Checking Competency of Electrocompetent Bacterial Cells

Adapted from BV's Cookbook, TCH 1/27/02

Titration of electroporation efficiency

CsCl-purified pBlueScript (10 ng/ul)	1 µl
DH10B electrocompetent cells	20 µl

1) Transform cells with Bio-Rad gene pulser at 1.8KV using a 1mm cuvette.

2) Add 1 ml of LB at room temperature.

3) Shake cells at 37°C for 1 hour in a 15ml tube.

4) Make serial dilution of the cells with LB.
10 ng/ml $\rightarrow$100 pg/ml $\rightarrow$ 10 pg/ml $\rightarrow$ 1 pg/ml

5) Plate 0.1 ml of 1 pg/ml on L-Amp.

6) Incubate overnight at 37°C.

NOTE: If 1,000 transformats grow on the plate, efficiency= 1,000 x 1 µg/0.1 pg= 1 x 10^{10}/ µg of pBS. Efficiency should be approx. 3 - 10 x 10^{9}/ µg pBlueScript