CHROMagar™ Salmonella

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.

<table>
<thead>
<tr>
<th>Product</th>
<th>Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total g/L</td>
<td>34.9 g/L</td>
</tr>
<tr>
<td>Composition g/L</td>
<td>Agar 15.0 Peptone and yeast extract 7.0 Chromogenic and selective mix 12.9</td>
</tr>
<tr>
<td>Aspect</td>
<td>Powder Form</td>
</tr>
</tbody>
</table>

STORAGE
2/30°C

FINAL MEDIA pH
7.6 +/- 0.2

PREPARATION (Calculation for 1L)

Step 1
Preparation
• Disperse slowly 34.9 g of powder in 1L 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 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.
• 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.

Step 2
Pouring

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 weeks 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
• Incubate at 37°C for 24h in aerobic conditions.

Typical Samples
- e.g. Typhoid syndrome
  - stool or blood samples;
  - Gastro entritis
  - stool samples
***
Possible enrichment step
***
Direct streaking or spreading technique

ENGLISH
Instructions For Use

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INTERPRETATION

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Typical colony appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Salmonella</em> including <em>S. Typhi</em></td>
<td>mauve</td>
</tr>
<tr>
<td><em>E.coli</em>, coliforms etc.</td>
<td>blue</td>
</tr>
<tr>
<td>Some <em>Proteus</em>, etc.</td>
<td>colourless</td>
</tr>
<tr>
<td>Gram positive bacteria</td>
<td>inhibited</td>
</tr>
<tr>
<td><em>Pseudomonas, Aeromonas</em></td>
<td>mostly inhibited</td>
</tr>
</tbody>
</table>

**Typical** colony appearance

![Image of Salmonella and E. Coli colonies]

The pictures shown are not contractual.

LIMITATIONS

- *Pseudomonas* may have similar mauve colony aspect and can be eliminated by an oxidase test.
- Many *Salmonella Typhi* can be detected after 24-48h incubation as mauve variable size colonies.
- Lactose plus *Salmonella* would grow in metallic blue.
- 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:

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Typical colony appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>S.enteritidis</em> ATCC® 13076</td>
<td>mauve</td>
</tr>
<tr>
<td><em>S.typhimurium</em> ATCC® 13311</td>
<td>mauve</td>
</tr>
<tr>
<td><em>E.coli</em> ATCC® 25922</td>
<td>metallic blue, small</td>
</tr>
<tr>
<td><em>C.freundii</em> ATCC® 8090</td>
<td>metallic blue</td>
</tr>
<tr>
<td><em>C.albicans</em> ATCC® 60193</td>
<td>inhibited</td>
</tr>
<tr>
<td><em>S.aureus</em> ATCC® 25923</td>
<td>inhibited</td>
</tr>
</tbody>
</table>

**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 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.

REFERENCES

Please refer to our website page «Publications» for scientific publications about this particular product.


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.

IFU/LABEL INDEX

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

**Ordering References**

<table>
<thead>
<tr>
<th>Pack Size</th>
<th>Ordering References</th>
<th>Weight (gr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 ml</td>
<td>SA130</td>
<td>34.9gr</td>
</tr>
<tr>
<td>5000 ml</td>
<td>SA132</td>
<td>174.5gr</td>
</tr>
<tr>
<td>25L</td>
<td>SA133-25</td>
<td>872.5gr</td>
</tr>
</tbody>
</table>

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