DNA SEQUENCING

Instrument Details:

Make: Applied Biosystems

Model: 3730 DNA Analyzer

Specifications:

Capacity: 16 sample plates (96 well)

Capillary length: 36 cm or 50 cm

Compatible Polymers: POP Conformational Analysis Polimer, POP-7

Dimensions: 100cm(W)x 73 cm (D)x89 cm (H)

Operating System: Microsoft Windows 7

Read Length: 400-900 bases (varies depending on run module)

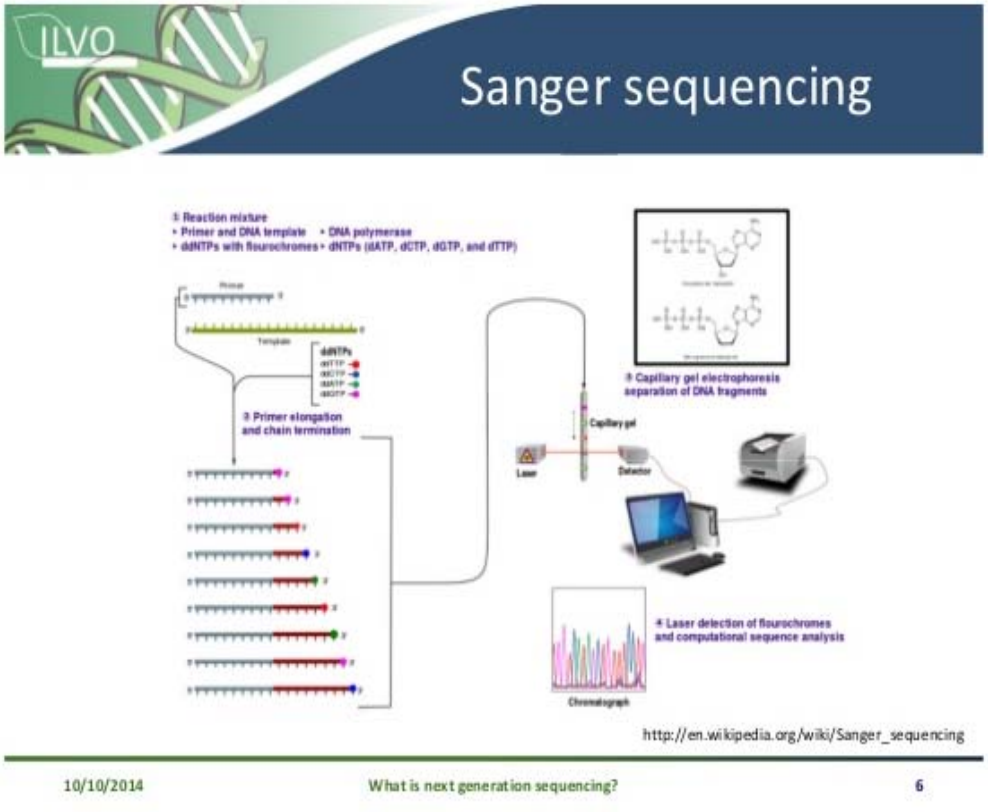
Performance: FastSeq-50cm-700QV20 base/60 min, GeneMapper Software:36cm-up 500 bp res w/0.15bp precision in 34 min, LongSeq-50cm-850QV20base/120min. RapidSeq:36cm-550QV 20 bases/36 min,StdSeq-36cm-700QV20base/60 min,XLRseq-50cm-900QV20 bases/360 min

Temperature Range(Metric): Temperature – controlled oven (18-70 °C range) and detection cell heater

Working Principle:

The chain-termination method requires a single-stranded DNA template, a DNA primer, a DNA polymerase, normal deoxynucleosidetriphosphates (dNTPs), and modified di-deoxynucleotidetriphosphates (ddNTPs), the latter of which terminate DNA strand elongation. These chain-terminating nucleotides lack a 3'-OH group required for the formation of a phosphodiester bond between two nucleotides, causing DNA polymerase to cease extension of DNA when a modified ddNTP is incorporated. The ddNTPs may be radioactively or fluorescently labeled for detection in automated sequencing machines.

Dye-terminator sequencing utilizes labelling of the chain terminator ddNTPs, which permits sequencing in a single reaction, rather than four reactions as in the labelled-primer method. In dye-terminator sequencing, each of the four dideoxynucleotide chain terminators is labelled with fluorescent dyes, each of which emit light at different wavelengths.



