

Materials List for:

# Efficient Polyethylene Glycol (PEG) Mediated Transformation of the Moss *Physcomitrella patens*

Yen-Chun Liu<sup>1</sup>, Luis Vidali<sup>1</sup>

<sup>1</sup>Department of Biology and Biotechnology, Worcester Polytechnic Institute- WPI

Correspondence to: Luis Vidali at [lvidali@wpi.edu](mailto:lvidali@wpi.edu)

URL: <https://www.jove.com/video/2560>

DOI: [doi:10.3791/2560](https://doi.org/10.3791/2560)

## Materials

Name	Company	Catalog Number	Comments
PPNH <sub>4</sub>			1.84 mM KH <sub>2</sub> PO <sub>4</sub> 3.4 mM Ca(NO <sub>3</sub> ) <sub>2</sub> 1 mM MgSO <sub>4</sub> 2.72 mM Diammonium tartrate 54 μM FeSO <sub>4</sub> ·7H <sub>2</sub> O 9.93 μM H <sub>3</sub> BO <sub>3</sub> 1.97 μM MnCl <sub>2</sub> ·4H <sub>2</sub> O 0.23 μM CoCl <sub>2</sub> ·6H <sub>2</sub> O 0.19 μM ZnSO <sub>4</sub> ·7H <sub>2</sub> O 0.22 μM CuSO <sub>4</sub> ·5H <sub>2</sub> O 0.10 μM Na <sub>2</sub> MoO <sub>4</sub> ·2H <sub>2</sub> O 0.168 μM KI Add 0.7% agar for solid medium.
PRM-B			PPNH <sub>4</sub> with 6% mannitol and 0.8% agar. Add 10 mL 1M CaCl <sub>2</sub> to 1 L before pouring plates.
PRM-T			PPNH <sub>4</sub> with 6% mannitol and 0.6% agar. Add 0.5 mL 1M CaCl <sub>2</sub> to 50 mL before use.
Liquid Plating Medium			PPNH <sub>4</sub> with 8.5% mannitol without agar. Add 0.5 mL 1M CaCl <sub>2</sub> to 50 mL before use.
2% Driselase			Add 4 g of Driselase (Sigma D9515-25G) to 200 mL of 8% mannitol. Stir gently for 30 min. at room temperature, incubate 30 min. at 4°C, and stir gently for 5 min. at room temperature. Spin 2,500 g for 10 min, discard pellet. Filter with 0.22 μm, and store frozen as 10 mL aliquots. Thaw in a room temperature water bath before use.
MMg			0.4 M mannitol 15 mM MgCl <sub>2</sub> 4 mM MES (pH 5.7)
PEG/Ca			4 g PEG4000 3 mL H <sub>2</sub> O 2.5 mL 0.8 M mannitol 1 mL 1M CaCl <sub>2</sub>
W5			154 mM NaCl 125 mM CaCl <sub>2</sub> 5 mM KCl 2 mM MES (pH 5.7)