This protocol was adapted from Marcus Lehr's Direct Plating Transformation Protocol, which was adapted from Pope&Kent, 1996.
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∅∅∅∅∅ Quick Transformation Protocol

Transformation of competent cells can be achieved using a fairly straitforward process. Cells are mixed with a plasmid solution, chilled, then plated and spread on antibiotic plates without any heat shock. Incubation of the plates occurs immediately afterwards.

Note that this protocol, while far faster than electroporation, is also far less efficient in transforming the bacteria.

Make sure to label the plates and incubate them beforehand.

⇒ Competent cells should be made in accordance with the **Production of QT competent cells** protocol.

Compounds
Competent cell solution, thawed
Plasmid solution

Materials
LB plates (labeled, with antibiotic, warmed to 37°C)
PCR tubes
Pipeteman P5, tips (chilled to 4°C)
Pipeteman P100, tips (chilled to 4°C)
Sterile glass spreading beads
ICE

You will alsa need access to an:
Incubator

External protocols:
Production of QT competent cells

Procedure

1. Add **2µL plasmid solution** to a **PCR tube.** Keep the PCR tube on **ICE.**

2. Add **50µL competent cell solution** to the PCR tube with a fresh, chilled, sterile **P100**. Mix the solutions by repeatedly uptaking and expelling it from your pipette about 5-10 times.

3. Chill the PCR tubes for **1-5 minutes** on the ICE.

4. Using **careful sterile technique,** pipette the contents of the PCR tube onto the center of an **LB plate** with a sterile **P100**.

5. Carefully lift the lid just high enough to fit in a **sterile glass spreader.** Spread the solution evenly across the plate using gentle linear motions, as if drawing a star (*).

6. **Incubate** the plates for **16 hours** at **37°C** or until colonies are observed.

This protocol, in effect, heat shocks the cells by icing them and plating them on heated plates. No water bath is necessary.