



Gene Pulser® Electroprotocols

Cell Type Plant
Species Used Maize, Black mexican sweet

Molecules Electroporated DNA: ds DNA mRNA

Before the Pulse

Cell growth medium BMS culture medium (see reference in notes)

Growth phase at harvest Log

Pre-pulse incubation 5 min. at 42° C

Wash solution Not given

The Pulse

Electroporation Temperature 0° C

Instruments Used Promega X-Cell

Electroporation Medium 10 mM HEPES
1mM CaCl₂

Cell Density 2 x 10⁽⁶⁾ / ml

Cuvette Gap 0.4 cm

Volume of Cells 0.8 ml

Voltage 0.200 kV

Field Strength 0.5 kV/cm

DNA Concentration 10 µg / ml

Capacitor 1250 µF

DNA Resuspension Buffer Not given

Resistor (Pulse Controller) Do not calculate

Volume of DNA Not given

Time Constant Do not calculate

After the Pulse

Outgrowth Medium Plant growth media

Relevant Publications and/or Comments

Note: exponential values designated in parentheses.

Outgrowth Temperature 10 min. at 4° C, then 25° C

All of our recent work uses electroporation.

Length of Incubation up to 3 days

Ref: Fromm, *et. al.*, *Meth. Enzymol.* **153**:351-366 (1987).

Selection Method or Assay Used β-glucuronidase (GUS), luciferase

Electroporation Efficiency 50%

Per Cent Survival 90 %

Name of Submitter
Institution Address

Telephone Number

Fax Number

Date Submitted 3/7/91

Survey Number 181

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