CHROMagar™ StrepB

MEDIUM PURPOSE
Chromogenic medium for the isolation and differentiation of Group B Streptococcus (S. agalactiae).
The Group B Streptococci (GBS), also known under the name of Streptococcus agalactiae, are the cause of numerous infections in adults but mostly an important cause of serious neonatal infections, occurring in the first three weeks of life. Studies indicate that approximately 12-27% of pregnant women are colonised by GBS.
CHROMagar™ StrepB is particularly suitable for the GBS carriage screening in pregnant women and the newborns infection monitoring.

COMPOSITION
The product is composed of a powder base (B) and 2 supplements (S1 + S2).

<table>
<thead>
<tr>
<th>Product</th>
<th>Base (B)</th>
<th>Supplement S1</th>
<th>Supplement S2</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.7 g/L</td>
<td>8 mL/L</td>
<td>0.25 g/L</td>
<td></td>
</tr>
<tr>
<td>Agar 15.0</td>
<td>Growth factors mix</td>
<td>Selective mix 0.25</td>
<td></td>
</tr>
<tr>
<td>Peptones and yeast extract 20.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromogenic mix 2.2</td>
<td></td>
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</tbody>
</table>

STORAGE
15/30 °C

FINAL MEDIA pH
7.3 +/- 0.2

PREPARATION (Calculation for 1 L)

Step 1
Base + S1
• Disperse slowly 44.7 g of powder base in 1 L of purified water.
• Add 8 mL of supplement S1 into slurry.
• Stir until agar is well thickened.
• Autoclave at 121 °C during 15 min.
• Cool at 45/50 °C keeping on stirring.

Step 2
S2
• In a transparent vessel, add 250 mg of supplement S2 in 10 mL of purified water.
• Place under agitation with a magnetic stirring until S2 is solubilized.

Step 3
Base + S1 + S2
• Filter sterilise and aseptically add 10 mL of S2 preparation into (base + S1) slurry cooled at 45/50 °C while mixing.
• Swirl or stir gently to homogenize.

Step 4
Pouring
• Pour into sterile Petri dishes.
• Let it solidify and dry.
Once dried, the appearance of the plates is translucent grey.

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.
**SPECIMEN COLLECTION AND HANDLING**

CHROMagar™ StrepB can be used with the following specimens: urine, rectal and vaginal specimens.

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 in Todd Hewitt/LIM broth (CDC recommendations).

- 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**

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Typical colony appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Streptococcus agalactiae</strong></td>
<td>mauve</td>
</tr>
<tr>
<td>(group B)</td>
<td></td>
</tr>
<tr>
<td><strong>Enterococcus species</strong></td>
<td>steel blue</td>
</tr>
<tr>
<td><strong>Lactobacilli, Leuconostoc</strong></td>
<td>light pink</td>
</tr>
<tr>
<td><strong>Lactococci</strong></td>
<td>Scanty growth to inhibited</td>
</tr>
<tr>
<td>Other microorganism</td>
<td>blue, colourless or inhibited</td>
</tr>
</tbody>
</table>

**PERFORMANCE**

In the following study, 242 vaginal and rectal swabs were tested and read after 24 h incubation at 35 °C in aerobiose.

<table>
<thead>
<tr>
<th>CHROMagar™ StrepB</th>
<th>Reference Method (CNA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>94 % *</td>
</tr>
<tr>
<td>Specificity</td>
<td>100 % *</td>
</tr>
</tbody>
</table>

Data obtained from the study «Evaluation of four chromogenic media for the isolation of Group B Streptococcus from vaginal specimens in pregnant women» N. Salem and J. J. Anderson. Austin Pathology, Microbiology Department 2015.

**LIMITATIONS AND COMPLEMENTARY TESTS**

- Incubation in CO₂ may result in false positive cultures.
- Rare strains of Group B Streptococcus may require an additional 24 h of incubation for a satisfactory colony size.
- Some strains of C, F & G Groups Streptococci may appear as mauve colonies.
- Some organisms may appear as pale mauve-violet colonies, like Aerococcus, Lactobacillus, Lactococcus and Leuconostoc.
- Most of Group A Streptococcus grow mauve as false positive. However, they can be differentiated with PYR test: PYR(+) --> StrepA ; PYR(-) --> StrepB
- Few strains of *Staphylococcus* may appear as mauve colonies. However, they can be differentiated by a Catalase test: Catalase (-) --> StrepB ; Catalase (+) --> Staphylococcus.
- Final identification may require complementary tests such as Hippurate Hydrolisis, CAMP or immunological tests.
- Latex agglutination confirmation test 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:

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Typical colony appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. agalactiae ATCC® 12386</td>
<td>mauve</td>
</tr>
<tr>
<td>S. agalactiae ATCC® 13813</td>
<td>mauve</td>
</tr>
<tr>
<td>E. faecalis ATCC® 29212</td>
<td>steel blue</td>
</tr>
<tr>
<td>E. coli ATCC® 25922</td>
<td>inhibited</td>
</tr>
</tbody>
</table>

**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/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.
• 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

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

<table>
<thead>
<tr>
<th>REF</th>
<th>Catalogue reference</th>
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</thead>
<tbody>
<tr>
<td>📆</td>
<td>Consult instructions for use</td>
</tr>
<tr>
<td>🍲</td>
<td>Quantity of powder sufficient for X liters of media</td>
</tr>
<tr>
<td>🕖</td>
<td>Expiry date</td>
</tr>
<tr>
<td>🥦</td>
<td>Required storage temperature</td>
</tr>
<tr>
<td>☔️</td>
<td>Store away from humidity</td>
</tr>
<tr>
<td>☀️</td>
<td>Protect from light</td>
</tr>
<tr>
<td>👤</td>
<td>Manufacturer</td>
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</tbody>
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