Chemical Transformation of *E. coli*

Materials

Chemically competent *E. coli* cells
Plasmid DNA
LB medium
LB agar plates containing the appropriate antibiotic

Procedure

1. Thaw competent cells on ice.
2. Transfer 50 µL of competent cells into a pre-chilled microcentrifuge tube.
3. Add 100 ng of plasmid DNA and incubate on ice for 30 min.
4. Heat shock at 42 °C for 60–90 s, then incubate on ice for 2 min.
5. Add 450 µL LB medium and shake at 37 °C and 200 rpm for 45 min for recovery.
6. Centrifuge the recovered cells at 1,900 × g for 3 min.
7. Discard the supernatant and resuspend the cell pellet in 100 µL of LB medium.
8. Spread the resuspended cells onto an LB agar plate containing the appropriate antibiotic.
9. Incubate the plate at 37 °C overnight.