Baird Parker Agar Base  
Art. No. 01-030

Also known as
BP Agar; Egg Yolk Tellurite Glycine Pyruvate Agar; ETGP Agar

Specification
Solid selective culture medium for the screening of staphylococci from a variety of samples, according to pharmacopoeias and ISO standards.

Formula* in g/L

- Tryptone: 10,00 g
- Sodium pyruvate: 10,00 g
- Glycine: 12,00 g
- Meat extract: 5,00 g
- Lithium chloride: 5,00 g
- Yeast extract: 1,00 g
- Agar: 17,00 g

Final pH 7,0 ± 0,2 at 25°C

* Adjusted and/or supplemented as required to meet performance criteria

Directions
Suspend 60 g in 950 mL of distilled water. Allow to soak and bring to the boil stirring constantly. Sterilize in the autoclave at 121°C for 15 minutes. Cool to 50°C and add 50 mL of Egg Yolk Tellurite Sterile Emulsion (Art. No. 06-026). Homogenize and distribute into plates. Once prepared, the medium must not be reheated nor sterilized again.

Description
Baird Parker Agar Base is recommended for the detection and enumeration of staphylococci in food and other material, since it allows a good differentiation of coagulase-positive strains. The growth of the accompanying bacteria is usually suppressed by the high concentration in lithium, glycine and pyruvate. Lithium and glycine enhances the growth of staphylococci. Occasionally the medium may grow some Bacillus species, yeast and very rarely, Proteus. The growth of Proteus species can be suppressed by adding 50 mg/l of sulphanilamide.

The presence of tellurite and egg yolk, which must be added to the medium after sterilization, allows the differentiation of presumptive pathogenic staphylococcal colonies. There is a high correlation between the coagulase test and the presence of clear zones of lypolysis in this medium, which is due to the staphylococcal lecithinase. Studies show that almost 100% of coagulase-positive staphylococci are capable of reducing tellurite, which produces black colonies, whereas other staphylococci can not always do so.

When using sterile reagents other than Scharlau microbiology brand the prepare the medium by adding 50 mL sterile egg yolk and 10 mL of 1% potassium tellurite solution. Plates should be used on the same day of preparation or within 48 hours, to avoid the loss of definition in the precipitated zones. The medium base, without yolk or tellurite, is perfectly stable and therefore can be melted repeatedly.

Technique
The inoculation is carried out by spreading 0,5 mL of sample over each plate with a Drigalsky loop. After 18-24 hours of incubation at 35ºC, select the colonies which are black, shiny and convex with regular margins surrounded by a clear zone. These can be presumptly identified as coagulase-positive Staphylococcus aureus.

Colonial appearance after 24 hours at 35°C:
- Staphylococcus aureus: Black, shiny, convex, regular margins, 1,0-1,5 mm diameter, surrounded by a clear zone of lipolysis 2-5 mm in width. Wide opaque zones of precipitate extending into the cleared medium may occur after 48 hours.
- Other species of Staphylococcus: Black, usually dull, with regular margins. Sometimes brown with zones of clearing but these present as wide opaque zones.
- Micrococcus spp: Brown, very small and without clearing zones.
- Bacillus spp: Various shades of brown, big. May produce clearing zones after 48 hours.
- Yeasts: White, big and smooth.

Egg yolk emulsion can be prepared by mixing a fresh egg yolk with an equivalent quantity (w/v) of saline solution. Sterilize by filtration and aseptically add to the medium. (This reagent is available, presterilized, from Scharlau microbiology Art. No. 06-016.).

The potassium tellurite solution is prepared by dissolving 3,5 g potassium tellurite in 100 mL distilled water. Sterilize by filtration. (This reagent is available presterilized from Scharlau microbiology Art. No. 06-011.)

Although these solutions can be mixed and added to the Baird Parker Agar Base forming the additive commonly known Egg Yolk Tellurite Sterile Emulsion (Art. No. 06-026 and 064-BA1018 ISO), they are also stable as the separate supplement and can be used in many other culture media.

References

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Storage  
For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4°C to 30°C and <60% RH).

Quality control

Incubation temperature: 35°C ± 2.0  
Incubation time: 48 h  
Inoculum: 10-100 CFU (Productivity) // 1.000-10.000 CFU (Selectivity). Spiral Plate Method (ISO/TS 11133-1/2)

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<thead>
<tr>
<th>Microorganism</th>
<th>Growth</th>
<th>Remarks</th>
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<tbody>
<tr>
<td><em>Bacillus subtilis</em> ATCC 6633</td>
<td>Inhibited</td>
<td>Selectivity</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 8739</td>
<td>Inhibited</td>
<td>Selectivity</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> ATCC 25923</td>
<td>Productivity &gt; 0.50</td>
<td>Black colonies; Lecithinase (+)</td>
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<tr>
<td><em>Staphylococcus aureus</em> ATCC 6538</td>
<td>Productivity &gt; 0.50</td>
<td>Black colonies; Lecithinase (+)</td>
</tr>
<tr>
<td><em>Staphylococcus epidermidis</em> ATCC 12228</td>
<td>Productivity &gt; 0.50</td>
<td>Black colonies; Lecithinase (+)</td>
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