

Chemical Transformations

Goal	To shock competent <i>E. coli</i> cells so the uptake of external DNA can be achieved
Materials	<ul style="list-style-type: none">• Chemically competent <i>E. coli</i> cells• DNA needed to transform• Water bath at 42°C• 5 mL Falcon tubes• 1.5 mL microfuge tubes• Pipettes and pipette tips• Ice• Spreaders• SOC media*
Procedure	<ol style="list-style-type: none">1. Acquire chemically competent <i>E. coli</i> cells from -80°C freezer; put on ice to thaw2. Aliquot 50 µL of chemically competent <i>E. coli</i> cells into 1.5 mL microfuge tubes. Keep the tubes on ice3. Add DNA to cells. Use a pipette tip to gently stir. Make sure to NOT vortex or pipet up and down4. Incubate on ice for 30 minutes5. Heat shock in 42°C water bath for 30 seconds6. Incubate on ice for 2 min7. Add 250 µL of SOC media and pipet up and down a few times. Transfer to a 5mL Falcon tube8. Incubate for 1 hour at 37°C on a shaker at 250 rpm9. Plate on media and incubate at 37°C overnight