

1. SEQ-Quickview (S001)

Your DNA samples are sequenced with standard vector primers or customer primers. You receive the automatically processed sequence data. Depending on the template quality, read lengths of up to 1000 nt per run can be generated. The results (.ab1 and .seq files) are usually available on the same day, at the latest on the following working day after sample receipt.

- **Preparation**

For this service, we need the samples and primers in separate reaction tubes or on a plate.

- eluted / dissolved in water, never in TE
- Samples & primers separately, in colourless Eppis
- Standard vector primer: available @ 4BL free of charge
- Samples & primers are stored for up to 4 weeks

Template			Primer	
Sample Type	Concentration	Volume per (1-5) Run	Concentration	Volume per (1-5) Run
PCR-Fragment Purified/unpurified	5ng/µl/100bp	20µl	5 pmol/µl	10µl
Plasmid	100-200ng/µl	20µl	5 pmol/µl	10µl
BAC/PAC/Cosmid	200-500ng/µl	20µl	10 pmol/µl	10µl

2. SEQ-Standard (S002)

Your samples (DNA) are sequenced with standard vector primers or customer primers. The sequence data is then edited afterwards. In case of laboratory-related problems, sequencing will be repeated free of charge. The results (.ab1 and .seq files) are usually available on the same day, at the latest on the following working day after sample receipt.

- **Preparation** see (SEQ-Quickview)

3. SEQ-GC rich (S004)

Do you have difficult DNA templates with a moderate GC content? No problem! Special modifications will be used for sequencing your samples. Standard primers as well as customer primers can be used. Automatic re-sequencing in case of unsuccessful sequencing is free of charge. The results (.ab1 and .seq files) are usually available on the same day, at the latest on the following working day after sample receipt.

- **Preparation** see (SEQ- Quickview)

4. SEQ-Secondary structure (S006)

Further optimized protocol for complex sequence regions such as DNA templates with complex secondary structures, long heterohomopolymer regions, palindromic sequences, sequences with tandem repeats or extreme GC regions. Standard primers as well as customer primers can be used. Automatic re-sequencing in case of unsuccessful sequencing is free of charge. The results (.ab1 and .seq files) are usually available on the same day, at the latest on the following working day after sample receipt.

- **Preparation** see (SEQ- Quickview)

5. SEQ-Primer Walking (S008)

For highest accuracy in the sequencing of long DNA segments. Multiple primers are used stepwise to sequence long DNA segments/plasmids of an unknown sequence flanked by a known sequence. The service includes design and synthesis of all primers, evaluation as well as assembly of all obtained sequences to a consensus sequence. Upon request, assembly against a reference sequence is also performed. The results depend on the length of the template. **Details on request**

6. SEQ-Premix (S014)

Your DNA samples are already available as a sample primer mix. Both 96-well plates and 8-well strips can be sent in. Important: Please only use lid strips, not foil, to seal the plates or

strips. You will receive the automatically processed sequence data (.ab1 and .seq files) usually on the same day, at the latest on the following working day after sample receipt.

- **Preparation**
 - eluted / dissolved in water, never in TE
 - Samples & primer premixed with lid, no foil or parafilm.

Template			Primer		Pre-Mixed
Sample Type	Concentration	Volume	Concentration	Volume	Total volume (DNA+Primer)
PCR-Fragment purified	5ng/100bp/μl	5μl	5 pmol/μl	5μl	10μl
Plasmid	100-200ng/μl	5μl	5 pmol/μl	5μl	10μl

7. SEQ-cDNA (S021)

Complementary DNA (cDNA) is the reverse transcript of the mRNA. Direct sequencing of cDNA is only possible in the forward direction. You will receive the automatically processed sequence data (.ab1 and .seq files) usually on the same day, at the latest on the following working day after sample receipt. The required cDNA concentration and the amount of cDNA required per read are given in the following table.

Template			Primer	
Sample Type	Concentration	Volume per (1-5) Run	Concentration	Volume per (1-5) Run
cDNA	125-250 ng/μl	20μl	5 pmol/μl	10μl

8. RCA & SEQ-RCA Product (S016, S082)

Problem with ultra-low sample concentrations or a limited volume? No problem! Rolling circle amplification (RCA) is therefore a technique that offers a solution for the amplification of micrograms of template from picogram of starting material with high accuracy. In addition, this method also allows direct sequencing of bacterial colonies without the need for plasmid

preparation. Automatic re-sequencing in case of unsuccessful sequencing is free of charge. The results (.ab1 and .seq files) are usually available 1-2 days after sample receipt.

- **Preparation**
 - Single colony, dissolved in 10 ul nuclease-free water, in 0.2 ml PCR tube each.
 - Desired plasmid concentration is $>0.01 \mu\text{g}/\mu\text{L}$

9. L-RCA Product (S025)

Sequential strategy of ligase-dependent circularisation of the amplicon / linearised pDNA, followed by RCA, enables sequencing from the 5' region to the 3' region and vice versa using reverse or forward primers. Automatic re-sequencing in case of unsuccessful sequencing is free of charge. The results (.ab1 and .seq files) are usually available 2-3 days after sample receipt.

- **Preparation**
 - Desired concentration is between $0.25\text{-}1.00 \mu\text{g}/\mu\text{l}$

Shipping

- @ambient temperature in a padded envelope
- Please send the order form via e-mail to: DNAseq@4base-lab.com