



## Gene Pulser® Electroprotocols

**Cell Type** Bacterial, gram negative  
**Species Used** *E. coli*, MC1061, NM522

**Molecules Electroported** DNA: plasmids, not supercoiled,  
pUC 13, pT3T7, pPL-lambda

### Before the Pulse

**Cell growth medium** 10 g/l Tryptone, 10 g/l Yeast Extract, 10 g/l NaCl

**Growth phase at harvest** O.D. (600) = 0.9

**Pre-pulse incubation** 1 min., 4°C

**Wash solution** 10% glycerol

### The Pulse

**Electroporation Temperature** 4°C

**Instruments Used** Gene Pulser® apparatus  
Pulse Controller

**Electroporation Medium** 10% glycerol

**Cell Density** 1/500 volume of initial culture

**Cuvette Gap** 0.1 cm

**Volume of Cells** 50 µl

**Voltage** 2.0 kV

**DNA Concentration** usually < or = 1 ng / µl

**Field Strength** 20 kV/cm

**DNA Resuspension Buffer** water

**Capacitor** 25 µF

**Volume of DNA** 10 µl

**Resistor** 200 Ω (Pulse Controller)

**Time Constant** 4.82 msec

### After the Pulse

**Outgrowth Medium** 10g/l Tryptone, 10 g/l NaCl, 5 g/l Yeast Extract

#### Relevant Publications and/or Comments

**Note:** exponential values designated in parentheses.

**Outgrowth Temperature** 37 °C

**Length of Incubation** 30 min

**Selection Method or Assay Used** ampicillin

**Electroporation Efficiency** 10 (8) to 10 (9) transformants / µg DNA

**Per Cent Survival** unknown

**Name of Submitter**  
**Institution Address**

**Telephone Number**

**Fax Number**

**Date Submitted** 10/31/90

**Survey Number** 037

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