

# Economy Run

## Sample Amounts and Concentrations for Tubes and Plates

DNA Template	Concentration	Volume	Pipetting Scheme for Premixed Option
Plasmid <sup>1</sup>	40–100 ng/μl	Each DNA sample should have a volume of 12 μl + 3 μl for every further reaction	12 μl DNA template solution + 3 μl sequencing primer solution (20μM) <sup>3</sup>
PCR Products <sup>2</sup>	<b>General Rule:</b> 1.5 ng/μl per 100 bp		
Length 100 - 400 bp	2 - 6 ng/μl		
Length 401 - 900 bp	4 - 17 ng/μl		
Length 901 - 2000 bp	12 - 70 ng/μl		
Primer (premixed)	4 pmol/μl = 4 μM		
Primer (separate)	10 pmol/μl = 10 μM		

<sup>1</sup> Optimal plasmid concentration is 80 ng/μl.

<sup>2</sup> Regardless of whether the PCR is purified or non-purified

<sup>3</sup> The addition of 3 μl of a 20 μM primer solution instead of a 10 μM primer solution to 12 μl DNA template solution (premixed option) usually leads to more robust sequencing results

### Remarks:

- When sending PCR products or plasmids in plates, we strongly recommend that you measure the concentration of a random subset of samples. It is very important that all samples fulfill the requested ranges of DNA concentration.
- In case you wish that Microsynth adds your sequencing primer, please make sure that you send us sufficient amount of your primer solution (at least 20 μl of a 10 μM solution; please consider that each sequencing reaction consumes 3 μl).
- DNA samples and primers for sequencing reactions are preferentially dissolved in pure water. Alternatively, 10 mM Tris-HCl (pH 8) with a maximum of 0.5 mM EDTA can be used for a better long term DNA stability. **TE buffer (10 mM Tris-HCL, 1 mM EDTA) might cause sequencing problems.**
- Your templates are stored for 4 days (tubes) or 1 month (plates) whereas your specific sequencing primers will be kept at our sequencing lab for 4 months (10 months if placed on the custom primer list).
- Synthesis of sequencing primer directly at Microsynth is possible (please select the “order now” option while placing your sequencing order).

## Tubes: Sample Preparation

### Purified Plasmids or PCR Products

Purified plasmids or PCR products can be sent at room temperature (RT) in 1.5 ml tubes.

### Non-Purified PCR Products

PCR products can be sent directly after PCR amplification (single bands) in their reaction buffer at room temperature (RT) in 1.5 ml tubes. Please note that upfront PCR purification is highly recommended but can easily be outsourced to Microsynth.

**Remark:** When preparing your samples (or sequencing primers), please make sure that your samples are placed into 1.5 ml tubes. Screw cap tubes are the most robust and safest tubes (no accidental lid opening). If you use snap cap tubes we recommend you to use Safe-Lock/Safe-Seal tubes (less risk of accidental lid opening). Please note that Microsynth cannot process 2 ml, 0.5 ml and 0.2 ml sample tubes. Our highly automated process of sample preparation requires the use of 1.5 ml tubes.

Simply stick the **green prepaid or blue non-prepaid barcode labels** onto your sample tubes. Please do not put any stickers on the lid of your tubes and do not wrap the tubes with parafilm.

## Plates: Sample Preparation

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### Purified Plasmids or PCR Products

Purified plasmids or PCR products can be sent at room temperature (RT) in the 96-well plate. Please check the quality of PCR samples on an agarose gel (a random subset may be sufficient; at least one sample per PCR primer pair) before shipment.

### Non-Purified PCR Products or *E. coli* cells\*

PCR reactions can be sent directly after PCR amplification in their reaction buffer at room temperature (RT) in the 96-well plate. Please select the DNA type "Unpurified PCR". Please check the quality of PCR samples on an agarose gel (a random subset is sufficient; at least one sample per PCR primer pair) before shipment.

If you send us *E. coli* cells, we recommend you that you ship them in the 96-well plate within Luria Broth (LB) medium at RT. Please make sure that your cells are incubated in 50 µl LB medium (containing the appropriate antibiotics) for at least 3-4 hours with gentle shaking at 37° C prior to shipping. If there is no incubator available in your lab, please let us know. We will then perform a longer incubation at our site.

\* only available for the [Economy Run Plus](#) and (for an additional charge) the [non-prepaid Economy Run](#).

**Remark:** Safe shipment of liquid cultures or solutions requires good sealing of your 96-well plate. It is recommended that you seal your 96-well plate with 8-cap stripes, 96-cap mats or heat sealing.

## Order Form Completion for Tubes and Plates

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Prior to shipping your sequencing samples to Microsynth, please proceed as follows to complete your order form:

1. Enter our webshop on [www.microsynth.com](http://www.microsynth.com) (click on "LOGIN SHOP")
2. Click on „**Sanger Sequencing**“ in the green DNA Sequencing area
3. Click on one of the options under **Economy Run**.
4. Fill in the order form and submit your order
5. Pack your samples into a transparent plastic bag (important: one bag per order) **without** printed order form for **tubes** and **with order form** for **plates**
6. Drop your sample package into the nearest Microsynth sample drop box (if available in your vicinity) or alternatively use our prepaid envelopes for mail shipment

## Need More Information?

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