


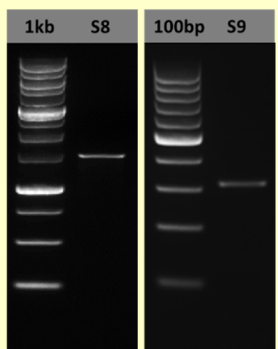

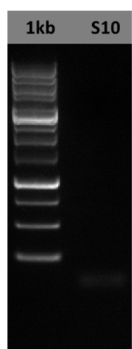

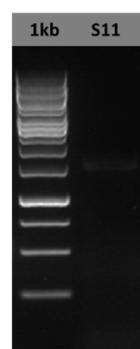

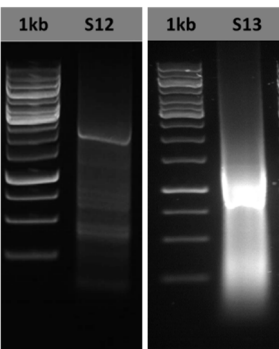

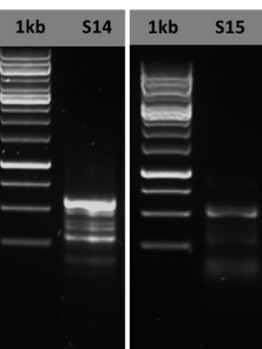

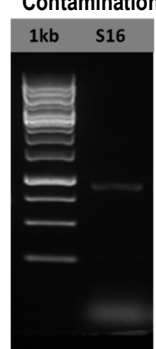
Qualitative Analysis of DNA template for Sanger DNA Sequencing


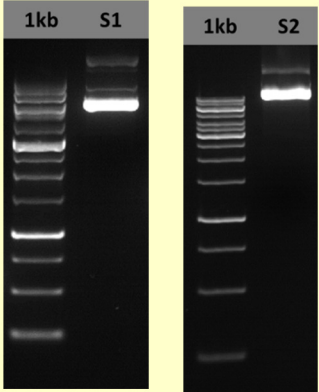

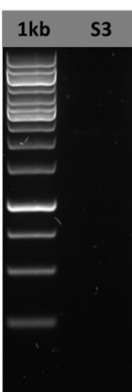

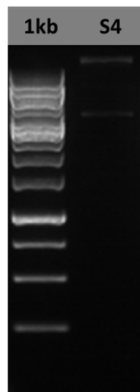

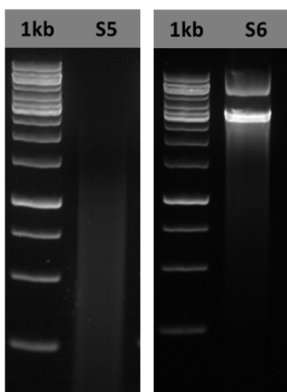

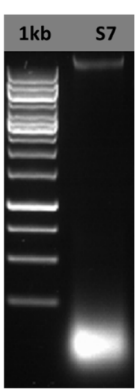
Maximize your success with well-prepared DNA templates!

Recommendation: Verify DNA template quality through agarose gel electrophoresis

- Recommended Gel % for :
 - Plasmid DNA & PCR fragments ≥ 400 bp , run samples on 1% agarose gel with 1kb DNA ladder
 - PCR fragment < 400 bp, run samples on 2% agarose gel with 100bp DNA ladder
- Load 0.5 μ g DNA ladder into the first lane, and 1 μ L of your DNA sample per lane. Run gel electrophoresis, and view gel profile.
- Capture and print the gel image. Label specifically the name & lane number of the DNA ladder & sample loaded per lane.
- Attach the gel photo along with your purified DNA samples. Email the gel photo with your printed Order Form to 1st BASE.

Reading Your Gel Photo

Purified PCR Product	Poorly Optimized PCR reaction / Poorly Purified PCR Product				
 <p>Good Quality PCR Product</p>  <p>✓ <i>Distinct target PCR products, free from degradation and contaminants</i></p> <p>✓ <i>DNA concentration within the recommended range</i></p>	 <p>Absence of DNA</p>  <p>Suggestion: Amplify and prepare a new batch of PCR Product</p>	 <p>Insufficient Template</p>  <p>Suggestion: Amplify and prepare a new batch of PCR product. Pool replicates if necessary.</p>	 <p>Smeared products</p>  <p>Suggestion: Amplify and prepare a new batch of PCR product. Optimize PCR condition to obtain distinct target of PCR product.</p>	 <p>Multiple Products</p>  <p>Suggestion: Excise the target DNA fragment using gel extraction. Check the purified PCR product on agarose gel again before sending for DNA sequencing.</p>	 <p>Primer-dimer Contamination</p> 

Purified Plasmid DNA	Poorly Purified Plasmid DNA				
 <p>Good Quality Plasmid DNA</p>  <p>✓ <i>Intact bands of plasmid DNA, free from degradation & contaminants</i></p> <p>✓ <i>DNA concentration within the recommended range</i></p>	 <p>Absence of DNA</p>  <p>Suggestion: Extract a new batch of Plasmid DNA.</p>	 <p>Insufficient Amount of DNA</p>  <p>Suggestion: Extract a new batch of Plasmid DNA [>50ng/μL].</p>	 <p>Degraded Plasmid DNA</p>  <p>Suggestion: Extract a new batch of Plasmid DNA.</p>	 <p>RNA contamination</p>  <p>Suggestion: Perform RNase treatment and purify the DNA template before sequencing.</p>	

Note: The DNA ladder is not applicable for sizing comparison of non-linear DNA samples (e.g. plasmid DNA).

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