HighPrep PCR vs Leading SPRI Bead-Based Reagent

DNA Clean-up and Recovery Rate

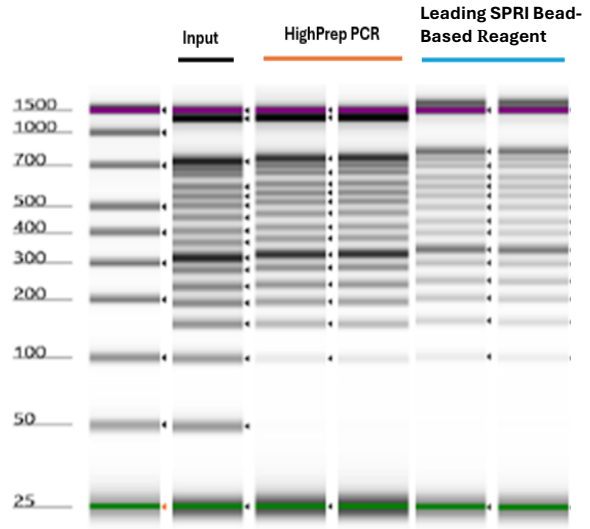


Figure 1: Removal of 50 bp DNA fragment. About 10 uL of 50 bp DNA ladder was purified with HighPrep PCR and the Leading SPRI Bead-Based Reagent using a bead ratio of 1.8x following the manufacturer's protocol. Fragments above 100 bp were retained by both reagents and the 50 bp DNA fragment was removed.

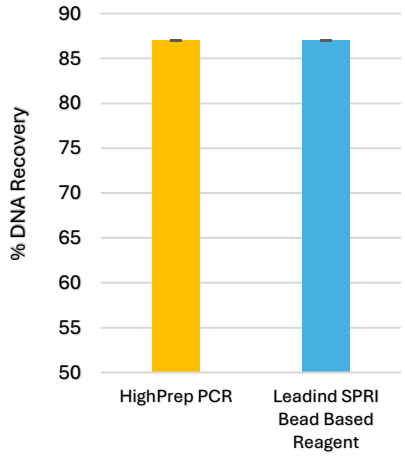
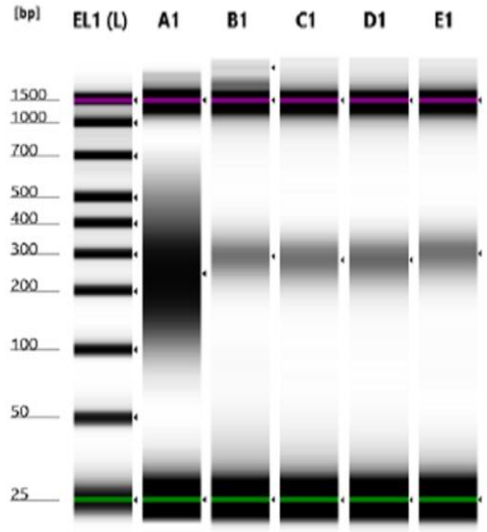


Figure 2. Side-by-side comparison of DNA recovery post cleanup using HighPrep PCR and the Leading SPRI Bead-Based Reagent. About 10 µL of 50 bp DNA ladder was purified using a bead ratio of 1.8x and DNA recovery was assessed. Both reagents had similar recovery.

DNA Size Selection

Selection of 250 bp – 350 bp DNA fragment



Lane	Sample	Average DNA size (bp)
A1	Input sheared gDNA	100-700
B1	HighPrep PCR-1	295
C1	HighPrep PCR-2	285
D1	Leading SPRI Bead-Based Reagent - 1	287
E1	Leading SPRI Bead-Based Reagent - 2	301

Figure 3: Efficient double-sided DNA size selection using HighPrep PCR as a direct replacement for the Leading SPRI Bead-Based Reagent. Agilent Tapestation fragment analysis of 250-350 bp DNA size selection (0.75x/0.2x) from sheared genomic DNA. The same size selection ratio was applied for both reagents.

Conclusion

- **HighPrep PCR and the Leading SPRI Bead-Based Reagent demonstrate equivalent purification capabilities, ensuring effective DNA fragment retention while efficiently removing <50 bp fragments.**
- **HighPrep PCR delivers identical size selection as the Leading SPRI Bead-Based Reagent, making it a direct and cost-effective replacement.**
- **Stability assessments confirm that HighPrep PCR maintains efficiency over time, proving its reliability for long-term applications**

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