TRANSFORMING COMPETENT CELLS

**BEFORE STARTING:**
- Make sure the DNA is prepared before taking the competent cells from the -80°C freezer
- Preheat the heating block/water bath to 42°C
- Take the SOC medium out of the freezer
- Make sure that the work bench is sterilized with ethanol
- Use a flame to create a sterile environment

**MATERIALS:**
- Competent cells
- Plasmid DNA
- 300ul SOC medium
- Heating block/water bath
- Incubator
- LB agar plates with appropriate antibiotic

**PROCEDURE:**
- Make sure the DNA is prepared before taking out the competent cells from the -80°C freezer
- Place the competent cell on ice for about 5 minutes
- Flick the tube to resuspend the cells
- Add 10-20 ng of DNA to the cells
- Pipette gently up and down
- Put the cells back on ice for 20 minutes
- Heat shock the bacteria at 42°C for 30-45 seconds
- Place on ice for 10 minutes
- Add 300 µl of SOC medium
- Put into the incubator for 1h at 37°C and 200-250rpm
- Pre-heat the agar plates for 30 in the incubator by placing them upside down and slightly open so that water can evaporate
- Spread the sample evenly on the agarplates, let them stand for 5 minutes, then put them back into the incubator UPSIDE DOWN over night
### ANTIBIOTICS

<table>
<thead>
<tr>
<th>Commonly Used Antibiotics</th>
<th>Recommended Concentration</th>
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<tbody>
<tr>
<td>Ampicillin</td>
<td>100 µg/mL</td>
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<tr>
<td>Bleocin</td>
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<tr>
<td>Carbenicillin</td>
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<tr>
<td>Chloramphenicol</td>
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<td>Spectinomycin</td>
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<tr>
<td>Tetracycline</td>
<td>10 µg/mL</td>
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