Applications:

3730 DNA Analyzer can be used to do Sequencing of purified Plamids,Cosmids PCR products and Fragment analysis , which can be use for the following purposes mentioned below:

1. AFLP Analysis
2. SNP analysis,
3. Mutation detection and traditional DNA sequencing
4. Microsatellites Sequencing
5. Mitochondrial DNA sequencing
6. Microsatellites for Human Identification

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Instrument Details:

Model: 3130xl Genetic Analyzer

Make: Applied Biosystems

Specifications:

The 3130xl Genetic Analyzer is the latest generation of 16-capillary electrophoresis instruments for the medium throughput laboratories. The system offers industry-leading performance, plus sophisticated automation capabilities allowing researchers to save time, reduce costs and increase productivity.

Applications:

3130xl Genetic Analyzer can be used to do Sequencing of purified Plamids,Cosmids ,PCR products and Fragment analysis which can be use for the following purposes mentioned below:

1. AFLP Analysis
2. SNP analysis,
3. Mutation detection and traditional DNA sequencing
4. Microsatellites Sequencing
5. Mitochondrial DNA sequencing
6. Microsatellites for Human Identification

DNA Sequencing and Genotyping Charges including GST:

SI. No	Equipment	Services offered	Sample types	Sample Concentration/ Volume	Cost (In Rupees plus 18% GST)	
	GENOMICS:				Academia	Corporate
1	**DNA Sequencers (ABI 3730 DNA Analyzer)**	Sequencing	DNA Template and primer	PCR Product :50ng/µl Plasmid:150-200ng/ µl Primer:5-10pmol/ µl	Rs. 300+ Rs. 54 GST= Rs. 354 per reaction	Rs. 400 +72 GST = Rs. 472 per reaction
	-	DNA Sequencing (Ready to run)	-	-	Rs. 90 +Rs. 16 GST = Rs. 106 per run	Rs. 120 + Rs.21 GST= Rs. 141 per run
	(ABI 3130xl GA)	Genotyping	Processed Sample	NA	Rs. 1,500+ Rs. 270 = Rs. 1,770 per run	Rs. 2,000 +Rs. 360 = Rs. 2,360 per run

PAYMENT:

External Users: Information

1. Academic Institutions:

User can come personally or send a letter from the Guide/HOD on the Institution's Original Letter Head along with the Registration Form and Demand draft. The letter must clearly indicate whether the samples are for Research or Consultancy purposes. The letter should be addressed to Mr. Vinod Kumar Mishra Staff Scientist, Head, Sophisticated Equipment Facility(SEF) Centre For DNA Fingerprinting and Diagnostics(CDFD) Hyderabad Email-sefcdfd@cdfd.org.in, vkmishra@cdfd.org.in

2. Industry& Non-Government Agencies:

User can come personally or send a letter signed by an authorized signatory of their Institution on Original Letter Head along with the Registration Form and Demand draft. The letter should be addressed to Mr. Vinod Kumar Mishra Staff Scientist, Head, Sophisticated Equipment Facility (SEF) Centre For DNA Fingerprinting and Diagnostics (CDFD) Hyderabad Email- sefcdfd@cdfd.org.in, vkmishra@cdfd.org.in

Tariff for external users: Basic charges including GST* (as applicable)

*GST rate as on 1.8.2017

General instructions to the users:

Payment Mode: Payment should in the form of a Demand Draft (DD) drawn in favour of The DIRECTOR CDFD HYDERABAD.

1. User should provide contact details to collect the data after the sample analysis is complete.

2. The experimental data provided is only for research / development purposes. These cannot be used as certificates in legal disputes.

3. Samples will not be analyzed till payment is received.

CENTER FOR DNA FINGERPRINTING AND DIAGNOSTICS

SOPHISTICATED EQUIPMENT FACILITY

UPPAL, HYDERABAD

SEQUENCING REQUISITION FORM

Name :	Date :
Group :	Phone : E-Mail:
Institute (external users): (a) Academic [ ]	(b) Industry [ ]

Details of the Samples: Total No. of Reactions:

S.No	Sample Name	Primer	Tm of the Primer	S.No	Sample Name	Primer	Tm of the Primer

DECLARATION	**This is to certify that these samples do not contain Radioactive material** **Signature**

Requirements :

A. Template	B. Primer
Amount : 0.5 – 4 µl per reaction	Amount : 1 µl per reaction
Concentration : Plasmid (150 ng/µl), PCR Product (50ng/ µl)	Concentration : 5pmoles/ µl

C. A gel image of the samples with marker is essential (1 µl of the sample loaded on the gel) -- ⬭

(For Plasmid – λHind III and for PCR product – Standard quantified marker),

D. Spectrophotometer / Nano Drop reading in ng / µl

E. Size of the insert / clone / PCR product : _____

F. Other Details: i. A-T or G-C rich product -- ⬭ ii. Additives if any -- ⬭

This is to submit that Content of this report is meant for our information only and we will not use the content of this report for advertisement, evidence, litigation or quote as certificate to third party.

Student signature Signature of the Group Head