

Oligonucleotide Service

Each month the SegoliP Unit sends a consolidated order to an overseas company for oligonucleotide synthesis. From order to receipt of the oligos is usually about 10 days.

Oligos are BioRP-system purified, transported in a lyophilised form, and come with full documentation that includes the name, sequence, GC content, MW, Tm and yield.

For further details on the scales of synthesis of oligos and modifications, please visit the website of the company we use: www.bioneer.com

To place an oligonucleotide order with SegoliP, please contact oligo@cqiir.org

Prices

Sequencing

- * Sanger: US\$ 6 per reaction (one template with one primer)
- * 454: Contact us for pricing

Fragment Analysis

- * US\$ 36 for up to 48 samples on a 96-well plate
- * US\$ 72 for 49-96 samples on a 96-well plate
- * US\$ 288 for a 384-well plate

DNA extraction (from plant materials)

- * US\$ 2.91 per sample

Full Genotyping Service

Includes PCR, fragment analysis and data analysis on GeneMapper

- * US\$ 3.86 per data point

Oligonucleotide Service

- * US\$ 0.27 per base for a 0.025 μ mol scale
- * US\$ 0.42 per base for a 0.05 μ mol scale
- * US\$ 60-80 Freight (this cost is shared between customers)



For further information please contact:

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SEGOLIP

DNA Sequencing
Genotyping
Oligonucleotide Services



DNA Sequencing, Genotyping & Oligonucleotide Services

biosciences
eastern and central africa

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INTERNATIONAL
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mobilizing biosciences for Africa's development

The SegoliP Unit offers DNA Sequencing (Sanger and 454 pyrosequencing), DNA extraction, full and partial genotyping, and oligonucleotide services to institutions in the region and beyond.

The SegoliP Unit, which houses the BecA Hub genomics platform, is equipped with two ABI Genetic Analyzers (ABI 3130 & 3730) and one pyrosequencer (Roche 454 Genome Sequencer FLX System).

DNA Sequencing Services

Medium throughput sequencing at the SegoliP Unit is conducted with BigDye™ Terminator technology (Sanger sequencing). The sequencing products are run on either the ABI 3130 or the ABI 3730 Genetic Analyser.

In addition, we have recently established massively parallel sequencing-by-synthesis using the Roche 454 Genome Sequencer FLX System (pyrosequencing).

Sanger sequencing

- Read length of 500 bases or more guaranteed for a common plasmid template
- Similar read lengths can be obtained from PCR products
- Sequence is generated as a text file
- Data is also produced as an ABI file (electropherogram/raw data)
- Sequence and raw data is uploaded to the clients account on the SegoliP Server
- Customers can access and download their results from the SegoliP Server

Requirements for Sanger sequencing

Please supply DNA templates at the following amounts and concentrations:

- Plasmids: 10-15 µl of 100 ng/µl
- PCR Products: 10-15 µl of 50 ng/µl

Please ensure DNA templates are highly purified before submitting to SegoliP for sequencing. We recommend the following DNA purification kits:

Plasmids

- Promega Wizard® SV Clean-Up Systems
- Qiagen Plasmid DNA Kits

PCR Products

- Promega Wizard PCR Clean-Up Systems
- Qiagen QIAquick PCR Purification Systems
- Gel Purification Systems (Promega or Qiagen)



Next Generation Sequencing

Using our 454 GS FLX we offer sequencing services on amplicon sequencing, short tag paired-end sequencing, and rapid library construction and sequencing. We have also further adapted our recently established SISPA method for multiplex sequencing of viral genomes. We encourage and foster experimental design discussions with current and prospective users.

Genotyping Services

The Unit accepts multi-well plates containing DNA fragments for size analysis on the ABI Genetic Analyzers. The instruments use the G5 filter set; four dyes can therefore be used to label PCR fragments: 6-FAM (blue), VIC (green), NED (yellow), PET (red), and LIZ dye is used as the internal size standard.

Data is posted on the SegoliP server as it is generated. Customers can access the information at their convenience.

The Unit also offers eight computers with GeneMapper software for Microsatellite analysis, Basic Sizing/Peak Detection, LOH. Microsatellite analysis, and AFLP analysis.

In addition the Unit also provides a DNA extraction (from plant materials) service, and a full genotyping service, which includes DNA extraction, PCR & fragment analysis.



Consumable Services

A number of sequencing and genotyping consumables are available from SegoliP on a cost recovery basis. These include 96 and 384-well reaction plates, GeneScan 500 LIZ Size Standard and Hi-Di Formamide. Contact us for more details.