	→ metallic blue
<i>S. aureus</i> ATCC® 25923	→ 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 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.

# CHROMagar™ Salmonella

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ENGLISH

Instructions For Use

- 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

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**CHROMagar™**  
The Chromogenic Media Pioneer

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