

## MEDIUM PURPOSE

Chromogenic medium for detection and isolation of *Salmonella* species in food samples.

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 human (EFSA/ECDC 2011 report, 2009 figures).

## COMPOSITION

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

Product	=	Base (B)	Supplement (S)
Total g/L		30.7 g/L	10ml/L
Composition g/L		Opaque Agar 20.0 Peptone and yeast extracts 8.0 Chromogenic mix 2.7	Propylene glycol 10.4
Aspect		Powder Form	Liquid Form
STORAGE		15/30°C	15/30°C
FINAL MEDIA pH		7.1 +/- 0.2	

## PREPARATION (Calculation for 1L)

### Step 1

Preparation

- Disperse slowly 30.7g of powder base in 1L of purified water.
- Stir until agar is well thickened.
- Add 10 ml/L of the LIQUID content of the supplement vial.
- Swirl for mixing.
- 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 replacing foam).

### Gram HELPING CALCULATION FOR 4 x 1000ml PACKS

30.7g	one dose of base powder
10ml	one dose of supplement

### Step 2

Pour plates

- Cool down in a water bath to 45-50°C.
- Swirl or stir gently to homogenize.
- 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 two months under refrigeration (2/8°C) if properly prepared and protected from light and dehydration.

## 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 and incubate at 37°C for 24 hours in aerobic condition.

### Typical Samples

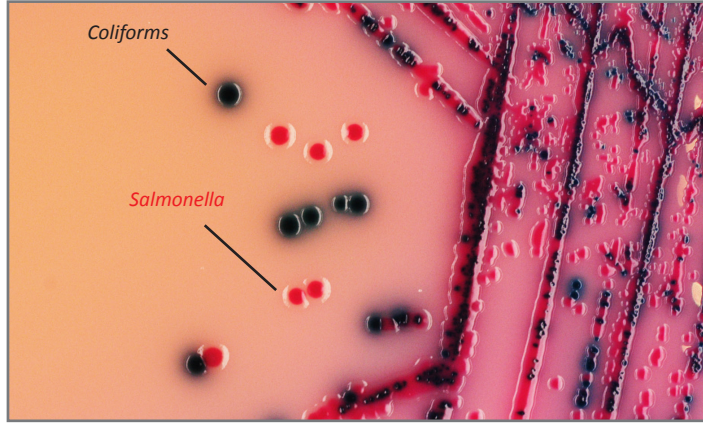
e.g. Industrial: food and environmental samples  
Clinical: stool or blood samples isolation  
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Possible enrichment step  
Direct streaking  
or spreading technique

### INTERPRETATION

Microorganism	Typical colony appearance
<i>Salmonella</i>	→ red
Many coliforms	→ blue or violet
<i>Proteus</i> , etc.	→ colourless
Gram positive	→ inhibited

### Typical colony appearance



The pictures shown are not contractual.

### LIMITATIONS

- This selective medium is inhibitory for many microorganisms other than *Salmonella*.
- Rare strains of *Pseudomonas* can appear positive and can be eliminated by an Oxydase test.
- Final identification must be done by biochemistry and serology.

### 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 ATCC strains below:

Microorganism	Typical colony appearance
<i>S. enteritidis</i> ATCC® 13076	→ red
<i>S. abaeutuba</i> ATCC® 35640	→ red
<i>E. coli</i> ATCC® 25922	→ blue, small
<i>C. freundii</i> ATCC® 8090	→ purple blue
<i>S. aureus</i> ATCC® 25923	→ inhibited

### WARNINGS

- Do not use plates if they show any evidence of contamination or any sign of deterioration.
- Do not use the product beyond its expiry date or if product shows any evidence of contamination or any sign of deterioration.
- For in vitro diagnostic use. This laboratory product should be used only by trained personnel in compliance with good laboratory practices.
- 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.
- 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.

### 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.

### 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

- Quantity of powder sufficient for X liters of media
- Expiry date
- Required storage temperature
- Store away from humidity

### 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)

Pack Size	Ordering References	Base	Supplement
4 x 1000 ml 200 Tests of 20ml	RR701	RR701 Weight: 4 x 30.7gr	N/A Weight: 4 x 10.4gr
25L 1250 Tests of 20ml	RR703-25	RR703-25 Weight: 767.5gr	RR703-25(S) Weight: 260gr

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