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Comparison Test using Chromo *Pfu* DNA Polymerase with 10X ViBuffer A and 5X ViBuffer Pfu

Amplification of MCS region with insert 1.5kb from pTZ using M13 primer in a 50µl reaction. 5µl of PCR product is loaded per lane and electrophoresed in 1% TBE agarose gel.
Chromo *Pfu* DNA Polymerase are tested in 2 units, 1 unit, 0.5 units and 0.25 units with 10X ViBuffer A and 5X ViBuffer Pfu in a 50µl PCR reaction.

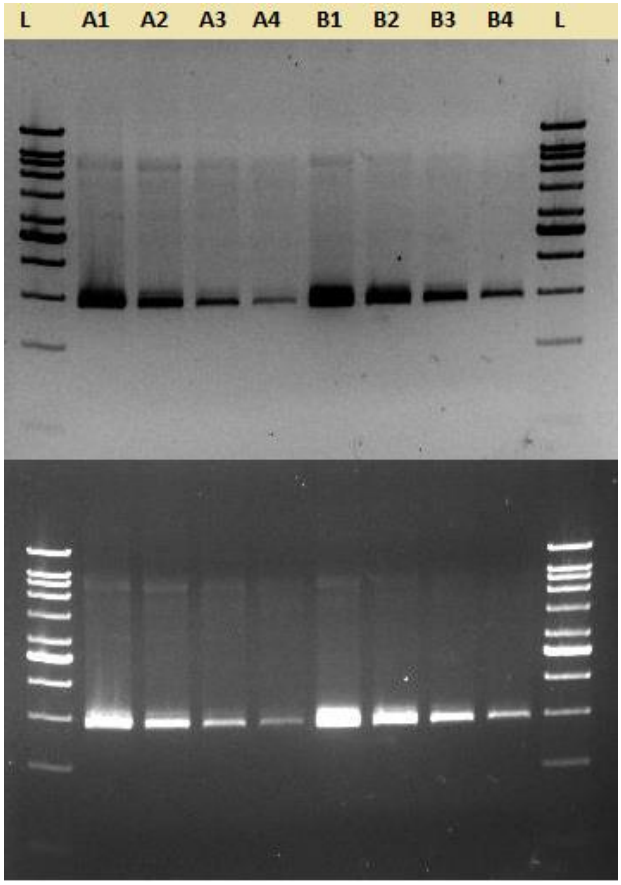

Figure 1: Amplification of pTZ template using M13 primer using different concentration of Chromo *Pfu* DNA polymerase with 10X ViBuffer A and 5X ViBuffer Pfu. 5µl of PCR product is loaded per lane. Expected PCR product size amplified is 1.5kb. PCR product has higher yield using 5X ViBuffer Pfu compared PCR product using 10X Buffer A.

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Legend:
A1: Amplification using 2U Chromo *Pfu* DNA Polymerase with 10X ViBuffer A
A2: Amplification using 1U Chromo *Pfu* DNA Polymerase with 10X ViBuffer A
A3: Amplification using 0.5U Chromo *Pfu* DNA Polymerase with 10X ViBuffer A
A4: Amplification using 0.25U Chromo *Pfu* DNA Polymerase with 10X ViBuffer A
B1: Amplification using 2U Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu
B2: Amplification using 1U Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu
B3: Amplification using 0.5U Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu
B4: Amplification using 0.25U Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu

Conclusion
Amplification test using Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu has higher yield of PCR product compared with test using 10X ViBuffer A and $MgCl_2$.

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Comparison Test using Chromo *Pfu* DNA Polymerase with 10X ViBuffer S and 5X ViBuffer Pfu

Amplification of Lambda DNA using primer mix in a 50µl reaction.
5µl of PCR product is loaded per lane and electrophoresed in 1% TBE agarose gel.
Chromo *Pfu* DNA Polymerase are tested in 2 units, 1 unit, and 0.5 units with 10X ViBuffer S and 5X ViBuffer Pfu in a 50µl PCR reaction.

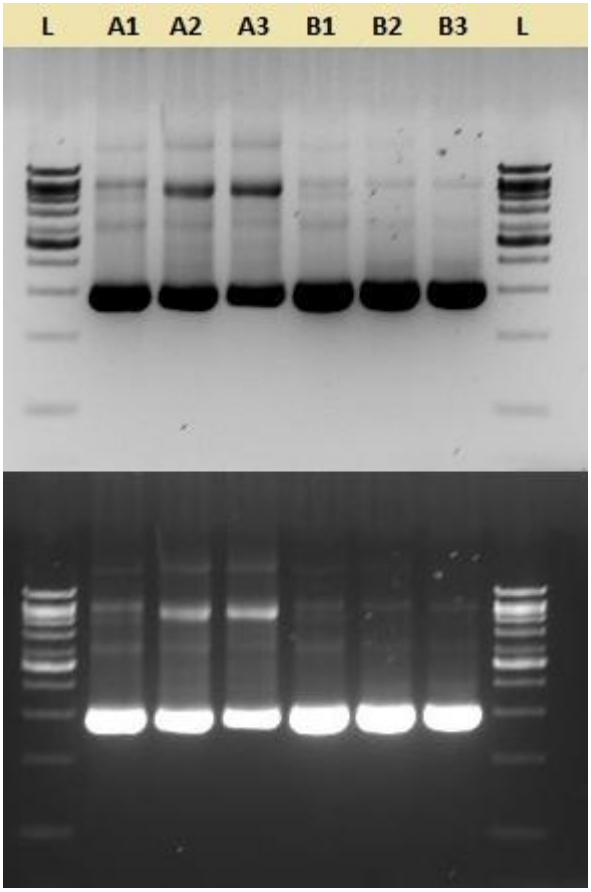

Figure 2: Amplification of Lambda DNA using primer mix using different concentration of Chromo *Pfu* DNA polymerase with 10X ViBuffer S and 5X ViBuffer Pfu. 5µl of PCR product is loaded per lane. Expected PCR product size amplified is 1.5kb. PCR product has higher yield, less smearing and more sensitive using 5X ViBuffer Pfu compared PCR product using 10X

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Buffer S.

Legend:
A1: Amplification using 2U Chromo *Pfu* DNA Polymerase with 10X ViBuffer A
A2: Amplification using 1U Chromo *Pfu* DNA Polymerase with 10X ViBuffer A
A3: Amplification using 0.5U Chromo *Pfu* DNA Polymerase with 10X ViBuffer A
B1: Amplification using 2U Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu
B2: Amplification using 1U Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu
B3: Amplification using 0.5U Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu

Conclusion
Amplification test using Chromo *Pfu* DNA Polymerase with 5X ViBuffer Pfu has higher yield of PCR product, less smearing and more sensitive compared with test using 10X ViBuffer S.

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