NEPA electroporation of Emiliania huxleyi cells

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Abstract

We used the NEPA electroportor to transform Emiliania huxleyi cells.

We were able to establish that this method can be used to introduce proteins into the cells.

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Protocol

Step 1.
Collect exponentially growing E. huxleyi cells by centrifugation at 3000 g for 3 min, room temp.

Step 2.
Wash the cells once and resuspended with 384mM Sorbitol to a final concentration of 108 cells/ml.

Step 3.
Mix 150 ul of cells with 1–10 mg of (linearized) plasmid and transfer to an electroporation cuvette with 0.2 cm gap.

Step 4.
Electroporate with optimal conditions – we used 7 poring pulses of 250V, followed by transfer 10 +/- transfer pulses.

Step 5.
After electroporation, transfer IMMIDIATELY into 4 mL of fresh media and incubate to allow recovery in nonselective medium in the growth room, low light for 16–20 h.

Step 6.
Apply selection and cross your fingers...