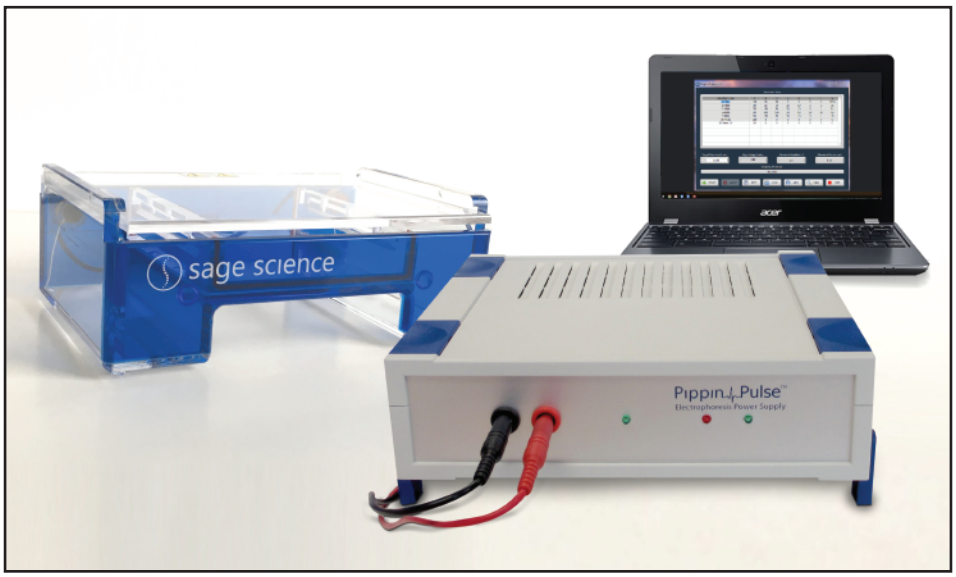
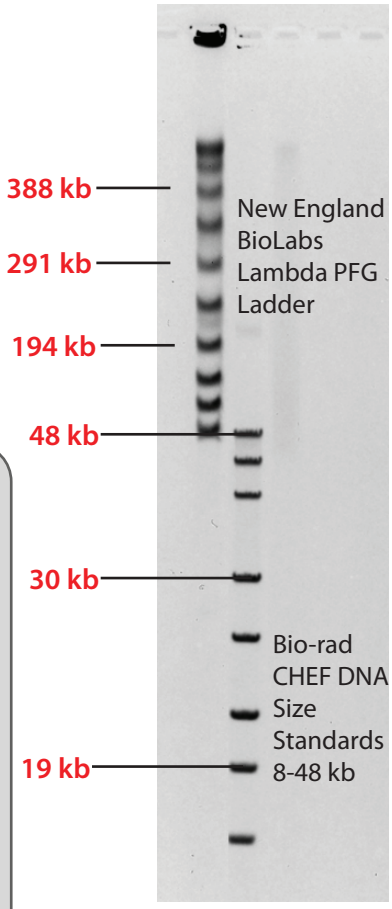


Pippin Pulse™

Pulsed-field Electrophoresis System

Sage Science's Pippin Pulse electrophoresis system provides agarose gel resolution of HMW DNA economically, with minimal bench space. The system resolves DNA up to 400 kb with a similar workflow to standard midi-gel runs. Pulsed-field protocols are preset or programmed from a PC, providing users the flexibility to develop and validate HMW DNA applications.

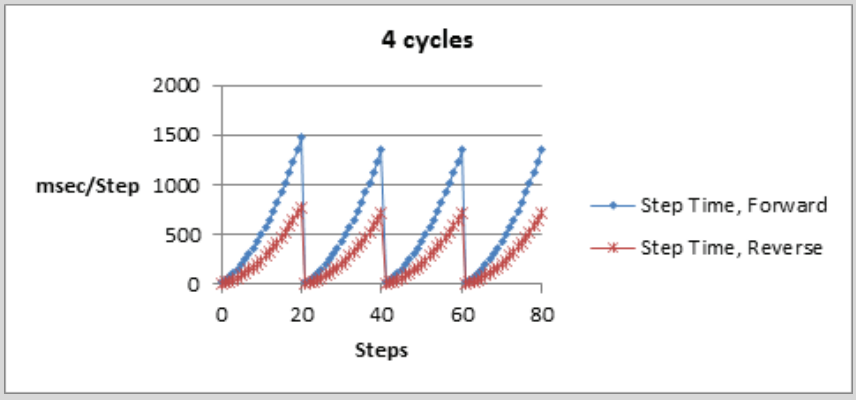


A gel image showing resolution of fragments from a gel run with the Pippin Pulse (Part No. PPI-0200) using the pre-set "5-430kb" protocol. The gel was run on a 12 X 14cm gel for 16 hours. The gel was cast with 0.75% Lonza SeaKem® GOLD agarose on the Sage Science midi gel box (Part No. PGB-1000) and 0.5X KBB buffer (Part No. KBB-1001).

About Pulsed (Field Inversion) Electrophoresis.

Pulsed-field gels work by shuttling DNA back and forth in the gel, effectively slowing down large DNA fragments that might otherwise run at the same rate as smaller ones. By switching the direction of the electric field in a gel, DNA will change its direction of migration. Since smaller molecules can change direction faster than larger molecules, more differentiated separation can be achieved by rapidly switching, or pulsing, the electric field.

For resolving a wide range of fragment sizes, the length of the forward and reverse can be incrementally increased or decreased, and/or cycled. An illustration of a pulsed field protocol is shown below.



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