



Gene Pulser® Electroprotocols

Cell Type Fungal / Yeast
Species Used *Dictyostelium discoideum*

Molecules Electroporated DNA: supercoiled and linear

Before the Pulse

Cell growth medium	HL5 (peptone, yeast extract, glucose) (ATCC Media #671)	Growth phase at harvest	1 x 10 ⁽⁶⁾ to 1 x 10 ⁽⁷⁾ cells / ml
Wash solution	Hepes Buffered Saline	Pre-pulse incubation	5 min.

The Pulse

Electroporation Temperature	4 °C	Instruments Used	Gene Pulser® apparatus & Pulse Controller
Electroporation Medium	Hepes Buffered Saline	Cuvette Gap	0.4 cm
Cell Density	5 x 10 ⁽⁶⁾ / ml	Voltage	1.25 kV
Volume of Cells	1 ml	Field Strength	3.125 kV/cm
DNA Concentration	20 ng to 20 µg	Capacitor	25 µF
DNA Resuspension Buffer	TE (10 mM Tris, 1 mM EDTA, pH 8.0)	Resistor	(Pulse Controller) Ω none. NOT RECOMMENDED*** (see notes)
Volume of DNA	Any volume	Time Constant	0.5 to 0.7 msec

After the Pulse

Outgrowth Medium	HL5	Relevant Publications and/or Comments	Note: exponential values designated in parentheses.
Outgrowth Temperature	22°C		**It is NOT RECOMMENDED to use high voltage with out the Pulse Controller.
Length of Incubation	overnight		
Selection Method or Assay Used	G418	HBS:	10mM HEPES, pH 7.2, 150 mM NaCl, 5 mM CaCl ₂
Electroporation Efficiency	10 ⁽⁻³⁾ transformants/ cell; 6 x 10 ⁽³⁾ transformants / µg DNA.		
Per Cent Survival	>90 %		

Name of Submitter
Institution Address

Telephone Number

Fax Number

Date Submitted 11/13/91

Survey Number 175

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