

Sequencing individual samples for laboratory investigations

The WU Biology DNA Sequencing core facility has the ability to run your DNA sequencing samples and return the results to you by electronic means. This service is available to members of the Genomics Education Partnership at the WU rate (see below). (Contact SCR Elgin for information; selgin@biology.wustl.edu.)

To use the facility you would need to have your students prepare the DNA template for sequencing, prepare and run the cycle sequencing reaction, clean the cycle sequencing reaction and finally dry down the reaction to remove all water. These dried samples are stable enough that they can be sent by mail or overnight shipping to the Biology DNA Sequencing core facility. Once here, your samples will be run on our DNA sequencing machine, currently a 3130xl. In most cases your samples will be analyzed within 36-48 hours. Upon completion, we will return the analysis files to you by email (for small numbers) or will make all the files available for download from our internet server. In rare cases, very large numbers of samples (more than 200 or 300) may take up to 4 days to process. It would be helpful to be notified ~2 weeks in advance if you plan to send a large number of samples.

As with many core facilities, we only accept DNA samples that have been sequenced with Applied Biosystems BigDye DNA sequencing kit. However we do accept both BigDye version 1.1 and BigDye version 3.1.

Online information is available on how to prepare template for sequencing, how to run cycle sequencing reactions and how to clean and dry your samples. I recommend you start with the BigDye manual available from Applied Biosystems (www.appliedbiosystems.com). Once there, look under the genomics section for information on DNA sequencing, and then follow the link for "BigDye Terminator v3.1 Cycle Sequencing Kit". On the resulting web page there is a large list of supporting literature along the right hand side.

Another web site with help on DNA sequencing comes from the Washington University core facility at the Medical School, the Protein and Nucleic Acid Chemistry Laboratory (PNAACL). Their web page is "<http://molecool.wustl.edu/pnacl/pnacl.home.html>". On the services page there is a very good PDF available that gives a lot of good advice on how to do DNA sequencing.

The cost for the service depends on the number of samples processed.

For samples supplied in individual tubes the charge is \$5 per sample. For samples supplied in the proper microtiter plate the charges are \$39 set up fee and \$24 per set of 16 (or part thereof). Contact Chris Shaffer for exact instructions on how to submit samples to quality for this reduced rate.

Quotes are available for very large numbers of samples (more than 288).

Questions can be sent to:
Christopher Shaffer
Biology Dept Sequence Facility
Phone 935-5078 sequence@biology.wustl.edu