



Gene Pulser® Electroprotocols

Cell Type Fungal / Yeast
Species Used *Schizosaccharomyces pombe*

Molecules Electroported DNA: supercoiled plasmids, linear fragments for integration.

Before the Pulse

Cell growth medium YE or dropout media (recipes in paper)

Growth phase at harvest 1×10^7 (7) cells / ml

Pre-pulse incubation none

Wash solution 1.2 M sorbitol (ice cold, filter sterilized)

The Pulse

Electroporation Temperature (Ice cold) 0°C

Instruments Used Gene Pulser® apparatus & Pulse Controller

Electroporation Medium 1.2 M sorbitol

Cuvette Gap 0.2 cm

Cell Density 1×10^4 (4) cells / ml

Voltage 2.25 kV

Volume of Cells 200 μl

Field Strength 1.125 kV/cm

DNA Concentration 1 ng to 1 μg DNA per pulse

Capacitor 25 μF

DNA Resuspension Buffer 1.2 M sorbitol

Resistor (Pulse Controller) 200 Ω

Volume of DNA <10 μl

Time Constant 5 msec

After the Pulse

Outgrowth Medium SD + necessary nutrients

Relevant Publications and/or Comments

Note: exponential values designated in parentheses.

Reference: Prentice, H. *Nucleic Acid Res.* **20** (3):621.

Outgrowth Temperature 30°C

Length of Incubation 4 to 6 days

Selection Method or Assay Used auxotrophy

Electroporation Efficiency 1×10^5 (5) to 1×10^6 (6) for autonomous plasmids

Per Cent Survival ~50 % (see Table 1 in reference)

Name of Submitter
Institution Address

Telephone Number

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Date Submitted 1/16/92

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