

# Preparation of Good Quality DNA template for Sequencing

Poor quality DNA templates compromise DNA sequencing results ...  
Maximize your success with well-prepared DNA templates!


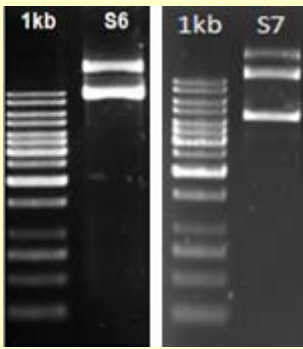

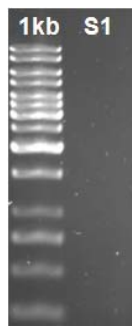

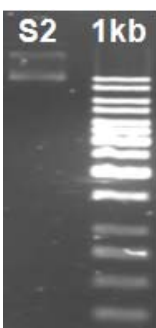

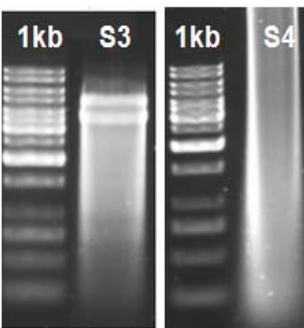

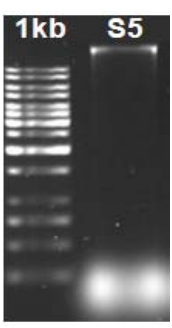
## Recommendation: Verify DNA template quality through agarose gel electrophoresis

- Recommended Gel % for :
  - plasmid DNA & PCR fragments > 400bp, run samples on 1% agarose gel
  - PCR fragment < 400bp, run samples on 2% agarose gel with 100bp DNA ladder
- Load 0.5µg DNA ladder into the first lane, and 1µL 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 gel photo with your Order Form to 1st BASE.


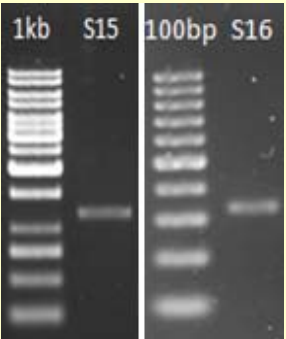

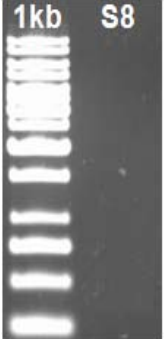

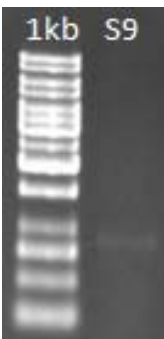

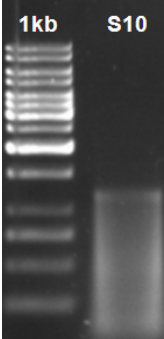

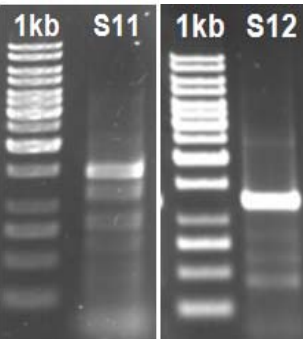

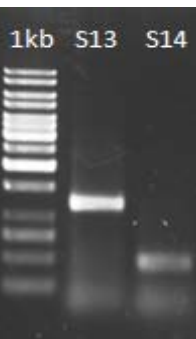
Note: The DNA ladder is not applicable for sizing comparison of non-linear DNA samples (e.g. plasmid DNA).

## Reading Your Gel Photo

### Purified Plasmid DNA

<p> <b>Good Quality Plasmid DNA</b></p>  <p><i>DNA concentration within recommended range (&gt;100ng/uL)</i></p> <p><i>Free from degradation &amp; contaminants</i></p>	<p> <b>No DNA Band</b></p>  <p><b>Suggestion:</b> Prepare a new batch of DNA.</p>	<p> <b>Faint DNA Band</b></p>  <p><b>Suggestion:</b> Extract a new batch of DNA [&gt;100ng/uL].</p>	<p> <b>Smear DNA</b></p>  <p><b>Suggestion:</b> Extract a new batch of DNA.</p>	<p> <b>RNA Contamination</b></p>  <p><b>Suggestion:</b> Treat with RNase-A.</p>
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### Purified PCR Product

<p> <b>Good Quality PCR Product</b></p>  <p><i>Distinct target PCR fragment, free from degradation and contaminants</i></p> <p><i>DNA Concentration within recommended range</i></p>	<p> <b>No DNA Band</b></p>  <p><b>Suggestion:</b> Amplify and prepare a new batch of target fragment.</p>	<p> <b>Faint Band</b></p>  <p><b>Suggestion:</b> Amplify and prepare a new batch of target fragment. Pool replicates if necessary.</p>	<p> <b>Smear DNA</b></p>  <p><b>Suggestion:</b> Amplify and prepare a new batch of target fragment.</p>	<p> <b>Un-specific Bands</b></p>  <p><b>Suggestion:</b> Excise the target fragment for gel-DNA extraction. Check purified DNA before sending for DNA sequencing.</p>	<p> <b>Primer-dimer Contamination</b></p>  <p><b>Suggestion:</b> Excise the target fragment for gel-DNA extraction. Check purified DNA before sending for DNA sequencing.</p>
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